STATEMENT SUBMITTED

BY THE

UNITED STATES NUCLEAR REGULATORY COMMISSION

TO THE

SUBCOMMITTEE ON NATIONAL SECURITY, EMERGING THREATS,
AND INTERNATIONAL RELATIONS

COMMITTEE ON GOVERNMENT REFORM

UNITED STATES HOUSE OF REPRESENTATIVES

CONCERNING

HOMELAND SECURITY: MONITORING NUCLEAR POWER PLANT SECURITY

SUBMITTED BY

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Introduction

Mr. Chairman and Members of the Subcommittee, it is a pleasure to appear before you today to discuss some of the efforts by the Nuclear Regulatory Commission (NRC) and its licensees with respect to security at nuclear power plants.

Overview

The NRC's mission is to regulate nuclear reactors, materials and waste facilities in a manner that protects the health and safety of the public, promotes the common defense and security, and protects the environment. Nuclear power plants have maintained strong safety and security measures, and were designed to withstand catastrophic events including fire, flood, earthquakes, and tornadoes. These plants were also designed using a defense-in-depth strategy, with redundant safety systems and are operated and protected by highly trained staff. Multiple barriers protect the reactor and prevent or mitigate off-site releases of radioactive materials. Design features of the reactor facilities provide substantial protection against a malevolent attack.

Security at nuclear facilities across the country has long been the subject of NRC regulatory oversight, dating back to the 1970's, and nuclear power plants have been required to implement security programs that are capable of defending against violent assaults by well-armed, well-trained adversaries. With sophisticated surveillance equipment, stringent access controls, physical barriers, professional security forces, and well qualified armed response forces and partnership with the local law enforcement agencies (LLEA), the nuclear power

facilities have likely been among the best protected commercial facilities in the Nation prior to September 11, 2001, and remain so today. Coupled with emergency plans that are tested on a regular basis and support from local government agencies, these facilities are designed, operated, and regulated to protect the public from a wide range of events, including potential terrorist attacks.

The terrorist attacks on the United States brought to light a new and more immediate threat to our country. All custodians of the Nation's critical infrastructure needed to reconsider decisions made earlier about the adequacy of security at the facilities under their charge. To cope with these changes in the threat environment, the NRC undertook a reassessment of its safeguards and security programs, to identify prompt actions and long-term enhancements that would raise the level of security at the nuclear facilities across the country.

Since the terrorists attacks, the NRC has ordered its licensees to take specific actions to improve security at their facilities and to augment the protection of the nuclear materials they possess. Additionally, we have made internal programmatic and organizational changes to enhance the effectiveness of NRC's regulation of the security of nuclear facilities and materials. We believe that these comprehensive acts also effectively address major Congressional concerns about the adequacy of security in the new threat environment. We recognize though that security would be further enhanced if five legislative proposals that the Commission has submitted to the Congress, which we discuss later in this testimony, are promptly enacted.

Orders

In the weeks and months following September 11, the NRC focused its efforts on improving security at the facilities and activities it regulates, including nuclear power plants, certain fuel cycle facilities possessing significant quantities of special nuclear material, and transportation of spent nuclear fuel. Compensatory measures were imposed and the NRC required licensees to make changes to their security programs to deal with a new level of threat.

On February 25, 2002, the NRC issued Orders to all nuclear power plant licensees requiring that they formally incorporate specific compensatory measures into their safeguards and security programs. These enhancements to security included increased security patrols, augmented security forces, additional security posts, increased vehicle standoff distances, and improved coordination with law enforcement. On January 7, 2003, another set of Orders, designed to enhance security by tightening the plant access authorization requirements, was issued. On April 29, 2003, the NRC issued additional Orders setting security officer work-hours limitations to minimize fatigue; new training and qualification requirements for security force members; and requiring licensees to revise their security and contingency plans to protect against a new level of threat.

In the months since those Orders were issued, there has been close coordination with the regulated industry and representatives of Federal, State, and local government agencies that would be called upon to support the licensees' response to a potential terrorist attack. The Orders of April 2003 required that the licensees submit their revised security plans to the NRC

by April 29, 2004, for review, revision as appropriate, and approval. The NRC staff is on schedule to complete its review of these plans and will work with licensees to implement them.

The licensees are responsible for providing security for their plants and costs incurred in this process are funded by the licensees. Except for directly after September 11 when Congress specifically authorized money for regulatory costs for upgrading NRC security, almost all of the Federal regulatory costs are paid by the NRC licensees through payment of fees.

Design Basis Threat and New Threat Level

Security programs at NRC-licensed nuclear power plants and certain fuel cycle facilities are designed to protect against an NRC specified level of threat called the design basis threat. The NRC first promulgated its design basis threats (DBTs) for radiological sabotage -- applicable to nuclear power plants -- and theft or diversion of strategic special nuclear material -- applicable to certain fuel cycle facilities -- in the late-1970s. In general terms, DBTs describe the attributes of a hypothetical adversary that these facilities must defend against with high assurance, including numbers of adversaries, types of weapons, and offensive strategies that would be employed by the adversaries. The threat attributes enumerated in the DBTs are based on extensive analyses by the NRC and discussion with the Intelligence Community and law enforcement officials. The DBT received periodic reviews by the staff and Commission resulting in at least one significant upgrade to the DBT prior to the September 11, 2001, attacks. When approved by the Commission, the DBT represents the characteristics of an adversary that a private guard force for a commercial nuclear facility should reasonably be required to protect against.

Following the September 11, 2001, attacks, the NRC conducted a comprehensive review of NRC's safeguards and security programs. This included a reassessment of the DBTs. As a result, the threat characteristics set forth in NRC regulations were supplemented by Orders issued to power reactors and to certain fuel cycle facilities in April 2003.

During its comprehensive review, the NRC staff also participated in the multi-agency working group developing the DOE/DOD Postulated Threat which, although not intended to apply to the commercial nuclear sector, provided insights considered in the development of NRC's supplemented DBTs. Additional coordination was conducted between NRC and DOE to ensure a clear understanding of the differences between the agencies' DBTs. This resulted in a proposed revision to NRC's threat characteristics which were presented to the Commission for their consideration to impose on specific licensees. In January 2003, the NRC sought comments on the supplement to the DBT from State agencies, Federal agencies, and licensees who were authorized access to the information. The Commission considered this information in establishing the supplemental requirements to implement the DBT. In addition, meetings were held with stakeholders, including other Federal agencies, State authorities, and industry representatives. Comments developed during those meetings, as well as the NRC staff final views were provided to the Commission in April 2003.

The Orders of April 29, 2003, required nuclear power plant licensees to revise their security and contingency plans to defend against the supplemented DBT. The NRC is currently reviewing these revised plans for nuclear power plants and certain nuclear fuel cycle facilities, nearly 200 plans in all, and expects that all plans will be reviewed, revised, as appropriate, approved, and, with few exceptions, implemented by the October 29, 2004, deadline imposed by the Commission's April 29, 2003, Orders. As was the case prior to September 11, the

Commission will review the DBTs semiannually against changes in the threat environment to ensure their continuing validity.

The NRC has been working with DHS, the White House Homeland Security Council, and other agencies regarding an "integrated response" by government assets to help defend against threats that could exceed the DBTs. The concept of "integrated response" applies to both prevention of and response to a potential terrorist event. The NRC is participating in tabletop exercises involving a number of Federal, State, and local agencies at nuclear power plants and continues to support the Homeland Security Council and DHS, the FBI, DoD, and other Federal, State, and local authorities regarding integrated response capabilities.

Vulnerability Assessment and Mitigation Strategies

The NRC has completed an extensive set of vulnerability assessments and identified mitigation strategies for NRC-licensed activities involving radioactive materials and nuclear facilities. Thus far, the results of these studies have validated the actions NRC has taken to enhance security as well as shown areas needing improvement. These efforts have continued to affirm the robustness of these facilities, the effectiveness of redundant systems and defense-in-depth design principles, and the value of effective programs for operator training and emergency preparedness.

Our vulnerability studies confirm that it would be difficult for even determined adversaries to both damage the reactor core and release radioactivity that could affect public

health and safety. Further, the studies confirm that even in the unlikely event of a radiological release due to terrorist use of a large aircraft, NRC's emergency planning basis remains valid. The aircraft vulnerability studies also indicate that significant damage to a spent fuel pool is not likely, that it is highly unlikely that the impact on a dry spent fuel storage cask would cause a significant release of radioactivity, and that the impact of a large aircraft on a transportation cask would not result in a release of radioactive material. Measures are in place to adequately protect the public from attacks on spent fuel, in either wet or dry configurations. Thus, we conclude that nuclear power plant safety, security, and emergency planning programs continue to provide reasonable assurance of adequate protection of the public health and safety and protection of the common defense and security.

Force-on-Force Exercises

We have continued to improve our security performance evaluation program (our force-on-force evaluations), which we consider an important element for ensuring protection of the Nation's critical infrastructure. In February 2003, we resumed the force-on-force program in the form of a pilot program to test recent program enhancements. In February 2004, the NRC began a transition force-on-force program, incorporating the lessons learned during the pilot program. The transition program follows the same format as the pilot program; however, the "mock adversary" force now uses the characteristics of the Design Basis Threat (DBT), as enhanced and supplemented by our Orders, to prepare for resumption of the full security performance assessment program in November 2004. Under that program, we will conduct approximately 22 force-on-force exercises per year, so that each site's security will undergo an NRC evaluated exercise at least once every three years. This represents a significant increase in the

exercise frequency; in addition, each plant is required to conduct independent exercises at least once each year.

During the pilot program, the NRC identified the need to improve the offensive capabilities, consistency, and effectiveness of the exercise adversary force. The Commission addressed this need by directing the staff to develop a training standard for a Composite Adversary Force (CAF). The CAF for a given NRC-evaluated force-on-force exercise will comprise security officers from various nuclear power facilities (excluding the licensee being evaluated) and will have been trained in offensive, rather than defensive, skills to perform the adversary function.

Baseline Inspection Program

The NRC's oversight program for security is far broader than the force-on-force exercises, vulnerability assessments, strategic and tactical threat assessment, and security plan reviews. It also includes a comprehensive baseline inspection program to verify the continued effectiveness of security measures and confirm compliance. The baseline inspection program for power reactors is part of NRC's Reactor Oversight Program. Through a sampling of licensee security activities, the NRC assesses whether the licensee's security program complies with requirements and provides adequate protection against the DBT for radiological sabotage. Before September 11, the NRC security oversight program focused on four key areas. Shortly after the September 11 attacks, the NRC appropriately refocused portions of its inspection program on verifying licensee implementation of the upgrades specified in NRC-issued advisories and Orders.

Since then, the NRC has substantially revised the baseline inspection program and involved the NRC on-site resident inspectors to a greater degree than before in overseeing security at the plants, ensuring that the NRC has real-time assessments of the status of security on the sites. The NRC implemented a revised baseline inspection program in mid-February 2004 that focuses on an expanded set of key areas, including: (1) access authorization, (2) access controls, (3) security plan changes, (4) contingency response and force-on-force testing, (5) security equipment performance, testing, and maintenance, (6) security training, (7) fitness for duty program, (8) owner controlled area controls, (9) information technology security, (10) material control and accountability, and (11) physical protection of shipments of spent fuel.

The NRC is continuing to enhance and adjust the oversight program for security by developing and implementing more effective processes to assess the significance of inspection findings, more meaningful performance indicators, and revised inspection procedures as a result of the ongoing vulnerability assessment activities and related mitigating strategies.

These changes have allowed the NRC to enhance the effectiveness and efficiency of its oversight of the security measures deemed essential by the Commission after the September 11 attacks. Onsite security inspection hours per year have increased considerably since September 11. Through audits and inspections of the security programs, NRC inspectors confirm that the required security enhancements are implemented.

Status of Security Plan Reviews

As discussed above, in Orders issued on April 29, 2003, the NRC required that licensees take steps to increase protections against a new level of threat, including changes to the adversary force composition and characteristics in light of information gained from the Intelligence Community since September 11, 2001. As part of the Orders, we required nuclear power reactor and certain fuel cycle facilities to develop new security plans, safeguards contingency plans, and training and qualification plans, and to submit them to the NRC by April 29, 2004, for review and approval. The purpose of the Commission's action was to ensure that licensees' plans were revised to specifically describe how the requirements in the NRC's security regulations and post-September 11 Orders were or will be implemented.

When fully implemented, the measures described in the revised plans provide greater capability to respond to more robust attacks than previously required. The new plans also cover a broader spectrum of contingency actions, provide for better trained and qualified security force members, and ensure that more time is devoted to exercises and drills designed to improve the skills of the licensees' guard forces.

The NRC assembled a dedicated team of NRC staff members to review the plans submitted by the industry. As of today, the NRC staff is completing its technical reviews of these plans, and is now working to complete the necessary written safety evaluations and licensing documents to formalize analysis and conclusions associated with each plan review.

Emergency Preparedness

The NRC has long required that its licensees maintain and frequently exercise plans designed to deal with response to emergencies at their plants. State and local agencies, and sometimes Federal agencies, participate in these exercises. The scenarios developed for these plans include many catastrophic events, which are the result of equipment malfunctions, operator errors, or natural disasters. The NRC continues to work with the U.S. Department of Homeland Security and other Federal agencies to integrate Federal Response Plans into a unified National Response Plan and National Incident Management System, and to refine the National Preparedness Policy. We have also completed the development of the commercial Nuclear Reactors, Materials, and Waste Key Resource Plan for Critical Infrastructure Protection. This document serves as the Sector-Specific component of the National Infrastructure Protection Plan. In addition, we continue to coordinate protective strategies with various components of the U.S. Department of Defense, including NORTHCOM and NORAD, and have recently participated in exercises such as Unified Defense '04 and Amalgam Virgo '04. The NRC has revised its Strategic Plan to enhance the recognition of the importance of physical security and emergency preparedness, and licensees will be expected to maintain a high level of preparedness and performance in these areas.

Sharing of Information

The NRC has sought stakeholder input for the many actions taken since September 11. Due to the sensitive, non-public nature of most of the security information, there have been

limitations on public access. In order to expand the sphere of the discussion as far as possible, the NRC has had State outreach meetings, a workshop attended by State and local government homeland security advisors, and public meetings to discuss security. The NRC also posts information on its web site to keep the public informed of actions taken and plans for the future.

In coordination with other Federal agencies, the NRC developed a database of reported security incidents, referred to as the Security Information Database (SID), which contains security reports issued by nuclear plant licensees as a result of advisories that NRC issues. Each report that NRC receives and adds to the SID provides details about a specific security incident that has occurred at a nuclear plant (e.g., suspicious person, suspicious activity, flyovers) and the actions that plant officials are taking to address the incident. SID reports are considered sensitive information and are handled accordingly. This information is posted on a protected web site and shared with authorized nuclear industry officials and Federal, State, and local government agencies.

The NRC is committed to ensuring openness in its regulatory programs and makes every attempt to make as much information as possible available to the public, as well as obtain public input in its decision making. At the same time, the NRC is necessarily interested in ensuring that sensitive information regarding nuclear facilities does not fall into the hands of those who wish to do us harm. After careful consideration, the Commission has decided that certain security information, previously released to the public, will no longer be publicly available and will no longer be updated on our web site. The NRC's public web site will continue to display performance indicators, inspection reports, and other information not related to plant security. The Commission's decision enhances the protection of information related to the

security of licensed facilities, but will not diminish NRC's commitment to openness in carrying out our public health and safety responsibilities.

Addressing the desire of local officials to more frequently and directly communicate with NRC on emergency preparedness, we increased our interactions with State and local emergency preparedness officials. We have supported workshops, meetings and other activities addressing emergency planning issues such as potassium iodide use, radiological dose assessment, communications during event response, and the like. We will continue these efforts whenever important, specific issues are raised.

NRC Computer Security

The NRC recognizes the importance of providing a comprehensive framework for ensuring the effectiveness of information security controls over information resources that support Federal operations and assets and provides for development and maintenance of controls required to protect Federal information and information systems. The NRC has historically been focused on technical safety and security issues, and computer security is another facet of that overall concern. Congressional oversight and participation in Federal Chief Information Officer groups have helped focus our computer security efforts to more effectively protect our computer systems. NRC has had a computer security program since 1980 and our focus on computer security from project inception and throughout the project life cycle has enabled us to appropriately protect our computer systems.

The NRC received an “A” on the Federal computer security report card issued by the House Government Reform Subcommittee on Technology, Information Policy, Intergovernmental Relations and the Census. The NRC operates with offices across the Nation and interacts with the public in general informational, regulatory, and discovery interchanges. In each of these interchanges, we take the inherent computer security requirements very seriously and work toward a seamless integration of computer security in our day-to-day operations.

Legislative Needs

Over the years, the NRC has repeatedly expressed its support for enactment of legislation needed to strengthen the security of facilities regulated by the Commission. Although the Commission has used existing authority to ensure robust security for nuclear power plants and high risk radioactive materials, prompt enactment of these provisions would grant the statutory authority for steps that we believe should be taken to further enhance the protection of the country’s nuclear infrastructure and prevent malevolent use of radioactive material.

The proposals that the Commission believes to be most important are: (1) authorization of security personnel at NRC-regulated facilities and activities to receive, possess, and, in appropriate circumstances, use more powerful weapons against terrorist attacks, (2) enlargement of the classes of NRC-regulated entities and activities whose employees are subject to fingerprinting and criminal history background checks, (3) Federal criminalization of unauthorized introduction of dangerous weapons into nuclear facilities, (4) Federal

criminalization of sabotage of additional classes of nuclear facilities, fuel, and material, and (5) extension of NRC's regulatory oversight to discrete sources of accelerator-produced radioactive material and radium-226.

All but the last of these provisions are contained in H.R. 6, as approved by the conferees on that bill in the first session of this Congress, and in S. 2095, which has been introduced in this session. The major part of the last provision is contained in S. 1043, which was reported by the Senate Committee on Environment and Public Works in the first session of this Congress. Accelerator-produced radioactive material and radium-226 are not now covered by the Atomic Energy Act, and while there is other radioactive material that is not subject to the regulatory authority of the NRC, discrete sources of accelerator-produced radioactive material and radium-226 are of the greatest concern in our effort to develop uniform national standards to prevent malevolent use of nuclear material.

A copy of the five proposals listed above has been appended to this testimony and the Commission looks forward to working with you on their enactment in this session of Congress.

I appreciate the opportunity to appear before you today and look forward to answering any questions you may have.

NRC-REQUESTED NUCLEAR SECURITY LEGISLATION

SEC. 1. FINGERPRINTING FOR CRIMINAL HISTORY RECORD CHECKS.

(a) In General- Subsection a. of section 149 of the Atomic Energy Act of 1954 (42 U.S.C. 2169(a)) is amended--

(1) by striking `a. The Nuclear' and all that follows through `section 147.' and inserting the following:

`a. In General-

`(1) REQUIREMENTS-

`(A) IN GENERAL- The Commission shall require each individual or entity--

`(i) that is licensed or certified to engage in an activity subject to regulation by the Commission;

`(ii) that has filed an application for a license or certificate to engage in an activity subject to regulation by the Commission; or

`(iii) that has notified the Commission, in writing, of an intent to file an application for licensing, certification, permitting, or approval of a product or activity subject to regulation by the Commission,

to fingerprint each individual described in subparagraph (B) before the individual is permitted unescorted access or access, whichever is applicable, as described in subparagraph (B).

`(B) INDIVIDUALS REQUIRED TO BE FINGERPRINTED- The Commission shall require to be fingerprinted each individual who--

`(i) is permitted unescorted access to--

`(I) a utilization facility; or

`(II) radioactive material or other property subject to regulation by the Commission that the Commission determines to be of such significance to the public health and safety or the common defense and security as to warrant fingerprinting and background checks; or

`(ii) is permitted access to safeguards information under section 147.';

(2) by striking `All fingerprints obtained by a licensee or applicant as required in the preceding sentence' and inserting the following:

`(2) SUBMISSION TO THE ATTORNEY GENERAL- All fingerprints obtained by an individual or entity as required in paragraph (1)';

(3) by striking `The costs of any identification and records check conducted pursuant to the preceding sentence shall be paid by the licensee or applicant.' and inserting the following:

`(3) COSTS- The costs of any identification and records check conducted pursuant to paragraph (1) shall be paid by the individual or entity required to conduct the fingerprinting under paragraph (1)(A).'; and

(4) by striking `Notwithstanding any other provision of law, the Attorney General may provide all the results of the search to the Commission, and, in accordance with regulations prescribed under this section, the Commission may provide such results to licensee or applicant submitting such fingerprints.' and inserting the following:

`(4) PROVISION TO INDIVIDUAL OR ENTITY REQUIRED TO CONDUCT FINGERPRINTING- Notwithstanding any other provision of law, the Attorney General may provide all the results of the search to the Commission, and, in accordance with regulations prescribed under this section, the Commission may provide such results to the individual or entity required to conduct the fingerprinting under paragraph (1)(A).'.

(b) Administration- Subsection c. of section 149 of the Atomic Energy Act of 1954 (42 U.S.C. 2169(c)) is amended--

(1) by striking `, subject to public notice and comment, regulations--' and inserting `requirements--'; and

(2) by striking, in paragraph (2)(B), `unescorted access to the facility of a licensee or applicant' and inserting `unescorted access to a utilization facility, radioactive material, or other property described in subsection a.(1)(B)'.

(c) Biometric Methods- Subsection d. of section 149 of the Atomic Energy Act of 1954 (42 U.S.C. 2169(d)) is redesignated as subsection e., and the following is inserted after subsection c.:

`d. Use of Other Biometric Methods- The Commission may satisfy any requirement for a person to conduct fingerprinting under this section using any other biometric method for identification approved for use by the Attorney General, after the Commission has approved the alternative method by rule.'.

SEC.2. USE OF FIREARMS BY SECURITY PERSONNEL OF LICENSEES AND CERTIFICATE HOLDERS OF THE COMMISSION.

Section 161 of the Atomic Energy Act of 1954 (42 U.S.C. 2201) is amended by adding at the end the following subsection:

`(z)(1) notwithstanding section 922(o), (v), and (w) of title 18, United States Code, or any similar provision of any State law or any similar rule or regulation of a State or any political subdivision of a State prohibiting the transfer or possession of a handgun, a rifle or shotgun, a short-barreled shotgun, a short-barreled rifle, a machinegun, a semiautomatic assault weapon, ammunition for the foregoing, or a

large capacity ammunition feeding device, authorize security personnel of licensees and certificate holders of the Commission (including employees of contractors of licensees and certificate holders) to receive, possess, transport, import, and use 1 or more of those weapons, ammunition, or devices, if the Commission determines that--

`(A) such authorization is necessary to the discharge of the security personnel's official duties; and

`(B) the security personnel--

`(i) are not otherwise prohibited from possessing or receiving a firearm under Federal or State laws pertaining to possession of firearms by certain categories of persons;

`(ii) have successfully completed requirements established through guidelines implementing this subsection for training in use of firearms and tactical maneuvers;

`(iii) are engaged in the protection of--

`(I) facilities owned or operated by a Commission licensee or certificate holder that are designated by the Commission; or

`(II) radioactive material or other property owned or possessed by a person that is a licensee or certificate holder of the Commission, or that is being transported to or from a facility owned or operated by such a licensee or certificate holder, and that has been determined by the Commission to be of significance to the common defense and security or public health and safety; and

`(iv) are discharging their official duties.

`(2) Such receipt, possession, transportation, importation, or use shall be subject to--

`(A) chapter 44 of title 18, United States Code, except for section 922(a)(4), (o), (v), and (w);

`(B) chapter 53 of title 26, United States Code, except for section 5844; and

`(C) a background check by the Attorney General, based on fingerprints and including a check of the system established under section 103(b) of the Brady Handgun Violence Prevention Act (18 U.S.C. 922 note) to determine whether the person applying for the authority is prohibited from possessing or receiving a firearm under Federal or State law.

`(3) This subsection shall become effective upon the issuance of guidelines by the Commission, with the approval of the Attorney General, to govern the implementation of this subsection.

`(4) In this subsection, the terms `handgun', `rifle', `shotgun', `firearm', `ammunition', `machinegun', `semiautomatic assault weapon', `large capacity ammunition feeding device', `short-barreled shotgun', and `short-barreled rifle' shall have the meanings given those terms in section 921(a) of title 18, United States Code.'.

SEC.3. UNAUTHORIZED INTRODUCTION OF DANGEROUS WEAPONS.

Section 229 a. of the Atomic Energy Act of 1954 (42 U.S.C. 2278a(a)) is amended in the first sentence by inserting `or subject to the licensing authority of the Commission or to certification by the Commission under this Act or any other Act' before the period at the end.

SEC. 4. SABOTAGE OF NUCLEAR FACILITIES OR FUEL.

(a) In General- Section 236 a. of the Atomic Energy Act of 1954 (42 U.S.C. 2284(a)) is amended--

(1) in paragraph (2), by striking `storage facility' and inserting `storage, treatment, or disposal facility';

(2) in paragraph (3)--

(A) by striking `such a utilization facility' and inserting `a utilization facility licensed under this Act'; and

(B) by striking `or' at the end;

(3) in paragraph (4)--

(A) by striking `facility licensed' and inserting `, uranium conversion, or nuclear fuel fabrication facility licensed or certified'; and

(B) by striking the comma at the end and inserting a semicolon; and

(4) by inserting after paragraph (4) the following:

`(5) any production, utilization, waste storage, waste treatment, waste disposal, uranium enrichment, uranium conversion, or nuclear fuel fabrication facility subject to licensing or certification under this Act during construction of the facility, if the destruction or damage caused or attempted to be caused could adversely affect public health and safety during the operation of the facility;

`(6) any primary facility or backup facility from which a radiological emergency preparedness alert and warning system is activated; or

`(7) any radioactive material or other property subject to regulation by the Nuclear Regulatory Commission that, before the date of the offense, the Nuclear Regulatory Commission determines, by order or regulation published in the Federal Register, is of significance to the public health and safety or to common defense and security,'.

(b) Penalties- Section 236 of the Atomic Energy Act of 1954 (42 U.S.C. 2284) is amended by striking `$10,000 or imprisoned for not more than 20 years, or both, and, if death results

to any person, shall be imprisoned for any term of years or for life' both places it appears and inserting `$1,000,000 or imprisoned for up to life without parole'.

SEC.5. TREATMENT OF ACCELERATOR-PRODUCED AND OTHER RADIOACTIVE MATERIAL AS BYPRODUCT MATERIAL

(a) DEFINITION OF BYPRODUCT MATERIAL.--Section 11 e. of the Atomic Energy Act of 1954 (42 U.S.C. 2014 (e)) is amended--

(1) by striking “The term ‘byproduct material’ means” and inserting the following:

“The term ‘byproduct material’ means–“;

(2) by inserting on the line following “The term ‘byproduct material’ means–“ the clause in section 11 e. that begins “(1) any radioactive material”;

(3) by striking “, and” at the end of clause (1) of section 11 e. and inserting “;”;

(4) by inserting on the line following the semicolon added by clause (3) the clause in section 11 e. that begins “(2) the tailings or wastes”;

(5) by striking “content.” at the end of clause (3) in section 11 e. and inserting “content; and”; and

(6) by inserting on the line following “content; and” the following:

“(3)(A) any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after the date of enactment of this paragraph, for use in a commercial, medical, or research activity; or

“(B) any material that --

“(i) has been made radioactive by use of a particle accelerator; and

“(ii) is produced, extracted, or converted after extraction, before, on, or after the date of enactment of this paragraph, for use in a commercial, medical, or research activity; and

“(4) any discrete source of naturally occurring radioactive material, other than source material that --

“(A) the Nuclear Regulatory Commission determines (after consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency), would pose a threat similar to that posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

“(B) before, on, or after the date of enactment of this paragraph, is extracted or converted after extraction, for use in a commercial, medical, or research activity.”.

(b) AGREEMENTS.--Section 274 b. of the Atomic Energy Act of 1954 (42 U.S.C. 2021) is amended--

(1) by redesignating paragraphs (3) and (4) as paragraphs (5) and (6), respectively; and

(2) by inserting after paragraph (2) the following:

"(3) byproduct materials (as defined in section 11 e.(3));

"(4) byproduct materials (as defined in section 11 e.(4));".

(c) REGULATIONS.--

(1) IN GENERAL.--Not later than the effective date of this section, the Nuclear Regulatory Commission shall promulgate final regulations establishing such requirements and standards as the Commission considers necessary for the acquisition, possession, transfer, use, or disposal of byproduct material (as defined in paragraphs (3) and (4) of section 11 e. of The Atomic Energy Act of 1954 (as added by subsection (a))).

(2) COOPERATION.--The Commission shall cooperate with the States in formulating the regulations under paragraph (1).

(3) TRANSITION.--To ensure an orderly transition of regulatory authority with respect to byproduct material as defined in paragraphs (3) and (4) of section 11 e. of the Atomic Energy Act of 1954 (as added by subsection (a)), not later than 180 days before the effective date of this section, the Nuclear Regulatory Commission shall prepare and provide public notice of a transition plan developed in coordination with States that--

(A) have not, before the effective date of this section, entered into an agreement with the Commission under section 274 b. of the Atomic Energy Act of 1954 (42 U.S.C. 2021); or

(B) in the case of a State that has entered into such an agreement, has not, before the effective date of this section, applied for an amendment to the agreement that would permit assumption by the State of regulatory responsibility for such byproduct material.

(d) WASTE DISPOSAL.--

(1) Notwithstanding any other Federal or State law or any action that has been taken to implement such law, commencing with the effective date of subsection (a), byproduct material as defined in section 11 e.(3) and (4) of the Atomic Energy Act of 1954 may be transferred to and disposed of--

(A) in a disposal facility licensed by the Commission, if the disposal meets the requirements of the Commission, or

(B) in a disposal facility licensed by a State that has entered into an agreement with the Commission under section 274b. of the Atomic Energy Act of 1954, if the disposal meets requirements of the State that are equivalent to the requirements of the Commission.

(2) Notwithstanding the provisions of paragraph (1), byproduct material as defined in section 11 e.(3) and (4) of the Atomic Energy Act of 1954 may be disposed of under the provisions of Title II of the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.), popularly known as the "Resource Conservation and Recovery Act," to the same extent as such material was subject to those provisions before the enactment of this section.

(3) Byproduct material as defined in section 11 e.(3) and (4) of the Atomic Energy Act of 1954 shall not be considered low-level radioactive waste as defined in title I of the Low-Level Radioactive Waste Policy Amendments Act of 1985, or in

implementing any Congressionally approved Compact entered into pursuant to the Low-Level Radioactive Policy Act of 1980 as amended.

(e) EFFECTIVE DATE.--Except with respect to matters that the Nuclear Regulatory Commission determines are required to be addressed earlier to protect the public health and safety or to promote the common defense and security, the amendments made by this section take effect on the date that is 4 years after the date of enactment of this Act.