

NUREG-1100  
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PERFORMANCE  
BUDGET  
**FISCAL YEAR  
2005**

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February 2004  
U.S. Nuclear Regulatory Commission

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# **EXECUTIVE SUMMARY**

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## EXECUTIVE SUMMARY

*The Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended, establish the fundamental regulatory mission of the U.S. Nuclear Regulatory Commission (NRC). The NRC's mission is to regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment.*

### Overview of the NRC Performance Budget

The Fiscal Year (FY) 2005 Performance Budget submitted by the U.S. Nuclear Regulatory Commission (NRC) supports the implementation of the agency's Strategic Plan goals and strategies for FY 2000 – FY 2005. The NRC's proposed FY 2005 budget totals \$670.3 million, which represents an increase of \$44.2 million over the FY 2004 budget. This budget reflects \$541.1 million from fees assessed to NRC licensees, resulting in a net usage of appropriated funds of \$129.2 million. The following table details the NRC's budget authority by appropriation.

TOTAL NRC BUDGET AUTHORITY BY APPROPRIATION				
NRC Appropriation	FY 2003 Enacted	FY 2004 Estimate	FY 2005 Full Cost	
			Request	Change from FY 2004
<b>Salaries and Expenses (S&amp;E) (\$K)</b>				
Budget Authority	577,806	618,800	662,777	43,977
Offsetting Fees	519,884	538,844	534,355	-4,489
Net Appropriated—S&E	57,922	79,956	128,422	48,466
<b>Office of the Inspector General (OIG) (\$K)</b>				
Budget Authority	6,797	7,300	7,518	218
Offsetting Fees	6,389	6,716	6,766	50
Net Appropriated—OIG	408	584	752	168
<b>Total NRC (\$K)</b>				
<b>Budget Authority</b>	<b>584,603</b>	<b>626,100</b>	<b>670,295</b>	<b>44,195</b>
Offsetting Fees	526,273	545,560	541,121	-4,439
Total Net Appropriated	58,330	80,540	129,174	48,634

In accordance with the requirement defined in Section 220 (b) of Office of Management and Budget (OMB) Circular A-11, the NRC is providing the full cost associated with its programs

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for the FY 2005 budget request. Full cost includes an allocation of the agency's infrastructure and support costs to each of the NRC's programs. The allocation methodology is consistent with the methodology used for preparing the agency's financial statements. For purposes of comparison, the chapters describing the NRC's strategic arenas show the FY 2004 budget with and without the full cost. Similarly, the budget request for the Office of the Inspector General (OIG) allocates its internal management and operational support costs to its programs.

### **Highlights of 2005 Programs**

#### *High-Level Waste Regulation*

The NRC's FY 2005 budget includes \$69.1 million for high-level waste regulation. This budget reflects Department of Energy (DOE) anticipated repository license application in December 2004, as well as the need to further assess the safety of spent nuclear fuel shipments to the proposed repository. During FY 2005, the NRC's activities for a potential license application will include resolving key technical issues through prelicensing consultations with DOE, reviewing the application, conducting thorough safety and security evaluations, preparing the safety evaluation report, supporting the hearings, initiating the high-level waste inspection program, conducting performance confirmation oversight, and adopting DOE's final environmental impact statement. FY 2005 resources support obtaining hearing space in Nevada, providing security, and developing and implementing the information systems needed to make documents available to the public and parties to the hearing, as well as to provide data management support during the hearings. Our goal is to complete our review and reach a license decision within three years. Finally, the NRC will conduct a Package Performance Study that will assess the safety of spent nuclear fuel shipping containers in rail and highway accidents, by testing a full-scale rail cask and full-scale truck cask.

#### *Homeland Security*

The FY 2005 budget includes \$56.8 million for Homeland Security activities. Since September 2001, the Commission has been engaged in a comprehensive review and implementation of improvements of programs and oversight of security at civilian nuclear power plants, nuclear fuel facilities, and other licensees regulated by the agency. In the course of these efforts, the NRC has had the benefit of continuing substantial interaction, consultation, and coordination with other Federal agencies and the States. During the past year, the NRC has made substantial progress in assessing potential vulnerabilities at nuclear power plants and other licensee facilities and has identified mitigating strategies, where appropriate; has revised the safeguards and security requirements for licensees; and has initiated a pilot force-on-force exercise program using expanded threat scenarios for power reactor facilities and selected fuel cycle facilities.

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During FY 2004, the NRC plans to conduct full security performance reviews, including force-on-force exercises, at nuclear power plants; expand the safeguards inspection programs; complete the review of nuclear power plant security plans; develop and begin implementation of a control of sources program and registry; revise and expand the baseline inspection programs; expand physical protection and material control and accounting review in support of licensing; and continue coordination with the Department of Homeland Security (DHS) and other Federal agencies.

The Homeland Security efforts planned for FY 2005 are as follows:

- Enhance and maintain reactor security and safeguards by having licensees incorporate the revised design-basis threat into licensees' security plans and having the NRC review and inspect against the revised plans.
- Continue the force-on-force exercises at nuclear power plants to improve the licensees' capabilities to provide adequate security.
- Improve the control of high-risk radioactive materials to prevent their potential malevolent use.
- Provide resources to evaluate threats promptly, coordinate with involved agencies, and communicate pertinent threat information to licensees.
- Provide revisions to the Fitness-for-Duty/Access Authorization rules for individuals granted unescorted access to facilities or Safeguards Information, and revision of Part 73 Training (Appendix B).
- Maintain the nuclear waste security and safeguards program of licensing and inspections, complete Temporary Instructions (TI) development and inspection for ISFSIs, and complete transportation licensing for spent fuel.
- Support a national strategy for physical protection of critical infrastructure by working with other Federal, State, and local entities in developing an integrated response plan for augmenting security at NRC-licensed sites.

### *Renewal of Reactor Licenses*

The NRC's FY 2005 budget provides \$30.0 million for the review and renewal of nuclear power reactor licenses beyond their original expiration dates. The NRC reviews license renewal applications to determine whether a reactor can continue to operate safely during the extended period of 20 years. The Commission has renewed the operating licenses for 23 of the existing 104 nuclear power plants. In FY 2005, the NRC expects to begin reviewing seven new renewal applications, in addition to up to nine applications that are expected to be already under review at that time. The NRC expects to complete its reviews of two applications in FY 2005. Program activities include reviewing the applications and supporting documentation from licensees, conducting independent evaluations of the safety and environmental issues associated with extended reactor operation, and conducting inspections to verify the licensees' activities to manage reactor aging and information in the

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application. The resource estimates reflect a 22-month cycle, assuming no hearing is required, for completion of each application after the start of the review.

### **New Reactor Licensing**

The NRC's FY 2005 budget provides \$39.7 million for the new reactor licensing program. This will support the review of three early reactor site permit applications submitted in calendar year 2003. The NRC will complete the milestones necessary to complete the Westinghouse (AP1000) advanced reactor design certification rulemaking in FY 2006. The NRC received the AP1000 standard design certification application in March 2002, and the review is expected to continue through FY 2005. The NRC plans to perform certification reviews of the General Electric (ESBWR) and Atomic Energy of Canada (ACR-700) designs. The NRC also plans to continue pre-application review activities for the Framatome (SWR-1000), General Atomic (GT-MHR), and the International Reactor Innovative and Secure (IRIS) design. In addition, the NRC will continue to update its regulatory framework to improve the effectiveness and efficiency of its review of these advanced reactor designs and of potential combined operating license applications that may reference these designs.

### **Reactor Inspection and Performance Assessment**

The NRC's FY 2005 budget provides \$156.8 million for reactor inspection and performance assessment. These resources support the NRC's activities needed to ensure that the 104 licensed reactors identify and resolve safety issues before they affect safe plant operation. In FY 2005, the NRC is strengthening reactor oversight activities to provide early identification and management of potential safety issues. The Reactor Inspection and Performance Assessment Program includes risk-informed inspections, use of performance indicator data, and a reactor assessment process. The inspection process comprises three major elements, including baseline inspections, plant-specific inspections, and generic issue inspections that address areas of emerging concern or those requiring increased emphasis because of recurring problems. Enforcement is used to deter non-compliance with NRC requirements and to encourage prompt identification and correction of violations of NRC requirements. The assessment process integrates inspection findings with other objective measures of performance (i.e., performance indicators), which licensees submit on a quarterly basis for each power reactor site.

### **FY 2005 Budget Increase**

The NRC's FY 2005 proposed budget of \$670.3 million represents a net increase of \$44 million over the FY 2004 budget. Increases assuming full costing in each year are identified in the following areas:

- There is an increase of \$14 million to fund Federal pay raises and other non-discretionary compensation and benefits increases.

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- There is an increase of \$30 million for the High-Level Waste program to initiate the review of the anticipated DOE application to construct a high-level waste repository at Yucca Mountain and to support the Package Performance Study addressing the safety of spent nuclear fuel shipping containers in rail and highway accidents.
- There is an increase of \$10 million for reactor programs primarily to keep pace with industry interest in new reactor initiatives and to strengthen the reactor inspection and performance assessment activities.
- These increases are primarily offset by a decrease of approximately \$10 million in Homeland Security programs for completed homeland security activities.

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### FY 2005 Budget and Program Summary

The FY 2005 Performance Budget is organized into the four mission-related strategic arenas: Nuclear Reactor Safety, Nuclear Materials Safety, Nuclear Waste Safety, and International Nuclear Safety Support. This section summarizes the NRC's Performance Budget and its associated arenas.

SUMMARY OF BUDGET AUTHORITY AND STAFFING BY STRATEGIC ARENA					
Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Full Cost Estimate	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Strategic Arena (\$K)</b>					
Nuclear Reactor Safety	276,395	306,982	423,486	435,149	11,663
Nuclear Materials Safety	59,979	65,803	95,824	100,337	4,513
Nuclear Waste Safety	70,416	72,279	90,809	118,096	27,287
International Nuclear Safety Support	5,237	5,856	8,681	9,195	514
Management and Support	165,779	167,880	0	0	0
<b>Subtotal</b>	<b>577,806</b>	<b>618,800</b>	<b>618,800</b>	<b>662,777</b>	<b>43,977</b>
<b>Inspector General</b>	6,797	7,300	7,300	7,518	218
<b>Total NRC</b>	<b>584,603</b>	<b>626,100</b>	<b>626,100</b>	<b>670,295</b>	<b>44,195</b>
<b>Staffing (FTE) by Strategic Arena</b>					
Nuclear Reactor Safety	1,573	1,662	2,086	2,102	16
Nuclear Materials Safety	380	406	516	518	2
Nuclear Waste Safety	270	271	338	375	37
International Nuclear Safety Support	38	43	53	53	0
Management and Support	601	611	0	0	0
<b>Subtotal</b>	<b>2,862</b>	<b>2,993</b>	<b>2,993</b>	<b>3,048</b>	<b>55</b>
<b>Inspector General</b>	44	47	47	47	0
<b>Total NRC</b>	<b>2,906</b>	<b>3,040</b>	<b>3,040</b>	<b>3,095</b>	<b>55</b>
<b>Reimbursable Business-Like FTE</b>	13	19	19	14	-5
<b>Total NRC</b>	<b>2,919</b>	<b>3,059</b>	<b>3,059</b>	<b>3,109</b>	<b>50</b>

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### *Nuclear Reactor Safety*

- Support regulatory oversight of 104 reactors that are licensed to operate, as well as review of a wide range of licensing actions for existing reactors, including power uprates and license transfers.
- Support new reactor licensing activities, including review of three early site permit applications, three pre-application reviews, and three design certification reviews.
- Support the simultaneous review of up to twelve reactor license renewal applications and completion of reviews of five applications in FY 2005.
- Support a reactor research program focused on safety to ensure that licensees safely design, construct, and operate civilian nuclear reactor facilities.
- Support revisions to reactor regulations to reduce unnecessary burden while maintaining safety.
- Support planned homeland security efforts, including addressing any weaknesses identified through ongoing vulnerability assessments and conducting security performance reviews, including force-on-force exercises, at each nuclear power plant on a 3-year cycle instead of the 8-year cycle that the agency used prior to the terrorist attacks on September 11, 2001. These reviews will also include tabletop exercises that involve a wide array of Federal, State, and local law enforcement and emergency planning officials.

### *Nuclear Materials Safety*

- Continue regulatory oversight and inspection of the licensed fuel cycle facilities, including 18 nuclear fuel facilities, two gaseous diffusion enrichment facilities, and 18 uranium recovery facilities.
- Provide for a review of a new application for one gas centrifuge facility and continuing review of the application for a construction authorization request for a mixed-oxide fuel fabrication facility.
- Support licensing and inspection of approximately 4,400 nuclear materials licenses in FY 2005.
- Support ongoing efforts to risk-inform the materials regulatory framework.
- Support a nuclear materials research program focused on safety to ensure that licensees safely design, construct, and operate non-reactor fuel cycle facilities and safely use non-reactor NRC-regulated materials.
- Support planned homeland security efforts, including improving control of radioactive materials to prevent their potential use in radioactive dispersal devices, developing tracking systems for nuclear materials transactions, and contingency planning for unconventional threats to national security.

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### *Nuclear Waste Safety*

- Support high-level waste activities, including license application review, hearing-related activities, and hearing space, security, and information technology needs, reflecting DOE's anticipated license application date of December 2004.
- Support nuclear waste safety research, including the Package Performance Study which will assess the performance of spent nuclear fuel shipping containers under impact and fire conditions by testing a full-scale rail cask and a full-scale truck cask.
- Support regulatory oversight, including licensing and inspection for spent fuel storage and transportation, transportation of other radioactive materials, and decommissioning facilities.
- Support regulatory oversight of compliance with the National Environmental Policy Act of 1969, as amended, including review or preparation of environmental impact statements or environmental assessments for NRC licensing actions.

### *International Nuclear Safety Support*

- Continue working with international organizations, such as the International Atomic Energy Agency (IAEA) and the Nuclear Energy Agency (NEA).
- Support the issuance of 85 - 125 import/export licenses per year.
- Continue to support the work of the Agency for International Development for the countries of the Former Soviet Union and Central and Eastern Europe.
- Continue to leverage NRC resources by providing access to non-U.S. safety information through interactions with foreign entities.
- Support the development and implementation of international regulatory standards, policies, and practices.
- Continue to provide support to Russia's counterpart to the NRC, the Federal Nuclear and Radiation Safety Authority of Russia (Russian Federation Gosatomnadzor).

## **FY 2003 Significant Program Accomplishments**

### *Reactor License Renewal*

Met or exceeded all milestones for review of license renewal applications and process improvement. Specifically, the agency issued renewed licenses for North Anna Units 1 and 2, Surry Units 1 and 2, and Peach Bottom Units 2 and 3 in FY 2003, and St. Lucie Unit 1 and 2 and Fort Calhoun in the first quarter of FY 2004. Currently, eight additional renewal applications (encompassing sixteen units at ten sites) are under review. With the completion of the standard license renewal application format and several interim staff guidance (ISG) documents, the staff is confident of meeting its target goal of 30 percent labor efficiency.



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### *New Reactor Licensing*

Issued the draft safety evaluation of the Westinghouse AP1000 design certification application. After completion of the design certification rulemaking (currently planned for December 2005), the design can be referenced in individual license applications. The certified design can also be relied upon by the Commission, the Advisory Committee on Reactor Safeguards, and hearing boards in their reviews of those applications. In reviewing applications for combined licenses or operating licenses, the Commission must treat as resolved those matters resolved in connection with issuing the certification.

### *Power Uprates*

Completed reviews of 17 power uprate applications, resulting in approximately 260 Megawatts Electric (MWe) being added to the Nation's electric generating capacity. Based on recent surveys of licensees and information received from the licensees after the surveys, the staff expects licensees to request power uprates for approximately 28 reactors over the next five fiscal years. This has the potential of approximately 1,900 MWe to the Nation's electric generating capacity, equivalent to the generating capacity of approximately two nuclear power plants.

### *Reactor Safety Research*

Issued NUREG/CR-6810, "Over-Pressurization Test of a 1:4 Scale Prestressed Concrete Containment Vessel Model," and NUREG/CR-6809, "Post-Test Analysis of the NUPEC/NRC 1:4 Scale Prestressed Containment Vessel Model." These reports discuss tests to failure of a prestressed concrete containment vessel, which were performed jointly with NUPEC of Japan in 2000. The NRC will use this information in evaluating licensee or applicants' predictions of containment response. Data to validate such predictions were not available before, as previous work did not encompass the condition when prestressed concrete containment vessels experience severe accident conditions to the point of failure.

Completed the technical assessment of potential mitigation strategies associated with terrorist attacks using aircraft. The NRC will use this work to confirm the adequacy of current designs and compensatory measures, and if necessary, to identify possible mitigation strategies for power reactors to improve their safety with respect to terrorist threats.

Prepared draft Regulatory Guide DG-1122 to provide guidance to licensees on the quality needed for the probabilistic risk assessment (PRA) information used in risk-informed applications. As such, it will also provide guidance for assessing the technical adequacy of PRA results for risk-informed activities. This guide also addresses the staff's positions on the PRA Standard promulgated by the American Society of Mechanical Engineers, as well as the industry's guidance on PRA peer reviews. The NRC issued the draft guide for public

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comment in November 2002 and subsequently held a workshop on January 9, 2003, for representatives of the nuclear industry and other stakeholders.

### *Homeland Security*

Issued orders on January 7, 2003, to nuclear power reactor facilities to revise current requirements for access authorization. On April 29, 2003, the Commission issued orders to address security force fatigue and revise the requirements for guard training and qualification. The NRC also revised the design-basis threat (DBT), which describes the adversary force composition and characteristics against which licensees must design their physical protection systems and response strategies.

Resumed force-on-force exercises in a pilot program at nuclear power reactor sites. These exercises are conducted to assess and improve the performance of defensive strategies at licensed facilities. These exercises have been and are intended to be a primary means to conduct performance-based testing of a licensee's security force and its ability to prevent radiological sabotage as required by NRC regulations. In the future, force-on-force exercises will be conducted on a triennial basis.

Conducted a top-to-bottom review of the security and safeguards requirements of licensed materials using a risk-informed approach. As a result of this review, the NRC issued Compensatory Measure Orders to 57 NRC and Agreement State large panoramic irradiator licensees requiring implementation of additional security measures consistent with the existing threat environment. The NRC also issued Compensatory Measure Orders to six Category III fuel cycle licensees, and imposed compensatory measures by license condition for one additional fuel cycle licensee. The NRC issued Compensatory Measure Orders to 31 independent spent fuel storage installations requiring enhanced safety and safeguards measures for spent fuel storage. In addition, at the end of FY 2003, NRC issued order imposing compensatory measures on the two Category I facilities.

Performed a series of risk-informed vulnerability assessments of fuel cycle and materials facilities, and continued vulnerability assessments for spent fuel storage and transportation as part of NRC's comprehensive review of safeguards and security requirements. These assessments will provide the technical bases for future regulatory decisions. The assessments involve site visits to gather data. Each assessment evaluates consequences, defines vulnerabilities, applies a risk-informed series of threats, and proposes cost-beneficial countermeasures. The integrated results of all the assessments are anticipated in FY 2004.

Participated with DOE on the Interagency Working Group on Radiological Dispersal Devices and Sealed Sources and completed a report on approaches for "cradle-to-grave" control of radioactive sources that might be used in a radiological dispersal device. The Commission directed the staff to implement many of the recommendations.

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Provided extensive support to international developments in response to the possible terrorist use of radiological dispersal devices and radiological exposure devices. In addition, the staff supported the IAEA in developments related to the Code of Conduct during Agency Technical Meetings held in Vienna for the control and security of radioactive sources. The NRC's positions on key elements of the IAEA's Code of Conduct were later adopted.

Participated with Federal, State, and local government agencies in a national emergency preparedness exercise (TOPOFF-2). The NRC conducted a series of internal critiques around this exercise to capture "lessons learned" (i.e., opportunities to enhance the agency's emergency response capabilities) and participated in Federal interagency critiques on May 16, 2003. The NRC has also been a part of the interagency effort to create an integrated Federal Response Plan.

Co-sponsored with the DHS a 2-day Homeland Security Workshop on commercial nuclear security issues. The workshop included presentations and panel discussions of many of the issues involved in protection of nuclear activities, given by NRC, DHS, and other Federal, State, and local representatives, and drew significant attendance by State Homeland Security Advisors, State Liaison Officers, and representatives of Federal, State, and local governments.

### *Nuclear Materials*

Formed an NRC medical working group to coordinate and resolve all inspection, enforcement, and policy issues in working toward the implementation of the revised 10 CFR Part 35, which pertains to the medical use of byproduct materials. Consulted with the Advisory Committee on Medical Use of Isotopes on difficult medical issues related to Part 35 revisions.

Published a Federal Register Notice in February 2003 requesting written comments on a planned rulemaking and environmental scoping related to the disposition of solid material. The NRC posted a summary on the agency's public Web site detailing both written and oral comments made during a public workshop from various stakeholders.

Conducted four audits of DOE Office of Science laboratories to support a Congressional request to DOE to provide a detailed estimate of the cost of bringing its 10 Science laboratories into compliance with NRC standards for nuclear safety. These audit results, as well as others planned for FY 2004, will provide information that will enable DOE to respond with a cost estimate for external regulation in the event that Congress directs this action.

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### *Mixed Oxide Fuel Fabrication*

Issued a draft environmental impact statement and a revised draft safety evaluation report (SER) to document the review of the revised construction authorization request submitted by Duke Cogema Stone & Webster (DCS) to construct a mixed oxide fuel fabrication facility that will convert weapons-grade plutonium into mixed oxide fuel for use in commercial reactors approved by the NRC for such use. The NRC staff's overall conclusions remain the same in the revised draft SER. Specifically, DCS has not met all of the applicable requirements pertaining to construction of the facility.

### *High-Level Waste Activities*

Made available the "Yucca Mountain Review Plan" (NUREG-1804, Revision 2, Final Report), public comments on that document, and NRC responses to those comments. The Yucca Mountain Review Plan provides guidance to NRC staff for evaluating a DOE application for a license to receive and possess high-level radioactive waste at a geologic repository at Yucca Mountain, Nevada. The NRC staff also completed amendments to 10 CFR Part 63 addressing unlikely events. These actions completed the regulatory structure and guidance for a future NRC licensing decision on the potential Yucca Mountain repository.

Continued work to resolve the key technical issues that are most important to potential repository licensing. In particular, the staff focused on DOE responses to specific Key Technical Issue agreements. Completion of each agreement will enhance the likelihood that a DOE license application will be complete and of high quality. In FY 2003, the staff met all agreement review target dates. In connection with its pre-application review, the staff conducted outreach activities with stakeholders at public meetings in Inyo County, California, as well as meetings in Nye County, Nevada, the host county for the proposed repository.

Completed draft test protocols for the Package Performance Study (PPS) to determine the safety of spent fuel rail and truck containers in extreme accidents under impact and fire conditions. The NRC published the protocols for public comment and conducted four public meetings during FY 2003 to discuss the testing conditions and obtain public comments on the test protocols. The tests will provide empirical data to enhance confidence in the safety of spent nuclear fuel transport and in the NRC's ability to computationally predict the performance of various transportation packages under accident conditions.

### *Spent Fuel Storage Licensing and Inspection*

Completed significant work on the licensing process for the Private Fuel Storage, LLC (PFS) application for a license to construct and operate an away-from-reactor, independent spent fuel storage installation on the Reservation of the Skull Valley Band of Goshute Indians, a Federally recognized Indian Tribe. The Atomic Safety and Licensing Board (ASLB) issued a partial initial decision on air crash probability in March 2003, ruling that the chance of a

## **EXECUTIVE SUMMARY**

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military aircraft crash was a credible accident and that no license could be issued until the applicant had demonstrated that the consequences of such an accident would not pose a significant threat to the facility. Additional ASLB partial initial decisions were issued on geotechnical and financial issues in May 2003, resolving these contentions in favor of the applicant, PFS. The ASLB decision on environmental aspects of the rail line is yet outstanding.

### *Decommissioning of Nuclear Facilities*

Signed a memorandum of understanding (MOU) with the Environmental Protection Agency (EPA) on the radiological decommissioning and decontamination of NRC-licensed sites. The MOU reaffirms a long-standing EPA policy of deferring exercise of authority under Superfund for the majority of facilities decommissioned under the NRC's authority. The MOU establishes provisions for NRC and EPA consultation for certain NRC-licensed sites. The MOU does not impose any new requirements on NRC licensees.

Completed the review and approval of the license termination plans for the Saxton, Connecticut Yankee and Maine Yankee nuclear power plants. These approvals involved developing environmental assessments and safety evaluation reports for each site, as well as coordinating the actions with other agencies with regulatory authority at the sites, such as the States. Approval of these plans by the NRC is a critical step in the decommissioning process for nuclear power plants because it allows the plants to complete those activities necessary to request termination of the operating licenses for the facility.

### *Nuclear Waste Safety Research*

Published NUREG-1640, "Radiological Assessments for Clearance of Materials From Nuclear Facilities" in July 2003. This report provides individual dose factors for assessing critical groups for likely scenarios involving release of certain materials from licensed sources. The materials analyzed were steel, copper, aluminum, and concrete. Other materials are being analyzed separately and will be published later this year in a supplement to NUREG-1640. This work supports the development of a draft generic environmental impact statement to support rulemaking on the disposition of solid materials.

### *International Nuclear Safety Support*

Completed staff reviews for and issuance of approximately 87 import/export authorizations (NRC licenses or amendments), including reviews of proposed exports of proliferation-sensitive equipment and materials. This included granting exemptions for five separate imports of major reactor components to five U.S. utility companies. The NRC published a direct final rule in the Federal Register to allow imports of major reactor components under the agency's general import license authority provided the U.S. end user is an NRC licensee under 10 CFR Part 50 or Part 52.

## **EXECUTIVE SUMMARY**

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Participated in an IAEA Operational Safety Review Team (OSART) mission to Brazil, follow up International Regulatory Review Team (IRRT) missions to Hungary and Switzerland, and a Transport Safety Appraisal Service (TranSAS) mission to Panama. The NRC continued to engage in bilateral nuclear safety, safeguards and security-related assistance activities with its regulatory counterparts in Russia, the Ukraine, Armenia, Kazakhstan, and Lithuania. The NRC's activities are conducted in close coordination with other U.S. Government agencies (for example, the Departments of State and Energy) and international entities (for example, IAEA) providing similar assistance.

## **EXECUTIVE SUMMARY**

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### **Financing the NRC Budget**

The NRC's proposed FY 2005 budget will be financed by offsetting fees and direct appropriations, as shown in the following table.

<b>NRC FINANCING</b> (Dollars in Thousands)			
	<b>FY 2003</b>	<b>FY 2004</b>	<b>FY 2005</b>
<b>Budget Authority</b>	584,603	626,100	670,295
<b>Offsetting Fees</b>	526,273	545,560	541,121
<b>Net Appropriated</b>			
Nuclear Waste Fund	24,738	33,100	69,050
General Fund (Percent Off Fee Base)	33,592	47,440	60,124
<b>Total Net Appropriated</b>	58,330	80,540	129,174

In accordance with the Omnibus Budget Reconciliation Act of 1990, as amended, the NRC's proposed FY 2005 budget is based on 90-percent fee recovery. The entire NRC budget is subject to fees, with the exception of the High-Level Waste program. This results in offsetting fees of \$541.1 million in FY 2005, a decrease of \$4.4 million from FY 2004. Net appropriated funds increase by \$48.6 million in FY 2005.

### **Integration of Budget Estimates and Performance Plan**

The NRC is in the process of performing its triennial update to the FY 2000 – FY 2005 Strategic Plan, which will culminate in the submission to Congress of the agency's FY 2004 – FY 2009 Strategic Plan. As a result, the NRC is in a period of transition to new performance measures. The strategic and performance goals and associated strategies and measures discussed in this document reflect the FY 2000 - FY 2005 Strategic Plan measures as presented in the FY 2004 Budget Estimates and Performance Plan, which the agency previously submitted to Congress in February 2003.

#### *Strategic Arenas*

The FY 2005 Performance Budget is organized into four mission-related strategic arenas: Nuclear Reactor Safety, Nuclear Materials Safety, Nuclear Waste Safety, and International Nuclear Safety Support. The FY 2005 Performance Budget also includes information on the Office of the Inspector General. For each of the strategic arenas, this document provides a brief overview of the budget, strategic and performance goals and implementing strategies, performance measures, and justifications for certain program requests.

## **EXECUTIVE SUMMARY**

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### *Strategic Goals*

The NRC will conduct an efficient regulatory program that allows the Nation to use nuclear materials for beneficial civilian<sup>1</sup> purposes in a safe manner. The NRC will fulfill its mission to protect public health and safety and the environment by working to achieve the following strategic goals: (1) prevent radiation-related<sup>2</sup> deaths and illnesses, promote the common defense and security, and protect the environment in the use of civilian nuclear reactors (Nuclear Reactor Safety); (2) prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of source, byproduct, and special nuclear materials (Nuclear Materials Safety); (3) prevent significant adverse impacts from radioactive waste to the current and future public health and safety and the environment and promote the common defense and security (Nuclear Waste Safety); and (4) support U.S. interests in the safe and secure use of nuclear materials and in nuclear nonproliferation (International Nuclear Safety Support).

### *Performance Goals*

The NRC has also identified performance goals for Nuclear Reactor Safety, Nuclear Materials Safety, Nuclear Waste Safety, and International Nuclear Safety Support. Specifically, the FY 2000 – FY 2005 Strategic Plan identifies the following four performance goals: (1) maintain safety, protection of the environment, and the common defense and security; (2) increase public confidence; (3) make NRC activities and decisions more effective, efficient, and realistic; and (4) reduce unnecessary regulatory burden on stakeholders.

### *Performance Measures*

Performance measures indicate whether the NRC is achieving its strategic and performance goals. In FY 2002, the NRC established 55 performance measures, of which the agency accomplished 53 targets. This annual performance plan includes the performance targets for these measures. Our success in meeting these targets will be reported in our annual performance and accountability report.

### *Program Outputs*

In addition to performance measures, the NRC's annual performance plan includes program outputs, which link the overall level of funding requested for a given strategic arena to the funding requested for specific program activities. The agency has identified actual and projected output targets for activities that are critical to executing our Strategic Plan. In FY 2002, the NRC established 58 output measures, of which the agency accomplished 54 targets. These outputs are closely related to funding levels, workload projections, policy assumptions, and external factors. The Justifications for Program Requests section of this plan identifies the established output measures.



## **EXECUTIVE SUMMARY**

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### *President's Management Agenda*

The NRC's FY 2005 budget request supports the five Government-wide initiatives in the President's Management Agenda, as discussed in the following paragraphs.

In the area of Strategic Management of Human Capital, the NRC will work to ensure that staffing strategies meet targeted workforce levels by achieving FTE utilization within two percent of the authorized ceiling and maintain an employee/supervisory ratio of greater than 8.5:1. The NRC will also work to sustain a high-performing, diverse workforce by hiring 25 percent of new professional staff at the entry level and by retaining 75 percent of new entry-level and professional hires over their first three years of NRC employment. In addition, every year the NRC will identify the most significant critical workforce skills imbalances, and develop human capital strategies to minimize skill gaps within 60 days of identifying the need. The NRC will work to ensure that the diversity of the agency's workforce compares favorably (within 25%) with relevant American labor market based upon Oak Ridge Institute of Science and Education availability data. The NRC's Managing Diversity Process facilitates the agency's policy of establishing and maintaining an organizational environment that fosters equal opportunity for all employees and applicants for employment and valuing each member of the NRC community. This process assists the agency to sustain a high quality, diverse workforce and to create and maintain a positive work environment that values employee differences, with a primary goal of full utilization of all employees.

In the area of competitive sourcing, the NRC has been making significant progress toward achieving OMB's objective of considering a minimum of 15 percent of commercial positions for competitive sourcing. With the issuance on May 29, 2003, of OMB's revised Circular A-76, the NRC suspended ongoing activities to assess the changes. The NRC is in the process of reevaluating its competitive sourcing strategy consistent with guidance contained in OMB's Competitive Sourcing Report dated July 25, 2003. The agency's future competitions and infrastructure to support these activities will be based on the evolving strategy. In the area of performance-based contracting, the NRC will ensure that not less than 20 percent of eligible service contracting dollars for contracts over \$25,000 use performance-based contracting techniques. The NRC will also ensure that and 100 percent of required synopses for acquisitions are posted on the Government-wide procurement point-of-entry Web site, [www.FedBizOpps.gov](http://www.FedBizOpps.gov).

In the area of Improved Financial Performance, in response to the President's Management Agenda, the NRC received an unqualified opinion with no material weaknesses on its FY 2003 Financial Statements. The Office of the Chief Financial Officer will continue to provide quarterly cost accounting reports to assist agency managers in analyzing the costs of their programs on a routine basis. In addition, the NRC will utilize an automated, single-input system for employees nationwide to enter time and labor information to support payroll processing, the NRC's work management system, the cost accounting system, and the fee billing system.

## **EXECUTIVE SUMMARY**

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To advance Expanded Electronic Government (E-Government), the NRC will work to support Government-wide E-Government initiatives, including E-Rulemaking, E-Authentication, E-Records, and E-Hiring. The NRC will also work to monitor and support agency compliance with pending E-Government legislation.

Finally, in the area of Budget and Performance Integration, the NRC is presenting its budget using a full-costing methodology and will continue (for the 6th consecutive year) to combine the budget and performance plan, reflecting the alignment of resources with anticipated outcomes. In FY 2003, the NRC performed its first program assessments through the OMB Program Assessment Rating Tool (PART) program. The two programs selected for evaluation were Reactor Inspection and Performance Assessment and Fuel Facilities Licensing and Inspection. Both programs were rated as effective, the highest rating under PART.

Although both NRC programs received high scores, recommendations were made by OMB to strengthen the demonstrated linkage between resource allocation and achievement of the agency's strategic goals, and to schedule more regular independent program evaluations. The agency is taking actions to address these recommendations, starting with the update of its five-year Strategic Plan. In the FY 2004-2009 Strategic Plan, agency activities and investments of resources are aligned with goals at a high level; intermediate outcomes and performance measures that will illuminate progress toward the goals are being developed for inclusion in the FY 2006 performance budget.

## **EXECUTIVE SUMMARY**

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### **NOTES**

1. As used in this plan, “civilian” uses or activities refer to those commercial and other uses of nuclear materials and facilities, including certain military activities (such as at hospitals and high-level waste disposal), which the Atomic Energy Act requires the NRC to license and otherwise regulate.
2. As used in this plan, the term “radiation-related” includes other hazards associated with the production and use of radioactive materials, such as potential chemical hazards related to fuel processing.

# **APPROPRIATIONS LEGISLATION**

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## PROPOSED FY 2005 APPROPRIATIONS LEGISLATION

The NRC's proposed appropriations legislation for FY 2005 is as follows:

### Salaries and Expenses

For necessary expenses of the Commission in carrying out the purposes of the Energy Reorganization Act of 1974, as amended, and the Atomic Energy Act of 1954, as amended, including official representation expenses (not to exceed \$15,000) and purchase of promotional items for use in the recruitment of individuals for employment, \$662,777,000, to remain available until expended: Provided, That of the amount appropriated herein, \$69,050,000 shall be derived from the Nuclear Waste Fund: Provided further, That revenues from licensing fees, inspection services, and other services and collections estimated at \$534,354,300 in fiscal year 2005 shall be retained and used for necessary salaries and expenses in this account, notwithstanding 31 U.S.C. 3302, and shall remain available until expended: Provided further, that the sum herein appropriated shall be reduced by the amount of revenues received during fiscal year 2005 so as to result in a final fiscal year 2005 appropriation estimated at not more than \$128,422,700.

### Office of the Inspector General

For necessary expenses of the Office of the Inspector General in carrying out the provisions of the Inspector General Act of 1978, as amended, to include awards (not to exceed \$5,000) to employees of State and local agencies and private citizens in recognition of efforts and initiatives that support the mission of the Office of the Inspector General, \$7,518,000 to remain available until expended: Provided, That revenues from licensing fees, inspection services, and other services and collections estimated at \$6,766,200 in fiscal year 2005 shall be retained and be used for necessary salaries and expenses in this account, notwithstanding 31 U.S.C. 3302, and shall remain available until expended; Provided further, That the sum herein appropriated shall be reduced by the amount of revenues received during fiscal year 2005 so as to result in a final fiscal year 2005 appropriation estimated at not more than \$751,800.

## **PROPOSED FY 2005 APPROPRIATIONS LEGISLATION**

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### **Analysis of Proposed FY 2005 Appropriations Legislation**

The analysis of the NRC's proposed appropriations legislation for FY 2005 is as follows:

#### **Salaries and Expenses**

1. FOR NECESSARY EXPENSES OF THE COMMISSION IN CARRYING OUT THE PURPOSES OF THE ENERGY REORGANIZATION ACT OF 1974, AS AMENDED, AND THE ATOMIC ENERGY ACT OF 1954, AS AMENDED:

42 U.S.C. 5841 et seq.

The NRC was established by the Energy Reorganization Act of 1974, as amended (42 U.S.C. 5801 et seq.). This act abolished the Atomic Energy Commission (AEC) and transferred to the NRC all of the AEC's licensing and related regulatory functions. These functions included those of the Atomic Safety and Licensing Board Panel and the Advisory Committee on Reactor Safeguards; responsibilities for licensing and regulating nuclear facilities and materials; and conducting research for the purpose of confirmatory assessment related to licensing, regulation, and other activities, including research related to nuclear materials safety and regulation under the provisions of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.).

2. INCLUDING OFFICIAL REPRESENTATION EXPENSES:

47 Comp. Gen. 657, 43 Comp. Gen. 305

This language is required because of the established rule restricting an agency from charging appropriations with the cost of official representation unless the appropriations involved are specifically available therefor. Congress has appropriated funds for official representation expenses to the NRC and its predecessor, the Atomic Energy Commission, each year since FY 1950.

3. INCLUDING PURCHASE OF PROMOTIONAL ITEMS FOR USE IN THE RECRUITMENT OF INDIVIDUALS FOR EMPLOYMENT:

B-247563.3, April 5, 1996

This language is required because 31 U.S.C. 1301(a) provides that appropriated funds are available only for authorized purposes. Specific statutory authority is required for purchasing items of nominal value that can be given to attract potential employees as part of the NRC's recruitment effort.

## **PROPOSED FY 2005 APPROPRIATIONS LEGISLATION**

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4. TO REMAIN AVAILABLE UNTIL EXPENDED:

31 U.S.C. 1301 provides that no regular, annual appropriation shall be construed to be permanent or available continuously unless the appropriation expressly provides that it is available after the fiscal year covered by the law in which it appears.

5. SHALL BE DERIVED FROM THE NUCLEAR WASTE FUND:

42 U.S.C. 10131(b)(4) provides for the establishment of a Nuclear Waste Fund to ensure that the costs of carrying out activities relating to the disposal of high-level radioactive waste and spent nuclear fuel will be borne by the persons responsible for generating such waste and spent fuel.

42 U.S.C. 10222(a)(4) provides that the amount of fees paid into the Nuclear Waste Fund by generators or owners of such waste and spent fuel shall be reviewed annually to determine if any adjustments are needed to ensure full cost recovery.

42 U.S.C. 10134 specifically requires the NRC to license a repository for the disposal of high-level radioactive waste and spent nuclear fuel and sets forth certain licensing procedures. 42 U.S.C. 10133 also assigns review responsibilities to the NRC in the steps leading to submission of the license application. Thus, the Nuclear Waste Policy Act of 1982, as amended, establishes the NRC's responsibility throughout the repository siting process, culminating in the requirement for NRC licensing as a prerequisite to construction and operation of the repository.

42 U.S.C. 10222(d) specifies that expenditures from the Nuclear Waste Fund can be used for purposes of radioactive waste disposal activities, including identification, development, licensing, construction, operation, decommissioning, and post-decommissioning maintenance and monitoring of any repository constructed under the Nuclear Waste Policy Act of 1982, and administrative costs of the high-level radioactive waste disposal program.

6. REVENUES FROM LICENSING FEES, INSPECTION SERVICES, AND OTHER SERVICES AND COLLECTIONS SHALL BE RETAINED AND USED FOR NECESSARY SALARIES AND EXPENSES IN THIS ACCOUNT, NOTWITHSTANDING 31 U.S.C. 3302, AND SHALL REMAIN AVAILABLE UNTIL EXPENDED:

Under Title V of the Independent Offices Appropriation Act of 1952, the NRC is authorized to collect license fees. Pursuant to 31 U.S.C. 9701, any person who receives a service or



## **PROPOSED FY 2005 APPROPRIATIONS LEGISLATION**

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thing of value from the Commission shall pay fees to cover the NRC's cost in providing such service or thing of value.

Pursuant to 42 U.S.C. 2213, the NRC is required to assess and collect annual charges from NRC licensees and certificate holders, except for the holders of any license for a Federally owned research reactor used primarily for educational training and academic research purposes. For FY 2005, 42 U.S.C. 2213 requires that the aggregate amount of such charges approximate 90 percent of the Commission's budgetary authority, less any amount appropriated to the Commission from the Nuclear Waste Fund.

31 U.S.C. 3302 requires the NRC to deposit all revenues collected to miscellaneous receipts of the Treasury unless specifically authorized by law to retain and use such revenues.

7. **THE SUM HEREIN APPROPRIATED SHALL BE REDUCED BY THE AMOUNT OF REVENUES RECEIVED:**

Pursuant to 42 U.S.C. 2213, the NRC is required to assess and collect annual charges from NRC licensees and certificate holders, with the exception of the holders of any license for a Federally owned research reactor used primarily for educational training and academic research purposes. For FY 2005, 42 U.S.C. 2213 requires that the aggregate amount of such charges approximate 90 percent of the Commission's budgetary authority, less any amount appropriated to the Commission from the Nuclear Waste Fund.

## **PROPOSED FY 2005 APPROPRIATIONS LEGISLATION**

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### Inspector General

8. FOR NECESSARY EXPENSES OF THE OFFICE OF THE INSPECTOR GENERAL IN CARRYING OUT THE PROVISIONS OF THE INSPECTOR GENERAL ACT OF 1978, AS AMENDED:

Public Law 95-452, 5 U.S.C. app., as amended by Public Law 100-504

Public Law 100-504 amended Public Law 95-452 to establish the Office of the Inspector General within the NRC effective April 17, 1989, and to require the establishment of a separate appropriation account to fund the Office of the Inspector General.

9. TO INCLUDE AWARDS (NOT TO EXCEED \$5,000) TO EMPLOYEES OF STATE AND LOCAL AGENCIES AND PRIVATE CITIZENS IN RECOGNITION OF EFFORTS AND INITIATIVES THAT SUPPORT THE MISSION OF THE OFFICE OF THE INSPECTOR GENERAL:

31 U.S.C. 1301(a) provides that appropriated funds are available only for authorized purposes. The Government Employees Incentive Awards Act authorizes an agency to pay cash awards to Federal government employees. No similar authority exists for persons other than Federal government employees. Specific statutory authority is required for awarding employees of state and local agencies and private citizens in recognition of efforts and initiatives that support the Office of the Inspector General's mission.

10. TO REMAIN AVAILABLE UNTIL EXPENDED:

31 U.S.C. 1301 provides that no regular, annual appropriation shall be construed to be permanent or available continuously unless the appropriation expressly provides that it is available after the fiscal year covered by the law in which it appears.

11. REVENUES FROM LICENSING FEES, INSPECTION SERVICES, AND OTHER SERVICES AND COLLECTIONS SHALL BE RETAINED AND USED FOR NECESSARY SALARIES AND EXPENSES IN THIS ACCOUNT, NOTWITHSTANDING 31 U.S.C. 3302, AND SHALL REMAIN AVAILABLE UNTIL EXPENDED:

Under Title V of the Independent Offices Appropriation Act of 1952, the NRC is authorized to collect license fees. Pursuant to 31 U.S.C. 9701, any person who receives a service or thing of value from the Commission shall pay fees to cover the NRC's cost in providing such service or thing of value.

## **PROPOSED FY 2005 APPROPRIATIONS LEGISLATION**

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Pursuant to 42 U.S.C. 2213, the NRC is required to assess and collect annual charges from NRC licensees and certificate holders, except for the holders of any license for a Federally owned research reactor used primarily for educational training and academic research purposes. For FY 2005, 42 U.S.C. 2213 requires that the aggregate amount of such charges approximate 90 percent of the Commission's budgetary authority, less any amount appropriated to the Commission from the Nuclear Waste Fund.

31 U.S.C. 3302 requires the NRC to deposit all revenues collected to miscellaneous receipts of the Treasury unless specifically authorized by law to retain and use such revenue.

12. **THE SUM HEREIN APPROPRIATED SHALL BE REDUCED BY THE AMOUNT OF REVENUES RECEIVED:**

Pursuant to 42 U.S.C. 2213, the NRC is required to assess and collect annual charges from NRC licensees and certificate holders, except for the holders of any license for a Federally owned research reactor used primarily for educational training and academic research purposes. For FY 2005, 42 U.S.C. 2213 requires that the aggregate amount of such charges approximate 90 percent of the Commission's budgetary authority, less any amount appropriated to the Commission from the Nuclear Waste Fund.

# **NUCLEAR REACTOR SAFETY**

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## NUCLEAR REACTOR SAFETY

The Nuclear Reactor Safety Arena encompasses all NRC efforts to ensure that civilian nuclear power reactor facilities, as well as non-power reactors, are licensed and operated in a manner that adequately protects the health and safety of the public and the environment and protects against radiological sabotage and theft or diversion of special nuclear materials. The Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended, are the foundation for regulating the Nation's civilian nuclear power industry. These efforts include reactor licensing (including power uprates and license transfers, operator licensing, regulation development, operating experience evaluation, and financial assurance); reactor license renewal; reactor inspection and performance assessment (including emergency response, reactor technical and regulatory training, imposition of enforcement sanctions for violations of NRC requirements, and investigation of alleged wrongdoing by licensees, applicants, contractors, or vendors); reactor regulatory research; new reactor licensing; and Homeland Security efforts (including threat assessment, mitigating strategies, security inspections, and force-on-force exercises).

### Budget Overview

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	185,428	201,522	249,273	263,103	13,830
Contract Support and Travel	90,967	105,460	174,213	172,046	-2,167
<b>Total Budget Authority</b>	276,395	306,982	423,486	435,149	11,663
FTE	1,573	1,662	2,086	2,102	16

The full-cost budget request of \$435.1M and 2,102 FTE for the Nuclear Reactor Safety Arena supports the regulatory oversight of 104 civilian nuclear power plants that are currently licensed to operate.<sup>1</sup> Although arena activities are being conducted more efficiently, resources increase to address major programmatic efforts such as new reactor licensing and reactor license renewal. The full-cost budget includes \$36.1M in FY 2004 and \$39.7M in FY 2005 to support new reactor licensing activities, including early site permits, pre-application and design certification reviews, and regulatory infrastructure updates. Resources have been allocated in FY 2005 to accommodate the simultaneous review of 12 license renewal applications throughout the fiscal year. Resource estimates also reflect a 22-month cycle, assuming no hearing is required, for completion of each renewal application (after start of the review). Resources provide for strengthening reactor oversight activities to provide early identification and management of potential safety issues.

## NUCLEAR REACTOR SAFETY

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Of the \$11.7M increase in FY 2005, \$13.8M is associated with the Government-wide FY 2005 pay raise, other increases in salaries and benefits, and 16 additional FTE primarily to support the Reactor Licensing and New Reactor Licensing Programs. This increase is offset by a \$2.2M decrease in contract support and travel, which is primarily attributable to the completion of mitigating strategy activities in Homeland Security.

### Measuring Results – Strategic and Performance Goals

This strategic arena includes strategic and performance goals, measures, and strategies. The **strategic goal** is the overall outcome the NRC wants to achieve. The **performance goals** are the key contributors to achieving the strategic goal and focus on outcomes over which the agency has control. The **performance measures** indicate whether the NRC is achieving its goal and establish the basis for performance management. These measures establish how far and how fast the agency will move in the direction established by the performance goals. The **strategies** describe how the NRC will achieve its performance goals and their associated measures. In other words, the strategies provide the direct link between what the agency wants to achieve (i.e., goals) and the key activities the agency will conduct to achieve those goals.

#### Our Strategic Goal

In the Nuclear Reactor Safety Arena, the NRC will conduct an efficient regulatory program to ensure that civilian nuclear power reactors, as well as non-power reactors, are operating in a manner that adequately protects public health and safety, promotes the common defense and security, protects the environment, and safeguards special nuclear materials used in reactors by working to achieve the following strategic goal:

Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of civilian nuclear reactors.

#### Four Performance Goals and Their Implementing Strategies

- (1) To **maintain safety, protection of the environment, and the common defense and security**, the NRC will employ the following strategies:
  - We will sharpen our focus on safety by continuing to assess and improve the NRC's reactor oversight process for our inspection, assessment, and enforcement activities.
  - We will respond to operational events involving potential safety or safeguards consequences.

## NUCLEAR REACTOR SAFETY

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- We will evaluate operating experience and the results of risk assessments for safety implications.
- We will thoroughly evaluate applications for new reactor licenses, design certifications, and early site permits to ensure that appropriate safety standards are established and maintained.
- We will identify, evaluate, and resolve safety issues, including age-related degradation, and ensure that an independent technical basis exists to review licensee submittals to ensure that safety is maintained.
- We will ensure that changes to operating licenses and exemptions to regulations maintain safety and meet regulatory requirements.
- We will ensure that license amendments involving license transfers and power uprates maintain safety and meet regulatory requirements.
- We will ensure that safety is maintained as licenses are renewed by ensuring that aging effects will be adequately managed and that the licensing basis related to the present plant design and operation will be maintained.
- We will maintain safety by ensuring that operator licenses are issued and renewed only to qualified individuals.
- We will continue to develop and use risk-informed and less-prescriptive performance-based<sup>2</sup> regulatory approaches, where appropriate, to maintain safety.

(2) To **increase public confidence**, the NRC will employ the following strategies:

- We will make public participation in the regulatory process more accessible. We will listen to the public's concerns and involve our stakeholders more fully in the regulatory process.
- We will communicate more clearly. We will add more focus, clarity, and consistency to our message, be timely, and present candid and factual information in the proper context with respect to the risk of the activity.
- We will continue to enhance the NRC's accountability and credibility by being a well-managed, independent regulatory agency. We will increase efforts to share our accomplishments with the public.



## **NUCLEAR REACTOR SAFETY**

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- We will report on the performance of nuclear power facilities in an open and objective manner.
  - We will continue to foster an environment in which safety issues can be openly identified without fear of retribution.
  - We will continue to develop and present communications courses to facilitate more effective communication with the public in public meetings and in documents.
  - We will continue to implement the plain language initiatives through staff and supervisor training in techniques for writing in clear, plain language and by including plain-language executive summaries in high-profile reports and documents.
- (3) To **make NRC activities and decisions more effective, efficient, and realistic**, the NRC will employ the following strategies:
- We will use risk information to improve the effectiveness and efficiency of our activities and decisions.
  - We will make agency decisions based on technically sound and realistic information.
  - We will anticipate challenges posed by the introduction of new technologies and changing regulatory demands.
  - We will identify, prioritize, and modify processes based on effectiveness reviews to maximize opportunities to improve those processes.
  - We will maintain a strong research program that supports increased realism in our decision making.
- (4) To **reduce unnecessary regulatory burden on stakeholders**, the NRC will employ the following strategies:
- We will utilize risk information and performance-based approaches to reduce unnecessary regulatory burden.
  - We will improve and execute our programs and processes in ways that reduce unnecessary costs to our stakeholders.
  - We will improve our reactor oversight process by redirecting resources from those areas that are less important to safety.

## NUCLEAR REACTOR SAFETY

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- We will actively seek stakeholder input to identify opportunities to reduce unnecessary regulatory burden.

### Performance Measures

The actual data reported for some of our strategic and performance goal measures for maintaining safety are subject to change as a result of the NRC's analysis of reported information, as well as the receipt of newly reported information. Future performance plan submissions will report and explain any changes to the data.

### Strategic Goal Measures

The following measures are associated with the Nuclear Reactor Safety strategic goal.

STRATEGIC GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<i>No nuclear reactor accidents.<sup>3</sup></i>						
<i>Target:</i>	0	0	0	0	0	0
<i>Actual:</i>	0	0	0	0		
<i>No deaths resulting from acute radiation exposures from nuclear reactors.</i>						
<i>Target:</i>	0	0	0	0	0	0
<i>Actual:</i>	0	0	0	0		
<i>No events at nuclear reactors resulting in significant radiation exposures.<sup>4</sup></i>						
<i>Target:</i>	0	0	0	0	0	0
<i>Actual:</i>	0	0	0	0		
<i>No radiological sabotage at nuclear reactors.</i>						
<i>Target:</i>	0	0	0	0	0	0
<i>Actual:</i>	0	0	0	0		
<i>No events that result in releases of radioactive material from nuclear reactors causing an adverse impact<sup>5</sup> on the environment.</i>						
<i>Target:</i>	0	0	0	0	0	0
<i>Actual:</i>	0	0	0	0		

## NUCLEAR REACTOR SAFETY

### Performance Goal (PG) Measures

The following measures are associated with the Nuclear Reactor Safety performance goals. The performance goal is associated with each measure identified by the acronym PG and the goal number, as identified in the previous section.

PERFORMANCE GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<i>No more than one event per year identified as a significant precursor of a nuclear accident.<sup>6</sup> (PG1)</i>						
<i>Target:</i>	1 or less	1 or less	1 or less	1 or less	1 or less	1 or less
<i>Actual:</i>	0	0	0	0		
<i>No statistically significant adverse industry trends in safety performance. (PG1)</i>						
<i>Target:</i>	0	0	0	0	0	0
<i>Actual:</i>	0	0	0	0		
<i>No events resulting in radiation overexposures<sup>7</sup> from nuclear reactors that exceed applicable regulatory limits. (PG1)</i>						
<i>Target:</i>	0	0	0	0	0	0
<i>Actual:</i>	0	0	0	0		
<i>No more than three releases per year to the environment of radioactive material from nuclear reactors that exceed the regulatory limits.<sup>8</sup> (PG1)</i>						
<i>Target:</i>	3 or less	3 or less	3 or less	3 or less	3 or less	3 or less
<i>Actual:</i>	0	0	0	0		
<i>No breakdowns of physical security that significantly weaken the protection against radiological sabotage or theft or diversion of special nuclear materials in accordance with abnormal occurrence criteria. (PG1)</i>						
<i>Target:</i>	0	0	0	0	0	0
<i>Actual:</i>	0	0	0	0		
<i>Complete the milestones relating to collecting, analyzing, and trending information for measuring public confidence. (PG2)</i>						
<u>Milestones:</u>						
FY 2001	Conduct semiannual evaluations of all public meeting feedback forms to determine any trends in NRC public meetings.					
FY 2002	Develop recommendation for continued use of public meeting feedback form or for another method of assessing public confidence.					
FY 2003-04	Create a Web-based system to compile and analyze trends in the responses of the feedback forms to assess the agency's meeting performance.					
FY 2005	Assess public meeting performance through review of feedback forms. Consider using results to target specific training or guidance for the staff.					
<i>Target:</i>	New Measure in FY 2001	Will meet target	Will meet target	Will meet target	Will meet target	Will meet target
<i>Actual:</i>		Met target	Met target	Met target		

**NUCLEAR REACTOR SAFETY**

PERFORMANCE GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Complete all of the public outreaches. (PG2)</b>						
<u>Milestones:</u>						
FY 2001	October, November, and December 2000 - Conduct regional/licensee public forums. January 2001 - Issue <i>Federal Register</i> notice requesting external stakeholder feedback. Second Quarter FY 2001 - Analyze external stakeholder feedback on Reactor Oversight Process. April 2001 - Conduct public lessons learned workshop.					
FY 2002	Conduct local public meeting on the draft environmental impact statement for the license renewal of Surry Units 1 and 2; North Anna Units 1 and 2; Catawba Units 1 and 2; McGuire Units 1 and 2; and Peach Bottom Units 2 and 3. Conduct public environmental scoping meetings for St. Lucie Units 1 and 2; Robinson; and Ft. Calhoun.					
FY 2003	Conduct local public meetings for environmental scoping and/or draft environmental impact statements for license renewal for St. Lucie Units 1 and 2, Ft. Calhoun, Robinson, Ginna, and V.C. Summer. Conduct public environmental scoping meetings for Quad Cities 1 and 2; and Dresden 2 and 3.					
FY 2004	Conduct local public meetings near Clinton, Grand Gulf, and North Anna to describe the early site permit process. Conduct local public meetings for environmental scoping and/or draft environmental impact statements for license renewal applications that reach this stage of the review process in FY 2004.					
FY 2005	Conduct local public meetings for environmental scoping and/or draft environmental impact statements for license renewal applications that reach this stage of the review process in FY 2005.					
<i>Target:</i>	New Measure in FY 2001	Will meet target	Will meet target	Will meet target	Will meet target	Will meet target
<i>Actual:</i>		Met target	Met target	Met target		
<b>Issue Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206<sup>9</sup> within an average of 120 days.<sup>10</sup> (PG2)</b>						
<i>Target:</i>	New Measure in FY 2001	120 days	120 days	120 days	120 days	120 days
<i>Actual:</i>		120 days (avg.)	126 days <sup>11</sup>	116 days		
<b>Complete those specific reactor milestones in the Risk-Informed Regulation Implementation Plan. (PG3)</b>						
<u>Milestones:</u>						
FY 2001	October 27, 2000 - Send Risk-Informed Regulation Implementation Plan (RIR-IP) to the Commission. November 17, 2000 - Brief Commission on RIR-IP. August 2001 - Develop final criteria and milestones.					
FY 2002-05	Execute milestones from RIR-IP (identified at beginning of each fiscal year).					
<i>Target:</i>	New Measure in FY 2001	Will meet target	Will meet target	Will meet target	Will meet target	Will meet target
<i>Actual:</i>		Met target	Met target	Met target		

**NUCLEAR REACTOR SAFETY**

PERFORMANCE GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Complete at least two key process improvements per year in selected program and support areas that increase effectiveness, efficiency, and realism. (PG3)</b>						
<i>Target:</i>	New Measure in FY 2001	Complete 2 key processes	Complete 2 key processes	Complete 2 key processes	Complete 2 key processes	Complete 2 key processes
<i>Actual:</i>		Completed 2 key processes	Completed 2 key processes	Completed 2 key processes		
<b>Complete those major milestones scheduled in accordance with the Commission-approved schedules in order to support completion of license renewal applications within 30 months from receipt of application to a Commission decision if a hearing is held (within 22 months without a hearing) , beginning in FY 2003; or within 25 months without a hearing prior to FY 2003. (PG3)</b>						
<i>Target:</i>	Complete Calvert Cliffs by 4/00 Oconee by 7/00	No application scheduled	Complete Hatch by 9/02 Complete Turkey Point by 10/02	Complete Surry and North Anna by 3/03* Peach Bottom by 5/03*	Complete St. Lucie by 10/03*, Catawba and McGuire by 12/03, Fort Calhoun by 11/03*, Robinson by 4/04*, Ginna by 6/04*, and Summer by 6/04*	Complete Dresden and Quad Cities by 11/04*
<i>Actual:</i>	Completed Calvert Cliffs 3/00 (24 months)* Oconee completed 5/00 (23 months)*	Completed Arkansas Nuclear One Unit 1 6/01 (17 months)*	Completed Hatch 1/02 (23 months)* Completed Turkey Point 6/02 (21 months)*	Completed Surry and North Anna 3/03 (22 months)* Completed Peach Bottom 5/03 (22 months)*	Completed St. Lucie 10/03 (22 months)* Completed Fort Calhoun 11/03 (22 months)	
<i>* There are no hearings associated with these reviews.</i>						
<b>Complete those specific milestones to reduce unnecessary regulatory burden. (PG4)</b>						
<b>Milestones:</b>						
FY 2001	Develop a process for collecting data and identify activities that have the greatest impact on reducing unnecessary regulatory burden while maintaining safety.					
FY 2002-04	Implement initiative as outlined in SECY-02-0081 with completion targeted for the end of FY 2004.					
FY 2005	Regulatory burden will be determined as regulatory requirements are reviewed and updated.					
<i>Target:</i>	New Measure in FY 2001	Will meet target	Will meet target	Will meet target	Will meet target	Will meet target
<i>Actual:</i>		Met target	Met target	Met target		

**NUCLEAR REACTOR SAFETY**

**BUDGET AUTHORITY AND FULL-TIME EQUIVALENT BY PROGRAM**

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Program (\$K)</b>					
Reactor Licensing	65,233	63,116	93,581	100,486	6,905
Reactor License Renewal	15,389	22,077	29,653	29,963	310
Reactor Inspection and Performance Assessment	96,531	96,204	147,438	156,775	9,337
Reactor Safety Research	61,070	63,077	72,911	72,658	-253
New Reactor Licensing	18,327	27,890	36,131	39,699	3,568
Homeland Security	19,845	34,618	43,772	35,568	-8,204
<b>Total Budget Authority</b>	276,395	306,982	423,486	435,149	11,663
<b>Full-Time Equivalent Employment by Program</b>					
Reactor Licensing	463	449	559	569	10
Reactor License Renewal	88	105	133	135	2
Reactor Inspection and Performance Assessment	711	718	905	904	-1
Reactor Safety Research	152	153	189	189	0
New Reactor Licensing	81	109	139	147	8
Homeland Security	78	128	161	158	-3
<b>Total FTE</b>	1,573	1,662	2,086	2,102	16

**Justification of Program Requests**

The Nuclear Reactor Safety Arena comprises six programs, which are described in the following pages.

**NUCLEAR REACTOR SAFETY**

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*Reactor Licensing*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	55,951	55,699	68,186	72,591	4,405
Contract Support and Travel	9,282	7,417	25,395	27,895	2,500
<b>Total Budget Authority</b>	65,233	63,116	93,581	100,486	6,905
FTE	463	449	559	569	10

*FY 2005 Activities.* The NRC is responsible for overseeing the licenses of 104 nuclear power reactors and will complete 1,500 licensing actions to amend existing licenses (including approximately 12 requests each year to increase the power generating capacity of specific commercial reactors), and 350 other licensing tasks to address issues that do not require a license amendment. Activities include legal advice and representation with respect to these reactor licensing actions. As part of its Reactor Licensing Program, the NRC will screen and evaluate approximately 1,000 reports regarding events that occur at power reactors each year. The NRC is also responsible for licensing all personnel authorized to operate power reactors and will conduct approximately 50 examination sessions each year to ensure operator competency. The NRC develops regulations governing the safe operation of nuclear facilities that will ensure adequate protection of workers, the public, and the environment. To continue to move the agency toward a more risk-informed and/or performance-based regulation for governing the safe operation of reactors while attempting to reduce the regulatory burden on licensees, the NRC will work on approximately 14 active rulemakings and issue four to five final rules each year. The staff continues to conduct power uprate reviews, and in FY 2003 the staff completed reviews for power uprates at 17 units. These uprates increased electrical generating capacity by about 260MWe. In addition, the NRC will oversee the operation of 35 test and research reactors and their associated 300 non-power reactor operators to ensure continued safety.

*Change from FY 2004.* Resources increase primarily to address issues associated with Davis-Besse Lessons Learned Task Force recommendations and their implementation.

The requested resources will support agency efforts to achieve the output targets established in the following table.

## NUCLEAR REACTOR SAFETY

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Licensing actions completed per year, including conversions to improved Standard Technical Specifications (iSTS).*</b>						
Target:	1,500	1,500	1,500	1,500	1,500	1,500
Actual:	1,574	1,617	1,560	1,774		
*Output modified in FY 2001 to include the phrase "including conversions to improved Standard Technical Specifications."						
<b>Output: Age of licensing action inventory, except for license renewal and iSTS conversions.*</b>						
Target:	95% ≤ 1 year 100% ≤ 2 years	95% ≤ 1 year 100% ≤ 2 years	96% ≤ 1 year 100% ≤ 2 years	96% ≤ 1 year 100% ≤ 2 years	96% ≤ 1 year 100% ≤ 2 years	96% ≤ 1 year 100% ≤ 2 years
Actual:	98.3% ≤ 1 year 100% ≤ 2 years	96.9% ≤ 1 year 99.9% ≤ 2 years	96.5% ≤ 1 year 100% ≤ 2 year	96.3% ≤ 1 year 100% ≤ 2 year		
*Output modified in FY 2001 to include the phrase "except for license renewal." Output modified in FY 2002 to include the phrase "except for license renewal and iSTS conversions."						
<b>Output: Size of licensing action inventory.</b>						
Target:	≤ 750	≤ 900	≤ 1,000	≤ 1,000	≤ 1,000	≤ 1,000
Actual:	962	877	765	1,296*		
*The inventory exceeded the 1,000 goal by 296 due to an increase of opened licensing actions in FY 2003 regarding the following security orders: (1) Design Basis Threat, (2) Fatigue, (3) Training, and (4) Access Authorization. The four security orders accounted for 412 licensing actions opened during FY 2003. Following the events of September 11, 2001, and as part of the Commission's review of the security and safeguards program, the Commission assessed information provided by the intelligence community and determined that revisions were warranted for the following: (1) access authorization programs, (2) design basis threat, (3) tactical and firearms proficiency and physical fitness requirements for security force personnel, and (4) the work hour demands on security force personnel. Therefore, the Commission determined that the threat environment at the time required that the Orders be issued and effective immediately.						
<b>Output: Other licensing tasks completed per year.</b>						
Target:	800	675 <sup>12</sup>	550	350*	350	350
Actual:	1,100 <sup>13</sup>	523	426	500		
* Output modified in FY 2003 from 550 to 350 to reflect the significant reduction in the inventory resulting from prior fiscal year efforts to close out generic-related tasks.						
<b>Output: Number of operator licensing examinations administered<sup>14</sup>, initial operator licensing examination sessions and generic fundamentals examination sessions.*</b>						
Target:	565 initial 400 generic	50 initial 3 generic	50 initial 3 generic	50 initial 3 generic	50 initial 4 generic	50 initial 4 generic
Actual:	352 initial 392 generic	58 initial 3 generic	51 initial 3 generic	61 initial 3 generic		
*Output modified in FY 2001. The number of examination sessions will be reported, rather than the number of examination candidates.						



**NUCLEAR REACTOR SAFETY**

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*Reactor License Renewal*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	10,664	13,080	16,185	17,187	1,002
Contract Support and Travel	4,725	8,997	13,468	12,776	-692
<b>Total Budget Authority</b>	15,389	22,077	29,653	29,963	310
FTE	88	105	133	135	2

*FY 2005 Activities.* The NRC conducts the Reactor License Renewal program to allow licensees to safely extend their nuclear power reactor licenses beyond their original expiration dates in a stable, predictable, effective and efficient manner. The NRC reviews applications and supporting documentation from licensees, conducts independent evaluations of the safety and environmental issues associated with extended reactor operation, conducts inspections to verify the information in the application and to verify the licensee’s aging management activities, conducts hearings if requested, and makes a final decision on the application. Activities include legal advice and representation with respect to applications for renewal of power reactor licenses. The program’s effectiveness in providing a comprehensive and technically sound safety conclusion is independently verified by the agency’s Advisory Committee on Reactor Safeguards. In addition, the NRC will continue to support regulatory framework improvements for license renewal, which include maintaining staff guidance documents, updating the License Renewal Generic Environmental Impact Statement, and revising inspection manual chapters. These activities are important to the program’s continuous improvement objective and resulted in a stable and predictable process that is 30 percent more efficient and reduced schedule timeliness from 25 months to 22 months without a hearing. The program is pursuing additional improvements during implementation of its FY 2004 - FY 2005 activities. In FY 2005, the NRC expects to begin reviewing seven new renewal applications in addition to up to nine applications that are expected to be under review at that time. The NRC expects to complete its review for two applications in FY 2005.

*Change from FY 2004.* Resources increase consistent with the number of reviews being requested by and conducted for reactor licensees.

**NUCLEAR REACTOR SAFETY**

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The requested resources will support agency efforts to achieve the output targets established in the following table.

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Completion of license renewal application reviews.</b>						
<i>Target: Complete those major milestones scheduled in accordance with the Commission-approved schedules in order to support completion of license renewal applications within 30 months from receipt of application to a Commission decision if a hearing is held (within 22 months without a hearing, beginning in FY 2003; or within 25 months without a hearing prior to FY 2003.*</i>						
<i>Target:</i>	Complete milestones for 2 applications	No applications scheduled	Complete milestones for 2 applications	Complete milestones for 3 applications	Complete milestones for 7 applications	Complete milestones for 2 applications
<i>Actual:</i>	Milestones completed for 2 applications	Milestones completed for 1 application	Milestones completed for 2 applications	Milestones completed for 3 applications		
* Output modified in FY 2000 to change from 36-month completion to 30-month completion. <sup>15</sup> Output modified in FY 2002 to clarify the 30-month completion "if a hearing is held and within 22 months without a hearing." Output modified in FY 2003 to clarify that the "22 months without hearing" began for applications completed beginning in FY 2003, 25 months prior to FY 2003.						

## NUCLEAR REACTOR SAFETY

### *Reactor Inspection and Performance Assessment*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	80,157	83,487	104,485	109,265	4,780
Contract Support and Travel	16,374	12,717	42,953	47,510	4,557
<b>Total Budget Authority</b>	96,531	96,204	147,438	156,775	9,337
FTE	711	718	905	904	-1

*FY 2005 Activities.* The NRC will conduct the Reactor Inspection and Performance Assessment Program to ensure that the 104 licensed reactors identify and resolve safety issues before they affect safe plant operation. This program's key element is the Reactor Oversight Process, which includes risk-informed baseline inspections, use of performance indicator data, enforcement, and a reactor assessment process. The inspection process comprises three major elements, including baseline inspections that focus on licensee performance in specific functional areas and licensee effectiveness in identifying, resolving, and preventing problems; plant-specific inspections that focus on followup on operational events and safety issues; and generic issue inspections that address areas of emerging concern or those requiring increased emphasis because of recurring problems. In addition to the activities associated with the inspection effort, the NRC will also respond to approximately 450 allegations of safety, safeguards, and/or discrimination violations, as well as reactor-related wrongdoing investigations. Inspection activities are important factors in achieving NRC annual targets for minimal accident precursor events and for steady or improving industry safety trends. The NRC continues to seek ways to achieve its programmatic safety targets more efficiently. The NRC identified a five percent efficiency in its baseline inspection activity which was included in the FY 2004 budget and is maintained in the FY 2005 budget.

In FY 2003, the Reactor Inspection and Performance Assessment program became the first NRC program to participate in OMB's PART evaluation process. The program received a score of 89 percent, or "Effective", the top category of rating attainable under PART. While the program received high scores for most aspects of its performance, OMB recommended that the program institute more regular, independent program evaluations, and that its performance measures be refined and streamlined to illuminate better the program's contribution to achieving the NRC's strategic goals. The NRC is considering revisions to the performance measures for the Reactor Inspection and Performance Assessment Program to better align with the agency's updated strategic plan. The NRC will also evaluate the benefits of performing independent program evaluations and consider changes to reflect other OMB recommendations.

## NUCLEAR REACTOR SAFETY

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Enforcement is used to deter non-compliance with NRC requirements and to encourage prompt identification and correction of violations of NRC requirements. The assessment process integrates inspection findings with other objective measures of performance (i.e., performance indicators), which licensees submit on a quarterly basis for each power reactor site. This process provides for ongoing and annual reviews of agency observations, findings on the safety performance of operating reactor facilities, preparation of an annual assessment letter, and conduct of an annual agency-level review meeting by NRC's senior management. Assessing reactor performance also includes integrating lessons learned, overseeing the implementation of corrective actions, systematically re-examining reactor oversight activities, and continually evaluating and developing the program.

The NRC will also work to ensure event response readiness by working closely with other Federal agencies to maintain a highly effective Federal incident response capability for operational events. In support of its public confidence strategies, the agency will work in cooperation with Federal, State, and local governments, organizations, and Native American Tribal Governments to ensure that the NRC maintains effective relations and communications with these organizations and promotes greater awareness and mutual understanding of the policies, activities, and concerns of all involved, as they relate to radiological safety at NRC facilities.

Finally, a highly trained and stable inspector work force is important to both programmatic success and the success of human capital initiatives of the President's Management Agenda. The NRC will continue to provide highly sophisticated technical training facilities and the necessary courses to meet the programmatic needs identified by offices and regions in annual needs surveys.

*Change from FY 2004.* In order to ensure continued achievement of program safety outcomes, resources in the planned activities of supplemental and reactive inspections were increased in FY 2005. These areas focus on licensee performance and safety issue resolution consistent with lessons learned from implementing the Reactor Oversight Process for plants such as Indian Point and Davis-Besse.

The requested resources will support agency efforts to achieve the output targets established in the following tables.

## NUCLEAR REACTOR SAFETY

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Number of plants for which core/baseline inspection program is completed during the most recently ended inspection cycle.*</b>						
<i>Target:</i>	All operating reactors	103 operating reactors	103 operating reactors	103 operating reactors**	103 operating reactors	103 operating reactors
<i>Actual:</i>	Completed at all reactors	Completed at all reactors	Completed at all reactors	Completed at all reactors		
<p><i>*Does not include Brown's Ferry Unit 1, which is currently not operating and not inspected under the full-baseline inspection program.</i></p> <p><i>** Davis-Besse is under IMC 0350 oversight for a plant with performance problems. The extent of inspections is determined by the IMC 0350 oversight panel.</i></p>						
<b>Output: Time to complete reviews of allegations.***</b>						
<i>Target:</i>	180 days	180 days <sup>16</sup>	70% ≤ 150 days 100% ≤ 360 days	70% ≤ 150 days 90% ≤ 180 days 100% ≤ 360 days	70% ≤ 150 days 90% ≤ 180 days 100% ≤ 360 days	70% ≤ 150 days 90% ≤ 180 days 100% ≤ 360 days
<i>Actual:</i>	Average 137 days	Average 107 days	84% ≤ 150 days 100% ≤ 360 days	87% ≤ 150 days 98% ≤ 180 days 100% ≤ 360 days		
<p><i>*** Beginning in FY 2003, the target for the time to complete reviews of allegations has changed to "70% of technical allegations closed within 150 days, 90% within 180 days, and 100% within 360 days." This change will reduce the margin compared to actual performance, while allowing for the efficient use of inspection resources and the ability to refer allegations to licensees for followup.</i></p>						

**NUCLEAR REACTOR SAFETY**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Mid-cycle performance review and end-of-cycle performance review; annual assessment letter; and annual agency action review meeting.</b>						
<i>Target:</i>	Conduct 2 reviews per site.	Conduct 103 mid-cycle reviews and 103 end-of-cycle reviews.	Conduct 103 mid-cycle reviews and 103 end-of-cycle reviews. Conduct annual meeting.	Conduct 103 mid-cycle reviews and 103 end-of-cycle reviews.** Conduct annual meeting.	Conduct 103 mid-cycle reviews and 103 end-of-cycle reviews. Conduct annual meeting.	Conduct 103 mid-cycle reviews and 103 end-of-cycle reviews. Conduct annual meeting.
<i>Actual:</i>	1 review per site conducted.*	Conducted 103 mid-cycle reviews 11/00. Conducted 103 end-of-cycle reviews 5/01. Letter and meeting 6/01.	Conducted 103 end-of-cycle reviews 2/02. Letters and annual meeting 4/02. Conducted 103 mid-cycle reviews 8/02.	Conducted 103 end-of-cycle reviews 3/03. Letters and annual meeting 3/03. Conducted 103 mid-cycle reviews 8/03.**		
<p>* 1 plant performance review per site conducted in 2<sup>nd</sup> quarter. Given implementation of reactor assessment process in April 2000, schedule for next review moved from 4<sup>th</sup> quarter to the 1<sup>st</sup> quarter of FY 2001 with mid-cycle reviews to be conducted after the first 6 months of implementation of the revised process.</p> <p>** Davis-Besse is under IMC 0350 oversight for a plant with performance problems. Although it was included in the review meeting agendas and discussed by senior management, it was not fully addressed by the routine assessment process.</p>						
<b>Output: Emergency Response Performance Index (EPRI).</b>						
<i>Target:</i>	95%	99%	99%	99%	99%	99%
<i>Actual:</i>	99.74%	100%	100%	100%		
<p><i>Definition: Index provides the single overall measure of the degree to which the agency believes it is ready to respond to an emergency situation. It serves as a method for measuring disparate activities that comprise the elements of the incident response program. It will be determined by averaging the degree to which each of the following program functions meets the goal of 99%: Response Organization Staffing, Response Facility Availability, Communications Reliability, Response Organization Training, and 24-Hour Notification Point. If the overall index falls below or approaches its target value of 99% for FY 2001, FY 2002, and FY 2003, management will determine what is contributing most to the decline and conduct appropriate corrective measures based on this review.</i></p>						
<b>Output: Numbers and types of reactor technical training courses offered.</b>						
<i>Target: Numbers and types of courses offered will meet cumulative needs identified by offices and regions in semiannual needs surveys.</i>						
<i>Target:</i>	Meet 90% of needs	Meet 90% of needs	Meet 95% of needs	Meet 95% of needs	Meet 95% of needs	Meet 95% of needs
<i>Actual:</i>	100% needs met	100% needs met	100% needs met	100% needs met		
<b>Output: Percentage of Office of Investigation cases will be investigated to a conclusion on the merits as either substantiated or unsubstantiated.<sup>17</sup></b>						
<i>Target:</i>	New measure in FY 2002.		90%	90%	90%	90%
<i>Actual:</i>			97%	95.9%		

## NUCLEAR REACTOR SAFETY

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Percentage of cases closed on the merits as either substantiated or unsubstantiated will be completed in 10 months or less.*</b>						
<b>Target:</b>	Complete cases ≤ 9 months (average) Active inventory ≤ 9%	Complete cases ≤ 9 months (average) Active Inventory ≤ 9%	Complete cases 80% ≤ 10 months	Complete cases 80% ≤ 10 months	Complete cases 80% ≤ 10 months	Complete cases 80% ≤ 10 months
<b>Actual:</b>	Completed in 5.6 months (average) (153 cases) 6% open for > 12 months	Completed in 7.3 months (average) (131 cases)	84% cases completed in ≤ 10 months	83% cases completed in ≤ 10 months		
* Output modified in FY 2002 from "Timeliness in completing investigations (average time to complete cases)."						
<b>Output: Timeliness in completing enforcement actions.*</b>						
<b>Target:</b>	90% ≤ 90 days (average)	90% ≤ 90 days (average)	<u>Investigation</u> <sup>18</sup> 100% ≤ 360 days <u>Non-</u> <u>Investigation</u> 100% ≤ 180 days	<u>Investigation</u> 100% ≤ 360 days <u>Non-</u> <u>Investigation</u> 100% ≤ 180 days	<u>Investigation</u> 100% ≤ 360 days <u>Non-Investigation</u> 100% ≤ 180 days	<u>Investigation</u> 100% ≤ 360 days <u>Non-Investigation</u> 100% ≤ 180 days
<b>Actual:</b>	90% in 67.5 days (average) 27 cases	90% in 76 days (average) 24 cases	<u>Investigation</u> 100% ≤ 360 days (4 cases) <u>Non-</u> <u>Investigation</u> 100% ≤ 180 days (23 cases)	<u>Investigation</u> 100% ≤ 360 days (7 cases) <u>Non-</u> <u>Investigation</u> 100% ≤ 180 days (19 cases)		
* Output modified in FY 2002 to distinguish between Investigation cases (average time to complete all cases will not exceed 180 days <sup>19</sup> ) and Non-Investigation cases (average time to complete all cases will not exceed 120 days).						
<b>Output: Timeliness in completing Significance Determinations for inspection findings greater than GREEN.</b>						
<b>Target:</b>	100% in <90 days	100% in <90 days	100% in <90 days	75% in <90 days**	80% in <90 days**	85% in <90 days**
<b>Actual:</b>	100% findings completed <90 days (4 findings)	70% findings completed <90 days (27 findings)	57% findings completed <90 days (27 findings)	73.3% findings completed <90 days (15 findings)		
** Target revised in FY 2002 (SECY-03-0062)						

**NUCLEAR REACTOR SAFETY**

*Reactor Safety Research*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	19,237	19,640	23,671	24,992	1,321
Contract Support and Travel	41,833	43,437	49,240	47,666	-1,574
<b>Total Budget Authority</b>	61,070	63,077	72,911	72,658	-253
FTE	152	153	189	189	0

*FY 2005 Activities.* The NRC conducts reactor safety research to support its mission of ensuring that its licensees safely design, construct, and operate civilian nuclear reactor facilities. The NRC’s critical research programs will respond to high-priority needs on or before their due date 85 percent of the time. To support the NRC’s performance goal of maintaining safety, the research will address integrity of reactor systems and components, which includes testing environmentally assisted cracking of reactor pressure boundary components and vessel internals, reactor pressure vessel integrity, in-service inspection effectiveness and reliability, steam generator tube integrity, and piping integrity. Specifically, the NRC will develop and implement action plans on leak detection/barrier integrity based on recommendations of the Davis-Besse Lessons Learned Task Force and develop a model for reactor coolant pump (RCP) seal failure.

In addition, the NRC will work on probabilistic risk analyses and applications, which include research activities to support risk-informing the agency’s regulations, technical standards, and oversight practices. This may involve changes to various agency procedures and documents, regulatory guides, and standard review plans. Some of these activities involve international cooperative efforts. Assessing and maintaining reactor and system codes will include development of experimental data to assess computer codes used in the safety analyses of reactor facilities in the areas of thermal-hydraulics, fuel behavior, severe accident, and neutronics. The NRC’s research will include assessment of operations activities to confirm the adequacy of existing acceptance criteria for high burn-up fuel.

Research will also continue during the planning period to address other issues, including safety assessment of digital technologies; aging-related effects on systems and components (including environmental qualification of aging electric cables, adequate safety margins for aging reactor containments, and aging of passive structures and components); operating experience evaluation; regulatory infrastructure and improvement initiatives to focus on generic safety issues, human



## NUCLEAR REACTOR SAFETY

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performance, regulatory effectiveness, impact of advancements in earth sciences, codes and standards, and communications; preparation for mixed-oxide fuel licensing; and assessment of health effects to validate current health effects models and monitor licensee performance in meeting “as low as reasonably achievable” (ALARA) objectives in occupational and public exposure.

*Change from FY 2004.* Contract support and travel decrease due to reductions in fuels and thermal hydraulic programs.

The requested resources will support agency efforts to achieve the output targets established in the following table.

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Timeliness of completing actions on critical programs.*</b>						
<i>Target: Percent of major milestones met on or before their due date.</i>						
<i>Target:</i>	New measure in FY 2002.		85%	85%	85%	85%
<i>Actual:</i>			91%	80%**		
* <i>Definition: Critical research programs typically respond to high priority needs from the Commission and NRC's licensing organizations. Critical research programs will be the highest-priority needs identified at the beginning of each fiscal year. In FY 2003, the highest-priority needs include vulnerabilities assessment, new reactor technology, generic safety issues, reactor materials aging, risk informing Part 50, fuel/MOX performance, instrumentation and control technology, and operating experience assessment.</i>						
** <i>The target was not met as a result of unanticipated requirements within critical research programs and emergent work of equal priority.</i>						

The Office of Nuclear Regulatory Research is developing a quality assessment process consistent with that proposed by the National Academy of Sciences, Committee on Science, Engineering, and Public Policy, in its report, “Evaluating Federal Research Programs: Research and the Government Performance and Results Act.” The process will be developed and tested during FY 2004 and baselined in FY 2005. Performance will be measured against that baseline in FY 2006. Performance targets for FY 2006 will be defined at the end of FY 2005.

**NUCLEAR REACTOR SAFETY**

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*New Reactor Licensing*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	9,902	13,722	17,100	18,904	1,804
Contract Support and Travel	8,425	14,168	19,031	20,795	1,764
<b>Total Budget Authority</b>	18,327	27,890	36,131	39,699	3,568
FTE	81	109	139	147	8

*FY 2005 Activities.* In response to renewed interest in building nuclear power plants, the NRC will conduct pre-licensing and licensing reviews in a manner that is generally consistent with projected industry plans and schedules. The NRC will support technical reviews of three early site permit applications (submitted in calendar year 2003) and inspection activities focusing on quality assurance programs and implementation, site preparation, and environmental protection considerations. The NRC will complete the milestones necessary to issue the AP1000 standard design certification rulemaking in FY 2006. The NRC received the AP1000 design certification application in March 2002 and expects the review to continue through FY 2005. The NRC also plans to perform certification reviews of the ESBWR and ACR-700 designs. In addition, the NRC plans to continue pre-application review activities for the SWR-1000, GT-MHR, and IRIS reactor designs.

In addition to specific reviews, the NRC will continue its efforts to develop and update the agency's regulatory framework to accommodate new and advanced reactor designs. These efforts will include rulemakings to improve the effectiveness and efficiency of new reactor licensing reviews; development of regulatory guidance, and the NRC's construction inspection program; and development of analytical tools, experimental data, and bases for regulatory guidance documents to support licensing of new advanced designs. The NRC will also provide legal advice and representation with respect to applications for early site permits and design certifications.

*Change from FY 2004.* Resources increase to support projected industry plans and schedules.

The requested resources will support agency efforts to achieve the output targets established in the following table.

## NUCLEAR REACTOR SAFETY

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output:</b> Review early site permit applications on the schedules negotiated with the applicants.						
Target:	New Measure in FY 2003			Begin review of 2 applications	Conduct review of 3 applications	Conduct review of 3 applications
Actual:	Met target					
<b>Output:</b> Conduct pre-application activities on the schedules negotiated with the prospective applicants [General Electric (GE), Atomic Energy of Canada, Limited (AECL), General Atomics, Framatome, and Westinghouse].*						
Target:	New Measure in FY 2003			Conduct pre-application activities for 6 reactor designs (ACR-700, ESBWR, GT-MHR, SWR-1000, IRIS, and PBMR)	Conduct pre-application activities for 5 reactor designs (ACR-700, ESBWR, GT-MHR, SWR-1000, and IRIS)	Conduct pre-application activities for 2 reactor designs (SWR-1000, and IRIS)
Actual:	Met target					
* Output modified in FY 2004 to include Framatome.						
<b>Output:</b> Review design certification applications on the schedules negotiated with the applicants.						
Target:	New Measure in FY 2003			Issue draft SER for AP1000 review	Issue the final safety evaluation report (SER) for AP1000 design certification review. Begin ESBWR design certification review	Complete milestones necessary to complete AP1000 design certification rulemaking in FY 2006. Continue ESBWR design certification review. Begin ACR-700 design certification review
Actual:	Met target					
<b>Output:</b> Complete regulatory infrastructure improvements needed to ensure that new facilities are safely constructed, and to improve the efficiency and effectiveness of new reactor licensing.						
Target:	<p><i>FY 2003 Construction Inspection Program - Issue inspection manual chapter for early site permits. Rulemaking - Conduct technical resolution activities for issues such as Alternate Site Revise Part 51, Tables S3 and S4, and Part 50, Appendix I. Regulatory Guidance - Modify regulatory guidance, NUREGs, SRP, and environmental SRP as needed to support new reactor licensing.</i></p> <p><i>FY 2004 Construction inspection program - Complete inspection guidance for early site permits; issue final construction inspection program framework document. Complete early site permit review standard.</i></p> <p><i>FY 2005 Develop combined license review guidance.</i></p>					
Target:	New Measure in FY 2003.			Meet target	Meet target	Meet target
Actual:	Met target					

**NUCLEAR REACTOR SAFETY**

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*Homeland Security*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	9,517	15,894	19,646	20,164	518
Contract Support and Travel	10,328	18,724	24,126	15,404	-8,722
<b>Total Budget Authority</b>	19,845	34,618	43,772	35,568	-8,204
FTE	78	128	161	158	-3

*FY 2005 Activities.* The NRC will continue to enhance security, where appropriate, through safeguards and security reviews in support of licensing; conduct inspections to confirm the adequacy of nuclear reactor security and safeguards in the current threat environment; and resolve policy issues associated with reactor security and safeguards. Activities will include physical protection and material control and accounting reviews in support of licensing, revision of the baseline inspection program for security and material control and accounting (MC&A), force-on-force exercises at nuclear power plants to assess performance, and threat assessment. Activities will also include coordination with the Department of Homeland Security and other Federal and State agencies to integrate security response planning, verification of compliance with compensatory security measures, implementation of revisions to the design basis threat (DBT), rulemaking, development of regulatory guidance in consultation with licensees and other authorized stakeholders, completion of mitigating strategies for power reactors and research and test reactors, resolution of policy and technical issues related to nuclear security and safeguards at reactor facilities, and legal advice and representation. Research activities will include confirmatory analyses and experiments on the potential consequences of overheating of fuel in spent fuel pools and staff technical support to other government agencies.

*Change from FY 2004.* The resources decrease as a result of the completion of work on vulnerability assessments and mitigating strategies and the completion of the reviews of nuclear power plant security plans that include the revised design-based threat.

## NUCLEAR REACTOR SAFETY

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### ARENA NOTES

1. The number of licensed reactors includes Browns Ferry Unit 1, which has no fuel loaded and requires NRC approval to restart.
2. Stated succinctly, risk-informed, performance-based regulation is an approach in which risk insights, engineering analysis and judgment, and performance history are used to (1) focus attention on the most important activities, (2) establish objective criteria based upon risk insights for evaluating performance, (3) develop measurable or calculable parameters for monitoring system and licensee performance, and (4) focus on the results as the primary basis of regulatory decision making.
3. “Nuclear reactor accidents” is defined in the NRC Severe Accident Policy Statement (50 Federal Register 32138, August 8, 1985) as those accidents which result in substantial damage to the reactor core, whether or not serious offsite consequences occur.
4. “Significant radiation exposures” are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician in accordance with Abnormal Occurrence Criterion I.A.3.
5. Releases that have the potential to cause “adverse impact” are currently undefined. As a surrogate, we will use those that exceed the limits for reporting abnormal occurrences as given by Abnormal Occurrence Criterion 1.B.1 (normally 5,000 times Table 2 (air and water) of Appendix B, Part 20).
6. Such events have a 1/1000 ( $10^{-3}$ ) or greater probability of leading to a reactor accident.
7. Overexposures are those that exceed limits as provided by 10 CFR 20.2203(a)(2), excluding instances of overexposures involving a shallow dose equivalent from a discrete radioactive particle in contact with the skin.
8. Releases for which 30-day reporting is required under 10 CFR 20.2203(a)(3).
9. A 10 CFR 2.206 petition is a written request filed by any person to institute a proceeding to modify, suspend, or revoke a license, or for any other enforcement action. The petition specifies the action requested and sets forth the facts that constitute the basis for the request. The NRC evaluates the technical merits of the safety concern presented by the petition. Based on the facts determined by the NRC’s technical evaluation or investigation of the merits of the petition, the Director will issue a decision to grant or deny the petition, in whole or in part. The Director's Decision explains the bases upon which the petition has been granted and identifies the actions that the NRC staff has taken (or will take) to grant the petition in whole or in part. Similarly, if the petition is denied, the Director's Decision explains the bases for the denial and discusses all matters raised by the petitioner in support of the request.
10. The start time of the 120 days is the date that the Petition Review Board determines that the proposed petition satisfies the criteria of NRC Management Directive (MD) 8.11, “Review Process for 10 CFR 2.206 Petitions,” and acknowledges by letter the petitioner's request. For petitions received after October 1, 2000, the end time is the date of the proposed Director’s Decision. Supplements to the

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petition which require extension of the schedule will reset the beginning of the metric to the date of issuance of a new acknowledgment letter.

11. Failure to meet the target resulted from several petitions related to nuclear plant security that were filed following the terrorist attacks on September 11, 2001. In response to the terrorist attacks, the NRC proposed additional security measures for nuclear power plants. The NRC delayed the Director's decisions until the measures were reviewed and approved so as to ensure that decisions conformed to the new NRC policies.
12. The target decreases to reflect the significant reduction in the inventory resulting from prior fiscal year efforts to close out generic-related tasks.
13. The target was exceeded because of an increased effort to close out generic-related tasks.
14. For FY 2000, the actual number of examination candidates was 352, compared to an estimated target of 565 candidates. The difference is attributable to attrition of operator license candidates during the training period from the projected enrollment provided by the licensees. The number of examination sessions, rather than examination candidates, is more predictable (at approximately 50 initial examination sessions at power reactors per year). Budget values are primarily based on the number of exam sessions, with a small adjustment based on the number of candidates per exam session. Thus, the output measure target beginning in FY 2001 has been changed to the estimated number of examination sessions, rather than the number of examination candidates. The commercial contract for preparing the generic fundamentals examinations expires at the end of FY 2003. If approved, the new contract for FY 2004 and beyond will increase the number of sessions from three to four per year.
15. The 30-month target for the license renewal performance measure includes sufficient time for a potential hearing. As soon as the NRC is certain that no hearings will be held, the schedule for reviewing a license renewal is set at 22 months.
16. The 180-day target reflects the implementation of the revised ROP, which began in April 2000. Inspections associated with allegation reviews are combined as much as possible with scheduled inspections to use resources effectively and efficiently and to protect the identity of the allegor. The new inspection program under the revised ROP is more risk-informed and focuses on the relatively small number of plants that exhibit performance problems. While this reduces the regulatory impact on plants that perform well, it also offers less flexibility for the NRC to schedule additional inspections to address allegations.
17. A significant measure of the effectiveness of the NRC's Office of Investigations (OI), as well as its contribution to the NRC's regulatory mission, lies in the more substantive investigations which OI conducts to a conclusion on the merits of the case, either substantiating an allegation of wrongdoing or not. These are the cases upon which the technical, legal, and enforcement staffs can base safety and/or enforcement decisions, and which, if substantiated, are referred to the Department of Justice (DOJ) for prosecutorial review.
18. Cases involving investigations normally involve wrongdoing or discrimination and, by their nature, are more resource intensive and less timely. Accordingly, the performance measure for cases involving

## **NUCLEAR REACTOR SAFETY**

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investigations provides for more staff time.

19. NRC processing time is defined as that time from the date the case is opened to the issuance of an enforcement action or other appropriate disposition, less (1) any time the NRC could not act due to the case residing with Department of Labor, DOJ, other Government, entity or where the licensee requests a lengthy deferment, and (2) any time the NRC could not act due to processing of requests under the Freedom of Information Act (FOIA).

# **NUCLEAR MATERIALS SAFETY**



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## NUCLEAR MATERIALS SAFETY

The Nuclear Materials Safety Arena encompasses NRC efforts to ensure that agency-regulated aspects of nuclear fuel cycle facilities and nuclear materials activities are handled in a manner that adequately protects public health and safety and promotes the common defense and security. This arena encompasses more than 20,000 specific and 150,000 general licensees that will be regulated by the NRC and 34 Agreement States<sup>1</sup> in FY 2005. This diverse, regulated community includes uranium extraction, conversion, and enrichment; nuclear fuel fabrication; fuel research and pilot facilities; and large and small users of nuclear material for industrial, medical, or academic purposes. The last group, the large and small users of nuclear materials, includes radiographers, hospitals, private physicians, nuclear gauge users, large and small universities, and others. This arena also includes all regulatory activities carried out by the NRC and the Agreement States to ensure that nuclear materials and facilities are used in a manner that protects the health and safety of the public and the environment, and protects against radiological sabotage and theft or diversion of special nuclear materials. The Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and the Uranium Mill Tailings Radiation Control Act of 1978, as amended, provide the foundation for regulating the Nation's civilian use of nuclear materials.

The scope of regulatory activities carried out under this arena includes regulation and guidance development; nuclear materials research; licensing/certification, inspection, and enforcement activities; identification and resolution of safety and safeguards issues; improved regulatory control of radiological sources; operating experience evaluation; incident investigation; threat assessment; emergency response; technical training; implementation of State and Tribal programs (Agreement State and State Liaison); and investigation of alleged wrongdoing by licensees, applicants, certificate holders, and contractors.

### **Budget Overview**

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	43,998	48,530	60,835	64,074	3,239
Contract Support and Travel	15,981	17,273	34,989	36,263	1,274
<b>Total Budget Authority</b>	59,979	65,803	95,824	100,337	4,513
FTE	380	406	516	518	2

The full-cost budget request of \$100.3M and 518 FTE for the Nuclear Materials Safety Arena supports the regulation of 40 fuel cycle facilities (encompassing 18 nuclear fuel facilities, 18 uranium recovery facilities, 2 gaseous diffusion enrichment facilities, a mixed-oxide (MOX) fuel fabrication facility, and 1 gas centrifuge facility) and approximately 4,500 nuclear materials

## **NUCLEAR MATERIALS SAFETY**

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licenses, which includes licensing and inspection activities, as well as related Homeland Security activities.

Of the \$4.5M increase in FY 2005, \$3.2M is associated with the Government-wide FY 2005 pay raise, other increases in salaries and benefits, and 2 additional FTE primarily to support the Fuel Facilities Licensing and Inspection Program. Other increases result primarily from increases in materials-related information technology requirements to maintain, operate, and ultimately replace various materials database tracking systems.

### **Measuring Results - Strategic and Performance Goals**

This strategic arena includes strategic and performance goals, measures, and strategies. The **strategic goal** is the overall outcome the NRC wants to achieve. The **performance goals** are the key contributors to achieving the strategic goal and focus on outcomes over which the agency has control. The **performance measures** indicate whether the NRC is achieving its goals and establish the basis for performance management. These measures establish how far and how fast the agency will move in the direction established by the performance goals. The **strategies** describe how the NRC will achieve its performance goals and their associated measures. In other words, the strategies provide the direct link between what the agency wants to achieve (i.e., goals) and the key activities the agency will conduct to achieve those goals.

#### *Our Strategic Goal*

In the Nuclear Materials Safety Arena, the NRC will conduct an efficient regulatory program that allows the Nation to use nuclear materials for civilian purposes in a safe manner to protect the health and safety of the public and the environment by working to achieve the following strategic goal:

Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of source, byproduct, and special nuclear materials.<sup>2</sup>

#### **Four Performance Goals and Their Implementing Strategies**

- (1) To **maintain safety, protection of the environment, and the common defense and security**, the NRC will employ the following strategies:
  - We will continue to improve the regulatory framework<sup>3</sup> to increase our focus on safety and safeguards, including incremental use of risk-informed and, where appropriate, less-prescriptive performance-based<sup>4</sup> regulatory approaches to maintain safety.

## **NUCLEAR MATERIALS SAFETY**

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- We will continue authorizing licensee activities only after determining that the proposed activities will be conducted in a manner that is consistent with the regulatory framework.
  - We will confirm that licensees understand and carry out their primary responsibility for conducting activities in a manner that is consistent with the regulatory framework.
  - We will respond to operational events involving potential safety or safeguards consequences.
  - We will maintain safety by continuing to encourage the Agreement States to join the NRC in pursuing an active role in the regulatory process.
- (2) To **increase public confidence**, the NRC will employ the following strategies:
- We will make public participation in the regulatory process more accessible. We will listen to the public's concerns and involve our stakeholders in the regulatory process.
  - We will communicate more clearly. We will add more focus, clarity, and consistency to our message; be timely; and present candid and factual information in the proper context with respect to the risk of the activity.
  - We will continue to enhance the NRC's accountability and credibility by being a well-managed, independent regulatory agency. We will increase efforts to share our accomplishments with the public.
  - We will continue to foster an environment in which safety issues can be openly identified without fear of retribution.
  - We will continue to develop and present communications courses to facilitate more effective communication with the public in public meetings and in documents.
  - We will continue to implement the plain language initiatives through staff and supervisor training in techniques for writing in clear, plain language and in including plain-language executive summaries in high-profile reports and documents.
- (3) To **make the NRC activities and decisions more effective, efficient, and realistic**, the NRC will employ the following strategies:
- We will continue to improve the regulatory framework to increase our effectiveness, efficiency, and realism.

## NUCLEAR MATERIALS SAFETY

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- We will identify, prioritize, and modify processes based on effectiveness reviews to maximize opportunities to improve those processes.
  - We will improve efficiency and effectiveness by continuing to encourage the Agreement States to join the NRC in pursuing an active role in the regulatory process.
- (4) To **reduce unnecessary regulatory burden on stakeholders**, the NRC will employ the following strategies:
- We will continue to improve our regulatory framework in order to reduce unnecessary regulatory burden.
  - We will improve and execute our programs and processes in ways that reduce unnecessary costs to our stakeholders.
  - We will actively seek stakeholder input to identify opportunities to reduce unnecessary regulatory burden.

### *Performance Measures*

The actual data reported for some of our strategic and performance goal measures for maintaining safety are subject to change as a result of the NRC's analysis of reported information as well as the receipt of newly reported information. Future performance plan submissions will report and explain any changes to the data.

## NUCLEAR MATERIALS SAFETY

### Strategic Goal Measures

The following measures are associated with the Nuclear Materials Safety strategic goal.

STRATEGIC GOAL MEASURES						
	FY2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<i>No deaths resulting from acute radiation exposures from civilian uses, including malevolent uses, of source, byproduct, or special nuclear materials, or deaths from other hazardous materials used or produced from licensed material.</i>						
Target:	0	0	0	0	0	0
Actual:	0	0	0	0		
<i>No more than six events per year resulting in significant radiation or hazardous material exposures<sup>5</sup> from the loss or use of source, byproduct, and special nuclear materials.</i>						
Target:	6 or less	6 or less	6 or less	6 or less	6 or less	6 or less
Actual:	0	0	0	1		
<i>No events resulting in releases of radioactive material resulting from civilian uses, including malevolent uses, of source, byproduct, or special nuclear materials that cause an adverse impact on the environment.<sup>6</sup></i>						
Target:	0	0	0	0	0	0
Actual:	0	0	0	0		
* Measure modified in FY 2002 to include the phrase "malevolent uses." The change reflects the impact of the terrorist attacks on September 11, 2001, on this measure.						
<i>No losses, thefts, or diversion of formula quantities of strategic special nuclear material, radiological sabotage, or unauthorized enrichment of special nuclear material regulated by the NRC.<sup>7</sup></i>						
Target:	0	0	0	0	0	0
Actual:	0	0	0	0		
<i>No unauthorized disclosures or compromise of classified information causing damage to national security.<sup>8</sup></i>						
Target:	0	0	0	0	0	0
Actual:	0	0	0	0		

## NUCLEAR MATERIALS SAFETY

### Performance Goal (PG) Measures<sup>9</sup>

The following measures are associated with the Nuclear Materials Safety performance goals. The performance goal associated with each measure is identified by the acronym PG and the goal number, as identified in the previous section.

PERFORMANCE GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<i>No more than 300<sup>10</sup> losses of control of licensed material per year<sup>11</sup>. (PG1)</i>						
<i>Target:</i>	356 or less	350 or less	300 or less	300 or less	300 or less	300 or less
<i>Actual:</i>	259 <sup>12</sup>	244	272 <sup>13</sup>	197		
<i>No occurrences of accidental criticality. (PG1)</i>						
<i>Target:</i>	0	0	0	0	0	0
<i>Actual:</i>	0	0	0	0		
<i>No more than 30 events<sup>14</sup> per year resulting in radiation overexposures<sup>15</sup> from radioactive materials that exceed applicable regulatory limits. (PG1)</i>						
<i>Target:</i>	19 or less	40 or less	30 or less	30 or less	30 or less	30 or less
<i>Actual:</i>	15 <sup>16</sup>	27	23 <sup>13</sup>	18		
<i>No more than 45 medical events per year. <sup>17</sup> (PG1)</i>						
<i>Target:</i>	43 or less	43 or less	45 or less	45 or less	45 or less	45 or less
<i>Actual:</i>	35 <sup>16</sup>	33	33 <sup>13</sup>	41		
<i>No more than 5 releases per year to the environment of radioactive material from operating facilities that exceed the regulatory limits.<sup>18</sup> (PG1)</i>						
<i>Target:</i>	39 or less	6 or less	5 or less	5 or less	5 or less	5 or less
<i>Actual:</i>	2	0	4 <sup>13</sup>	0		
<i>No non-radiological events that occur during the NRC-regulated operations that cause impacts on the environment that cannot be mitigated within applicable regulatory limits, using reasonably available methods.<sup>19</sup> (PG1)</i>						
<i>Target:</i>	0	0	0	0	0	0
<i>Actual:</i>	0	0	0	0		

## NUCLEAR MATERIALS SAFETY

PERFORMANCE GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b><i>No more than five substantiated cases per year of attempted malevolent use<sup>20</sup> of source, byproduct, or special nuclear material. (PG1)</i></b>						
<i>Target:</i>	5 or less	5 or less	5 or less	5 or less	5 or less	5 or less
<i>Actual:</i>	2	0	0	0		
<b><i>No breakdowns of physical protection or material control and accounting systems resulting in a vulnerability to radiological sabotage, theft, diversion, or unauthorized enrichment of special nuclear material.<sup>21</sup> (PG1)</i></b>						
<i>Target:</i>	0	0	0	0	0	0
<i>Actual:</i>	0	0	0	0		
<b><i>Complete the milestones relating to collecting, analyzing, and trending information for measuring public confidence. (PG2)</i></b>						
FY 2001	Conduct semiannual evaluations of all public meeting feedback forms to determine any trends in NRC public meetings.					
FY 2002	Develop recommendation for continued use of public meeting feedback form or for another method of assessing public confidence.					
FY 2003-04	Create a web-based system to compile and analyze trends in the responses of the feedback forms to assess the agency's meeting performance.					
FY 2005	Assess public meeting performance through review of feedback forms. Consider using results to target specific training or guidance for the staff.					
<i>Target:</i>	New measure in FY 2001	Will meet target	Will meet target	Will meet target	Will meet target	Will meet target
<i>Actual:</i>		Met target	Met target	Met target		



## NUCLEAR MATERIALS SAFETY

PERFORMANCE GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Complete all of the public outreaches. (PG2)</b>						
<u>Milestones:</u>						
FY 2001	October 2000 - Develop mixed-oxide (MOX) fuel Web site. February 2001 - Issue first MOX fuel newsletter. May 2001 - Conduct environmental impact statement public scoping meeting. May, July, September 2001 - Conduct MOX follow up public meetings.					
FY 2002	Conduct Part 35 Workshops (Workshops to be held prior to effective date). Conduct Fuel Cycle Oversight Revision Process public meeting. Conduct Uranium Recovery Workshop. Issue MOX draft Environmental Impact Statement and conduct public meeting in the vicinity of the plant. Issue MOX draft Safety Evaluation Report and conduct public meeting in the vicinity of the plant. Participate in OAS Annual Meeting. Participate in Conference of Radiation Control Program Directors Annual Meeting.					
FY 2003	Conduct MOX public meeting in the vicinity of the plant. Conduct public meetings on MOX draft Environmental Impact Statement. Conduct public meetings for approximately five Licensee Performance Reviews. Conduct Uranium Recovery Workshop. Conduct two public meetings in the vicinity of the selected U.S. Enrichment Corporation (USEC) gas centrifuge lead cascade plant site. Participate in OAS Annual Meeting. Participate in Conference of Radiation Control Program Directors Annual Meeting. Participate in Part 35 Training and Experience Public Meeting. Participate in Disposition of Solid Materials Workshop.					
FY 2004	Conduct public meeting to discuss MOX final safety evaluation report results. Conduct public meetings for approximately five licensee performance reviews. Conduct Uranium Recovery Workshop. Conduct public meetings related to gas centrifuge license application in the vicinity of the selected gas centrifuge site. Participate in OAS Annual Meeting. Participate in Conference of Radiation Control Program Directors Annual Meeting. Conduct public meetings related to Integrated Safety Analysis Summary reviews.					
FY 2005	Participate in OAS Annual Meeting. Participate in Conference of Radiation Control Program Directors Annual Meeting. Conduct public meetings for approximately five licensee performance reviews. Participate in public meeting to discuss MOX facility construction. Conduct public meetings related to gas centrifuge license application at a selected site. Conduct Uranium Recovery Workshop.					
<i>Target:</i>	New measure in FY 2001	Will meet target	Will meet target	Will meet target	Will meet target	Will meet target
<i>Actual:</i>		Met target	Met target	Met target <sup>22</sup>		

## NUCLEAR MATERIALS SAFETY

PERFORMANCE GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b><i>Issue Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206<sup>23</sup> within an average of 120 days.<sup>24</sup> (PG2)</i></b>						
<i>Target:</i>	New measure in	120 days	120 days	120 days	120 days	120 days
<i>Actual:</i>	FY 2001	No petitions received	No petitions received	No petitions received		
<b><i>Complete those specific materials milestones in the Risk-Informed Regulation Implementation Plan. (PG3)</i></b>						
<u>Milestones:</u>						
FY 2001	October 27, 2000 - Risk-Informed Regulation Implementation Plan (RIR-IP) sent to the Commission. November 17, 2000 - Commission brief on RIR IP. August 2001 - Develop final criteria and milestones.					
FY 2002-05	Execute milestones identified in the final RIR IP. (Identified at the beginning of each fiscal year.)					
<i>Target:</i>	New measure in	Will meet target	Will meet target	Will meet target	Will meet target	Will meet target
<i>Actual:</i>	FY 2001	Met target	Met target	Met target		
<b><i>Complete at least two key process improvements per year in selected program and support areas that increase efficiency, effectiveness, and realism. (PG3)</i></b>						
<i>Target:</i>	New measure in	Will complete 2 key processes	Will complete 2 key processes	Will complete 2 key processes	Will complete 2 key processes	Will complete 2 key processes
<i>Actual:</i>	FY 2001	Completed 4 key processes	Completed 2 key processes	Completed 2 key processes		
<b><i>Complete those specific milestones to reduce unnecessary regulatory burden. (PG4)</i></b>						
<u>Milestones:</u>						
FY 2001	Staff will complete 10 CFR Part 35 rulemaking (medical).					
FY 2002-05	Staff will complete at least one rulemaking primarily designed to reduce unnecessary regulatory burden.					
<i>Target:</i>	New measure in	Will meet target	Will meet target	Will meet target	Will meet target	Will meet target
<i>Actual:</i>	FY 2001	Did not meet target. <sup>25</sup>	Met target, 10 CFR Part 35, Medical Use of Byproduct Material	Met target completed direct final rule, clarifying amendments, for 10 CFR Part 35		

**NUCLEAR MATERIALS SAFETY**

PERFORMANCE GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<i>Reduce paperwork and record keeping imposed by the NRC on its licensees by at least 25 percent over a period of 5 years. (PG4)</i>						
<i>Target:</i>	New measure in FY 2001	5 percent reduction from FY 2000 baseline	10 percent reduction from FY 2000 baseline	15 percent reduction from FY 2000 baseline	N/A *	N/A *
<i>Actual:</i>		Did not meet target. <sup>26</sup>	Met target: achieved 16% reduction from FY 2000 baseline	Met target: achieved 17% reduction from FY 2000 baseline		
*Target for FY 2004 and beyond was deleted for this metric. The new security and safeguards requirements for the NRC and Agreement State licensees (needed for common defense and security) will likely result in an increase in paperwork and record keeping requirements.						

## NUCLEAR MATERIALS SAFETY

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### BUDGET AUTHORITY AND FULL-TIME EQUIVALENT BY PROGRAM

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Program (\$K)</b>					
Fuel Facilities Licensing and Inspection	14,217	16,028	23,323	25,624	2,301
Nuclear Materials Users Licensing and Inspection	39,387	37,661	56,323	58,627	2,304
Homeland Security	6,375	12,114	16,178	16,086	-92
<b>Total Budget Authority</b>	<b>59,979</b>	<b>65,803</b>	<b>95,824</b>	<b>100,337</b>	<b>4,513</b>
<b>Full-Time Equivalent Employment by Program</b>					
Fuel Facilities Licensing and Inspection	104	116	143	147	4
Nuclear Materials Users Licensing and Inspection	251	241	309	305	-4
Homeland Security	25	49	64	66	2
<b>Total FTE</b>	<b>380</b>	<b>406</b>	<b>516</b>	<b>518</b>	<b>2</b>

### Justification of Program Requests

The Nuclear Materials Safety Arena comprises three programs, which are discussed in the following pages.

## NUCLEAR MATERIALS SAFETY

### *Fuel Facilities Licensing and Inspection*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	12,232	14,152	17,142	18,270	1,128
Contract Support and Travel	1,985	1,876	6,181	7,354	1,173
<b>Total Budget Authority</b>	14,217	16,028	23,323	25,624	2,301
FTE	104	116	143	147	4

*FY 2005 Activities.* Resources are provided to conduct the NRC's regulatory programs at facilities in the fuel cycle. Major activities include licensing review of a commercial gas centrifuge facility. The NRC will continue its review of DOE's application for a MOX fuel fabrication facility to be located at DOE's Savannah River site. The NRC conducts licensing activities for one uranium conversion facility, two enrichment facilities, six fuel fabrication facilities and nine special nuclear material and source material facilities (includes facilities that are authorized to possess greater-than-critical-mass quantities of special nuclear material). Activities include implementation of a safety and safeguards inspection program based on the risk significance of licensee operations and facility performance history. Approximately five licensee performance reviews will be conducted per year. Resources are also provided for uranium recovery licensing activities and fuel facility adjudicatory hearings on uranium recovery and MOX fuel fabrication. Activities include legal advice and representation supporting individual licensing actions, including enrichment facilities and major license amendments for major fuel cycle facilities. Resources are also provided to support risk-informing the Commission's regulatory framework for materials licensing and regulatory oversight. Research activities include support for the review of an application for a MOX fuel fabrication facility.

In FY 2003, the Fuel Facilities Licensing and Inspection program participated in OMB's PART program for the first time. The program received a score of 89 percent, or Effective, the top category of rating attainable under PART. While the program received high scores for its clarity of mission, program management and effectiveness, OMB recommended that the program institute more regular, independent program evaluations, and that its performance measures be refined and streamlined to better illuminate the program's contribution to achieving the NRC's strategic goals. The Office of Nuclear Materials Safety and Safeguards (NMSS) is currently updating its performance measures to align with the agency's updated strategic plan, and will include these updated measures in the FY 2006 performance budget. The NMSS' Division of Fuel Cycle Safety and Safeguards is considering various options for program evaluations as a result of completing the PART questionnaire.

## NUCLEAR MATERIALS SAFETY

*Change from FY 2004.* Programmatic resource increases reflect an increase in MOX fuel fabrication inspection activities and information technology costs. These increases are somewhat offset by decreases in enrichment facilities licensing activities as well as a reduction in indirect staff.

The requested resources will support agency efforts to achieve the output targets established in the following tables.

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Timeliness of fuel cycle licensing actions (amendments, renewals, new applications, and reviews) from the date of acceptance.*</b> (For Licensing Actions received after October 1, 2000)						
<i>Target:</i>	New measure in FY 2001	75% ≤ 180 days 100% ≤ 3 years	75% ≤ 180 days 100% ≤ 2 years	75% ≤ 180 days 100% ≤ 2 years	75% ≤ 180 days 100% ≤ 2 years	75% ≤ 180 days 100% ≤ 2 years
<i>Actual:</i>		94% ≤ 180 days	88% ≤ 180 days 100% ≤ 2 years	89% ≤ 180 days 100% ≤ 2 years		
* Output modified in FY 2002 to exclude licensing actions involved in a hearing.						
<b>Output: Timeliness of safety and safeguards inspections.</b> <i>Target: Complete core inspections as scheduled in Fuel Cycle Master Inspection Plan on time.*</i>						
<i>Target:</i>	90%	<10% overdue	< 10% overdue	< 10% overdue	< 10% overdue	< 10% overdue
<i>Actual:</i>	100% (Completed 105 inspections)	< 1% overdue (Completed 144 inspections)	0% overdue (Completed 139 inspections)	0% overdue (Completed 117 inspections)		
* Output modified in FY 2001 to include the Region IV Uranium Recovery Inspection schedule and with less than 10% overdue. Output modified in FY 2002 to replace the Fuel Cycle Master Inspection Plan with Temporary Instruction 2600/007. Output modified in FY 2003 to replace Temporary Instruction 2600/007 with Inspection Manual Chapter 2600.						
<b>Output: Significant precursors to criticality, i.e., an event that is significant enough to warrant a criticality safety reactive inspection.</b>						
<i>Target:</i>					< 4 per year	< 4 per year
<i>Actual:</i>		New measure beginning in FY 2004				

## NUCLEAR MATERIALS SAFETY

### Nuclear Materials Users Licensing and Inspection

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	28,867	28,342	35,991	37,499	1,508
Contract Support and Travel	10,520	9,319	20,332	21,128	796
<b>Total Budget Authority</b>	39,387	37,661	56,323	58,627	2,304
FTE	251	241	309	305	-4

*FY 2005 Activities.* Activities include licensing, inspection, event evaluation, incident response, allegation and enforcement activities, materials-related wrongdoing investigations, and rulemaking activities needed to maintain the regulatory infrastructure associated with the processing and handling of nuclear materials. Resources also provide for business process improvements and information technology and information management related to materials programs. Approximately 4,000 materials licensing actions and 1,090 routine health and safety inspections are expected to be completed in FY 2005. The NRC will continue to work on approximately 25 - 30 active materials and waste rulemakings per year, and issue 8 - 10 final rules per year. Activities include providing technical assistance to the Agreement States, as well as legal advice and representation to support administrative and judicial proceedings. Resources support the Agreement State Program and State, Federal, and Tribal liaison related to nuclear materials. Research activities include tools for probabilistic risk assessment, support for risk-informing materials licensee regulation, and methods for assessing radiation exposure. The FY 2004 and FY 2005 resources reflect savings of approximately 14 FTE in materials licensing, inspection, and rulemaking activities as a result of efficiencies found through internal program reviews and initiatives to risk-inform the program.

*Change from FY 2004.* Significant programmatic resource increases reflect increases for materials licensing, materials incident response, materials Agreement State activities, and maintenance and operation of, and improvement to, materials-related information management technologies. These increases are somewhat offset by decreases in rulemakings, NRC's materials-related technical training, and a reduction in indirect staff.

The requested resources will support agency efforts to achieve the output targets established in the following tables.

## NUCLEAR MATERIALS SAFETY

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Timeliness of review of applications for new materials licenses and license amendments.</b>						
<i>Target:</i>	80% ≤ 90 days	80% ≤ 90 days 100% ≤ 1 year	85% ≤ 90 days 100% ≤ 1 year	85% ≤ 90 days 100% ≤ 1 year	85% ≤ 90 days 100% ≤ 1 year	85% ≤ 90 days 100% ≤ 1 year
<i>Actual:</i>	95% ≤ 90 days (3,394 of 3,561)	94% ≤ 90 days (3,226 of 3,417) 99.7% ≤ 1 year	97% ≤ 90 days (3,210 of 3,301) 99.8% ≤ 1 year (3,294 of 3,301)	97% ≤ 90 days (3,318 of 3,416) 99.8% ≤ 1 year (3,409 of 3,416)		
<b>Output: Timeliness of reviews of applications for materials license renewals and sealed source and device designs.</b>						
<i>Target:</i>	80% ≤ 180 days	80% ≤ 180 days 100% ≤ 2 years	85% ≤ 180 days 100% ≤ 2 years	85% ≤ 180 days 100% ≤ 2 years	85% ≤ 180 days 100% ≤ 2 years	85% ≤ 180 days 100% ≤ 2 years
<i>Actual:</i>	92% ≤ 180 days (192 of 208)	98% ≤ 180 days (731 of 748) 100% ≤ 2 years (748 of 748)	96% ≤ 180 days (679 of 708) 100% ≤ 2 years (708 of 708)	97% ≤ 180 days (797 of 820) 100% ≤ 2 years (820 of 820)		
<b>Output: Timeliness of safety inspections of materials licensees.*</b>						
<i>Target:</i>	< 10% overdue	< 10% overdue	< 10% overdue	< 10% overdue	< 10% overdue	< 10% overdue
<i>Actual:</i>	< 3% overdue (Completed approx. 1,000)	1% overdue (Completed approx. 1,000)	1% overdue (Completed approx. 650)	< 1% overdue (Completed approx. 650)		
<i>*Core inspections as defined in Inspection Manual Chapter 2800.</i>						



## NUCLEAR MATERIALS SAFETY

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b><i>Output: The Nuclear Materials Events Database (NMED), which contains information about nuclear materials events reported to the NRC by NRC licensees and Agreement States, will be maintained by entering materials event information in a timely manner.</i></b>						
<i>Target: Materials event information from morning reports, event notifications, and preliminary notifications of occurrences will be entered into NMED and updated within the identified time frame.</i>						
<i>Target:</i>	90% entered ≤ 2 working days 90% updated ≤ 2 working weeks	90% entered ≤ 2 working days 90% updated ≤ 2 working weeks	90% entered ≤ 2 working days 90% updated ≤ 2 working weeks	90% entered ≤ 2 working days 90% updated ≤ 2 working weeks	95% entered ≤ 2 working days 90% updated ≤ 2 working weeks	95% entered ≤ 2 working days 90% updated ≤ 2 working weeks
<i>Actual:</i>	99% ≤ 2 working days (577 of 581) 99% updated ≤ 2 working weeks (1,264 of 1,280)	99% ≤ 2 working days (496 of 501) 75% ≤ 2 working weeks (741 of 987) <sup>31</sup>	100% ≤ 2 working days (556 of 556) 98% ≤ 2 working weeks (1,639 of 1,664)	98% ≤ 2 working days (493 of 497) 97% ≤ 2 working weeks (2,241 of 2,307)		

**NUCLEAR MATERIALS SAFETY**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Numbers and types of materials technical training courses offered.</b>						
<i>Target: Numbers and types of courses offered will meet cumulative needs identified by offices and regions in annual needs survey.</i>						
<i>Target:</i>	Meet 90% of needs	Meet 90% of needs	Meet 95% of needs	Meet 95% of needs	Meet 95% of needs	Meet 95% of needs
<i>Actual:</i>	100% needs met	100% needs met	100% needs met	100% needs met		
<b>Output: Timeliness in completing enforcement actions</b>						
<i>Target:</i>		New measure in FY 2005				<u>Investigation</u> 100 % ≤ 360 days <u>Non- Investigation</u> 100% ≤ 180 days
<i>Actual:</i>						
<b>Output: Emergency Response Readiness Index.</b>						
<i>Target:</i>	95%	99%	99%	99%	99%	99%
<i>Actual:</i>	99.3%	100%	100%	100%		
<i>Definition: Index provides the single overall measure of the degree to which the agency believes it is ready to respond to an emergency situation. It serves as a method for measuring disparate activities that comprise the elements of the Incident Response Program. It will be determined by averaging the degree to which each of the following program functions meets the goal of 99 percent: Response Organization Staffing, Response Facility Availability, Communications Reliability, Response Organization Training, and 24-Hour Notification Point. If the overall index falls below or approaches its target value of 99 percent for FY 2002 and FY 2003, management will determine what is contributing most to the decline and conduct appropriate corrective measures on the basis of this review.</i>						
<b>Output: Percentage of Office of Investigation cases that will be investigated to a conclusion on the merits as either substantiated or unsubstantiated.</b>						
<i>Target:</i>	New measure in FY 2002.		90%	90%	90%	90%
<i>Actual:</i>			93%	97.1%		

## NUCLEAR MATERIALS SAFETY

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Percentage of cases closed on the merits as either substantiated or unsubstantiated that will be completed in 10 months or less.*</b>						
<b>Target:</b>	Complete cases ≤ 9 months (average) Active inventory ≤ 9%	Complete cases ≤ 9 months (average) Active Inventory ≤ 9%	Complete cases 80% ≤ 10 months	Complete cases 80% ≤ 10 months	Complete cases 80% ≤ 10 months	Complete cases 80% ≤ 10 months
<b>Actual:</b>	Completed in 5.6 months (average) (153 cases) 6% open for > 12 months	Completed in 7.3 months (average) (131 cases)	87% cases completed in ≤ 10 months	93.9% cases completed in ≤ 10 months		
* Output modified in FY 2002 from "Timeliness in completing investigations (average time to complete cases)."						
<b>Output: Timeliness in completing enforcement actions. *</b>						
<b>Target:</b>	90% ≤ 90 days (average)	90% ≤ 90 days (average)	<u>Investigation</u> 100% ≤ 360 days <u>Non- Investigation</u> 100% ≤ 180 days	<u>Investigation</u> 100% ≤ 360 days <u>Non- Investigation</u> 100% ≤ 180 days	<u>Investigation</u> 100% ≤ 360 days <u>Non- Investigation</u> 100% ≤ 180 days	<u>Investigation</u> 100% ≤ 360 days <u>Non- Investigation</u> 100% ≤ 180 days
<b>Actual:</b>	90% in 53.2 days (average) 35 cases	90% in 55 days (average) 51 cases	<u>Investigation</u> 100% in 360 days (21 cases) <u>Non- Investigation</u> 100% ≤ 180 days (40 cases)	<u>Investigation</u> 100% in 360 days (22 cases) <u>Non- Investigation</u> 100% ≤ 180 days (32 cases)		
* Output modified in FY 2002 to distinguish between Investigation cases ( average time to complete all cases will not exceed 180 days) and Non-Investigation cases (average time to complete all cases will not exceed 120 days).						

## NUCLEAR MATERIALS SAFETY

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### *Homeland Security*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	2,899	6,036	7,702	8,305	603
Contract Support and Travel	3,476	6,078	8,476	7,781	-695
<b>Total Budget Authority</b>	6,375	12,114	16,178	16,086	-92
FTE	25	49	64	66	2

*FY 2005 Activities.* Activities address preventing the potential use of radioactive sources in a radiological dispersal device (RDD) or other malevolent applications and improving safety and security by reducing the number of incidents involving inadequate control of sources both domestically and internationally. Activities include evaluating the need for security improvements including compensatory measures, ensuring their implementation, providing for rulemaking associated with changes to the regulatory framework, conducting physical protection and Material Control and Accounting (MC&A) reviews of NRC-licensed fuel facilities and materials licensees, revising the baseline inspection program for physical protection and MC&A, developing a database for tracking radioactive sources, examining vulnerabilities, reevaluating safeguards and physical security programs, and research with respect to the dispersability of material. In conjunction with this effort, the NRC will continue to participate in interagency efforts to enhance security of radioactive sources, assess potential consequences of attacks, and respond to malevolent uses. Resources include, among other things, the provision of legal advice and representation related to Homeland Security.

*Change from FY 2004.* The resources remain at approximately the FY 2004 level during FY 2005. There is a slight decrease in resources for regulatory improvements that reflects the completion of work on large quantity radioactive materials (LQ RAM) compensatory measures. In addition, there is a decrease in the funds necessary for the information technology efforts of the Control of Sources Registry. There is a slight increase in the safeguards and oversight activities due to an expansion of regional Baseline Materials Inspections.

## NUCLEAR MATERIALS SAFETY

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### Additional Output Measure for Research Activities

The following output measure applies to the research activities in the Nuclear Materials Safety Arena.

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Timeliness of completing actions on critical research programs. *</b>						
<i>Target: Percent of major milestones met on or before their due date.</i>						
<i>Target:</i>	New measure in FY 2002	New measure in FY 2002	85%	85%	85%	85%
<i>Actual:</i>			N/A	N/A**		
* <i>Definition: Critical research programs typically respond to high-priority needs from the Commission and NRC's licensing organizations. Critical research programs will be the highest priority needs identified at the beginning of each fiscal year.</i>						
** <i>The FY 2003 high-priority programs are contained within the Reactor and Waste Arenas. No Materials Arena activity met the threshold as a high-priority program for FY 2003. In FY 2004, all programs will be reevaluated and updated as appropriate.</i>						

The Office of Nuclear Regulatory Research is developing a quality assessment process consistent with that proposed by the National Academy of Sciences, Committee on Science, Engineering, and Public Policy, in its report, "Evaluating Federal Research Programs: Research and the Government Performance and Results Act." The process will be developed and tested during FY 2004 and baselined in FY 2005. Performance will be measured against that baseline in FY 2006. Performance targets for FY 2006 will be defined at the end of FY 2005.

## NUCLEAR MATERIALS SAFETY

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### ARENA NOTES

1. In addition to the current 33 Agreement States, Minnesota is expected to become an Agreement State by the end of FY 2004.
2. For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material, consistent with proposed amendments to 10 CFR Part 70. It also includes exposures from uranium recovery activities under the Uranium Mill Tailing Radiation Control Act.
3. In this context, the “regulatory framework” consists of several interrelated aspects, including: (1) the NRC’s mandate from Congress in the form of enabling legislation, (2) the NRC’s rules in Title 10 of the *Code of Federal Regulations*, (3) the regulatory guides and review plans that reflect the NRC staff’s views on acceptable means to comply with those regulations, (4) the body of technical information, obtained from research performed by the NRC or by others, and from evaluation of operational experience, that supports the positions in the rules and guides and review plans, (5) the licensing and inspection procedures utilized by the staff, and (6) the enforcement guidance.
4. Risk-informed, performance-based regulation is an approach in which risk insights, engineering analysis and judgment, and performance histories are used to (1) focus attention on the most important activities, (2) establish objective criteria based upon risk insights for evaluating performance, (3) develop measurable or calculable parameters for monitoring system and licensee performance, and (4) focus on the results as the primary basis of regulatory decision making.
5. “Significant exposures” are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician. Hazardous material (as defined by the Occupational Safety and Health Administration) exposures have the potential to occur primarily with fuel cycle and uranium recovery activities in the Nuclear Materials Safety Arena.
6. Releases that have the potential to cause “adverse impact” are currently undefined. As a surrogate, we will use those that exceed the limits for reporting abnormal occurrences as given by abnormal occurrence criteria 1.B.1 (normally 5,000 times Table 2 (air and water) of Appendix B, Part 20).
7. In accordance with Appendix G to 10 CFR Part 73 and 10 CFR 74.11(a).
8. In accordance with the requirements of 10 CFR 95.57.
9. The performance goals and associated measures may be added to and/or modified, as annual, real data are evaluated.
10. Performance targets were modified in FY 2002, to more accurately reflect actual historical performance data.

## NUCLEAR MATERIALS SAFETY

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11. Reportable events of material entering the public domain in an uncontrolled manner as reported under 10 CFR 20.2201(a). The Nuclear Materials Events Database contains the list of these events as reported by NRC licensees and, through the Agreement States, the Agreement State licensees.
12. Actual FY 2000 data have changed from that reported in the FY 2004 Performance Plan. The actual number of losses of control in FY 2000 has changed from 265 to 259. Changes to actual prior year data result from late notification of events by Agreement States and NRC licensees, and/or additional staff analysis of the event data.
13. Actual FY 2002 data have changed from that reported in the FY 2004 Performance Plan. The actual number of losses of control in FY 2002 has changed from 266 to 272; the actual number of radiation over exposures in FY 2002 has changed from 25 to 23; the actual number of medical events in FY 2002 has changed from 32 to 33; and the actual number of releases of radioactive material to the environment in FY 2002 changed from 3 to 4. Changes to actual prior year data result from later notification of events by Agreement States and NRC licensees, and/or additional staff analysis of the event data.
14. Performance targets were modified in FY 2002, to more accurately reflect actual historical performance data.
15. Over exposures are those exposures that exceed the dose limits specified in by 10 CFR 20.2203(a)(2) as tracked in NMED. For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material, consistent with 10 CFR Part 70. Reportable chemical exposures are those that exceed license commitments. It would also include chemical exposures involving uranium recovery activities under the Uranium Mill Tailings Radiation Control Act. Multiple people may be affected by a single causal event.
16. Actual FY 2000 data have changed from that reported in the FY 2004 Performance Plan. The actual number of radiation over exposures in FY 2000 has changed from 18 to 15. The actual number of medical events in FY 2000 changed from 37 to 35. Changes to actual prior year data result from late notification of events by Agreement States and NRC licensees, and/or additional staff analysis of the event data.
17. Medical events (misadministrations) as reported under 10 CFR Part 35 are tracked in NMED. Multiple patients may be affected by a single causal event.
18. Releases for which a 30-day reporting is required under 10 CFR 20.2203(a)(3). This measure also includes chemical releases from regulated activity under the Uranium Mill Tailings Radiation Control Act.
19. This involves chemical releases from NRC-regulated activities under the Uranium Mill Tailings Radiation Control Act.
20. "Malevolent use" is defined as the deliberate misuse of radioactive materials with the intent to cause physical or psychological harm to a person or persons, or to cause physical damage to a facility or

## NUCLEAR MATERIALS SAFETY

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- to the environment. The NRC evaluates intentional violations and deliberate acts against this definition.
21. The NRC recognizes that no explicit reporting requirements exist for substantiated breakdowns of programs. The NRC relies on its safeguards inspection findings and licensee notifications.
  22. In FY 2003, examples of public outreach efforts included a Uranium Recovery Workshop; public meetings on the MOX draft EIS and the revised draft safety evaluation report; public meetings on the proposed Louisiana Energy Services' (LES) gas centrifuge facility; participation in the annual meetings of the Organization of Agreement States (OAS), and Conference of Radiation Control Program Directors (CRCPD). Other examples include public meetings associated with requirements for recognition of specialty board certifications in 10 CFR Part 35, "Medical Use of Byproduct Material," and the expanded information on Part 35 questions and answers. The NRC also conducted a stakeholder workshop on control of solid materials; held a public meeting with the radiopharmaceutical industry on extremity dose monitoring; participated in the 2003 Federal Facilities Management Symposium sponsored by the Association of State and Territorial Solid Waste Management Officials; and held a series of meetings and workshops with Agreement States and large panoramic irradiator licensees to develop risk informed, efficient, and effective compensatory measures to provide additional security for large irradiator sources.
  23. A 10 CFR 2.206 petition is a written request filed by any person to institute a proceeding to modify, suspend, or revoke a license, or for any other enforcement action. The petition specifies the action requested and sets forth the facts that constitute the basis for the request. The NRC evaluates the technical merits of the safety concern presented by the petition. Based on the facts determined by the NRC technical evaluation or investigation of the merits of the petition, the Director will issue a decision to grant or deny the petition, in whole or in part. The Director's Decision explains the bases upon which the petition has been granted and identifies the actions that NRC staff has taken (or will take) to grant the petition in whole or in part. Similarly, if the petition is denied, the Director's Decision explains the bases for the denial and discusses all matters raised by the petitioner in support of the request.
  24. The start of the 120-day period is the date that the Petition Review Board determines that the proposed petition satisfies the criteria of NRC Management Directive 8.11, "Review Process for 10 CFR 2.206 Petitions," and acknowledges by letter the petitioner's request. For petitions received after October 1, 2000, the end time is the date of the proposed Director's Decision. Supplements to the petition which require extension of the schedule will reset the beginning of the metric to the date of issuance of a new acknowledgment letter.
  25. The NRC completed work on the Part 35 rule in FY 2001, and received conditional approval from OMB for clearance of information collection requirements on September 18, 2001. However, Public Law No. 107-66 (H.R. 2311) included a prohibition on spending by the NRC to implement or enforce revised Part 35, with respect to diagnostic nuclear medicine, until the Commission reexamined Part 35 and provided a report to Congress which explained why the burden imposed by revised Part 35 could not be further reduced. The Commission submitted the report to Congress on January 31, 2002, and promulgated the rule in FY 2002.



## **NUCLEAR MATERIALS SAFETY**

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26. In FY 2001, the staff's focus on reducing paperwork and record keeping imposed by NRC centered on the revision to 10 CFR Part 35, which the staff estimates will result in a 12-percent reduction as compared to the current requirements, when it is made effective. Implementation of Part 35 was pending during FY 2001 while awaiting Congressional decision but has proceeded in FY 2002. As the new requirements for Part 35 go into effect during FY 2003, the anticipated effect of reducing unnecessary burden should begin to occur. However, it should be noted that other rulemaking actions result in an increase in necessary burden (and, therefore, the total burden) as part of an effort to protect public health and safety. For example, a change to Part 70 (Special Nuclear Material) created a modest increase in paperwork requirements.

# **NUCLEAR WASTE SAFETY**

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## NUCLEAR WASTE SAFETY

The Nuclear Waste Safety Arena encompasses oversight of the long-term storage and disposal of high-level waste (HLW), regulatory oversight for the transportation of radioactive materials and the interim storage of spent nuclear fuel both at and away from reactor sites, oversight of the decommissioning of nuclear reactors and other facilities, low-level waste management, performance assessment and environmental reviews for licensing activities, and waste safety research. The NRC's HLW regulatory activities are mandated by the Atomic Energy Act of 1954, as amended, and by the Energy Reorganization Act of 1974, and are further set out in the Nuclear Waste Policy Act of 1982, as amended (NWPA), and the Energy Policy Act of 1992. The NWPA specifies a detailed approach for the long-range undertaking of HLW disposal, with the U.S. Environmental Protection Agency (EPA) responsible for developing standards (which the NRC is required to implement) and the U.S. Department of Energy (DOE) responsible for characterizing the site and developing the repository, subject to NRC regulatory oversight. The NWPA directs the DOE to characterize only one site at Yucca Mountain in the State of Nevada. For the interim storage of spent nuclear fuel, the NRC's oversight responsibilities include maintaining the operational safety of spent fuel in storage and preparing for dry storage at decommissioned reactors. The NRC's oversight of low-level radioactive waste disposal activities is conducted in accordance with the Low-Level Radioactive Waste Policy Act of 1980, as amended in 1985. The NRC's environmental protection activities provide regulatory oversight of compliance with the National Environmental Policy Act of 1969, as amended (NEPA). Environmental activities include review and preparation of documents mandated by NEPA.

### **Budget Overview**

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	32,016	32,538	40,133	52,688	12,555
Contract Support and Travel	38,400	39,741	50,676	65,408	14,732
<b>Total Budget Authority</b>	70,416	72,279	90,809	118,096	27,287
FTE	270	271	338	375	37

The full-cost budget request of \$118.1M and 375 FTE for the Nuclear Waste Safety Arena supports activities associated with disposal of radioactive wastes, storage of spent nuclear fuel, transportation of radioactive materials, and decommissioning of nuclear reactors and other facilities. The increase of \$27.3M in FY 2005 is primarily to support regulation of the proposed HLW repository at Yucca Mountain, Nevada, consistent with DOE's anticipated license application date of December 2004.

## NUCLEAR WASTE SAFETY

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The increase supports docketing and reviewing DOE's application, conducting thorough safety and security evaluations, preparing the safety evaluation report, adopting and possibly supplementing a final environmental impact statement, initiating pre-hearing and hearing activities on DOE's potential license application, and renting and providing security for hearing room space in the vicinity of Las Vegas, Nevada. Our goal is to complete our review and reach a license decision within three years. The increase in resources for high-level waste also provides for the Package Performance Study addressing the safety of spent nuclear fuel shipping containers in rail and highway accidents, by testing a full-scale rail and a full-scale truck cask under impact and fire conditions. Of the \$27.3M increase in FY 2005, \$12.6M is associated with the Government-wide FY 2005 pay raise, other increases in salaries and benefits, and additional FTEs to support the High-Level Waste Program. In addition, contract support and travel increases by \$16.8M for high-level waste activities. These increases are partially offset by a decrease of \$1.7M in the Waste Homeland Security Program, as a result of the completion of certain mitigating strategy activities, and a decrease of \$1.1M in the environmental protection and low-level waste program, as a result of a reduced workload for environmental impact statements.

### Measuring Results – Strategic and Performance Goals

This strategic arena includes strategic and performance goals, measures, and strategies. The **strategic goal** is the overall outcome the NRC wants to achieve. The **performance goals** are the key contributors to achieving the strategic goal and focus on outcomes over which the agency has control. The **performance measures** indicate whether the NRC is achieving its goals and establish the basis for performance management. These measures establish how far and how fast the agency will move in the direction established by the performance goals. The **strategies** describe how the NRC will achieve its performance goals and their associated measures. In other words, the strategies provide the direct link between what the agency wants to achieve (i.e., goals) and the key activities the agency will conduct to achieve those goals.

#### *Our Strategic Goal*

In the Nuclear Waste Safety Arena, the NRC will conduct an efficient regulatory program to ensure the safe transport, storage, and disposal of radioactive waste in a manner that adequately protects public health and safety and promotes the common defense and security by working to achieve the following strategic goal:

Prevent significant adverse impacts from radioactive waste to the current and future public health and safety and the environment, and promote the common defense and security.
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## NUCLEAR WASTE SAFETY

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### Four Performance Goals and Their Implementing Strategies

- (1) To **maintain safety, protection of the environment, and the common defense and security**, the NRC will employ the following strategies:
- We will continue developing a regulatory framework to increase our focus on safety, including the incremental use of risk-informed and, where appropriate, less-prescriptive performance-based<sup>1</sup> regulatory approaches to maintain safety.
  - We will continue authorizing licensee activities only after determining that the proposed activities will be conducted in a manner that is consistent with the regulatory framework.
  - We will confirm that licensees understand and carry out their primary responsibility for conducting activities in a manner that is consistent with the regulatory framework.
  - We will respond to operational events involving potential safety or safeguards consequences.
  - We will evaluate new information from research, new safety issues, changing external factors, international programs, and licensee operational experience so that improvements can be made to maintain an adequate regulatory framework.
  - We will keep pace with the national high-level waste management program. We will apply the regulatory framework to prelicensing reviews and consultations with DOE to resolve the issues that are most important to repository safety and prepare for addressing a potential licensing decision within the statutory time period.
- (2) To **increase public confidence**, the NRC will employ the following strategies:
- We will make public participation in the regulatory process more accessible. We will listen to the public's concerns and involve them more fully in the regulatory process.
  - We will communicate more clearly. We will add more focus, clarity, and consistency to our message; be timely; and present candid and factual information in the proper context with respect to the risk of the activity.
  - We will continue to enhance the NRC's accountability and credibility by being a well-managed, independent regulatory agency. We will increase efforts to share our accomplishments with the public.

## **NUCLEAR WASTE SAFETY**

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- We will continue to foster an environment where safety issues can be openly identified without fear of retribution.
  - We will continue to develop and present communications courses to facilitate more effective communication with the public in public meetings and in documents.
  - We will continue to implement the plain language initiatives through staff and supervisor training in techniques for writing in clear, plain language and in including plain-language executive summaries in high-profile reports and documents.
- (3) To **make the NRC activities and decisions more effective, efficient, and realistic**, the NRC will employ the following strategies:
- We will continue to improve the regulatory framework to increase our effectiveness, efficiency, and realism.
  - We will identify, prioritize, and modify processes based on effectiveness reviews to maximize opportunities to improve those processes.
- (4) To **reduce unnecessary regulatory burden on stakeholders**, the NRC will employ the following strategies:
- We will continue to improve our regulatory framework in order to reduce unnecessary regulatory burden.
  - We will improve and execute our programs and processes in ways that reduce unnecessary costs to our stakeholders.
  - We will actively seek stakeholder input to identify opportunities for reducing unnecessary regulatory burden.

### *Performance Measures*

The actual data reported for some of our strategic goal measures and the performance goal measures regarding maintaining safety are subject to change as a result of NRC analysis of reported information as well as the receipt of newly reported information. Changes to the data will be reported and explained in future performance plan submissions.

### **Strategic Goal Measures**

The following measures are associated with the Nuclear Waste Safety strategic goal.

## NUCLEAR WASTE SAFETY

STRATEGIC GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<i>No deaths resulting from acute radiation exposures from radioactive waste.</i>						
Target:	0	0	0	0	0	0
Actual:	0	0	0	0		
<i>No events resulting in significant radiation exposures<sup>2</sup> from radioactive waste.</i>						
Target:	0	0	0	0	0	0
Actual:	0	0	0	0		
<i>No releases of radioactive waste causing an adverse impact on the environment.<sup>3</sup></i>						
Target:	0	0	0	0	0	0
Actual:	0	0	0	0		
<i>No losses, thefts, diversions, or radiological sabotage<sup>4</sup> of special nuclear material or radioactive waste.</i>						
Target:	0	0	0	0	0	0
Actual:	0	0	0	0		

### Performance Goal (PG) Measures

The following measures are associated with the Nuclear Waste Safety performance goals. The performance goal associated with each measure is identified by the acronym PG and the goal number, as identified in the previous section.

PERFORMANCE GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<i>No events resulting in radiation over exposures<sup>5</sup> from radioactive waste that exceed applicable regulatory limits. (PG1)</i>						
Target:	0	0	0	0	0	0
Actual:	0	0	0	0		



**NUCLEAR WASTE SAFETY**

PERFORMANCE GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<i>No breakdowns of physical protection resulting in a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste.<sup>6</sup> (PG1)</i>						
Target:	0	0	0	0	0	0
Actual:	0	0	0	0		
<i>No radiological releases<sup>7</sup> to the environment from operational activities that exceed the regulatory limits. (PG1)</i>						
Target:	0	0	0	0	0	0
Actual:	0	0	0	0		
<i>No instances where radioactive waste and materials under the NRC's regulatory jurisdiction cannot be handled, transported, stored, or disposed of safely now or in the future.<sup>8</sup> (PG1)</i>						
Target:	0	0	0	0	0	0
Actual:	0	0	0	0		
<i>Complete the milestones relating to collecting, analyzing, and trending information for measuring public confidence. (PG2)</i>						
<u>Milestones:</u>						
FY 2001	Conduct semiannual evaluations of all public meeting feedback forms to determine any trends in NRC public meetings.					
FY 2002	Develop recommendation for continued use of public meeting feedback form or for another method of assessing public confidence.					
FY 2003-04	Create a Web-based system to compile and analyze trends in the responses of the feedback forms to assess the agency's success in meeting performance goals.					
FY 2005	Assess public meeting performance through review of feedback forms. Consider using results to target specific training or guidance for staff.					
Target:	New measure in FY 2001	Will meet target	Will meet target	Will meet target	Will meet target	Will meet target
Actual:		Met target	Met target	Met target		

**NUCLEAR WASTE SAFETY**

<b>PERFORMANCE GOAL MEASURES</b>						
	<b>FY 2000</b>	<b>FY 2001</b>	<b>FY 2002</b>	<b>FY 2003</b>	<b>FY 2004</b>	<b>FY 2005</b>
<b><i>Complete all of the public outreaches. (PG2)</i></b>						
<u>Milestones:</u>						
FY 2001	Conduct public meetings in Nevada on Yucca Mountain hearing process.					
FY 2002	Conduct public meetings in Nevada on Final 10 CFR Part 63, Yucca Mountain Review Plan, and sufficiency review (if Site Recommendation by DOE is delivered).					
FY 2003	Conduct 10 CFR Part 71 public meetings (following publication of proposed rule, prior to final rule). Implement public outreach activities described in decommissioning communication plans.					
FY 2004	Continue to respond to specific requests from affected units of local governments or others for public meetings on various aspects of NRC's HLW program. Implement public outreach activities described in decommissioning communication plans. Continue to respond to specific requests from affected units of local governments or others for public meetings on various aspects of NRC's HLW program. Continue to engage the public as we make progress in the resolution of key technical issues. Conduct public outreaches on Package Performance Study. Continue public outreach activities as stated in the Spent Fuel Transportation and Storage Communication Plan.					
FY 2005	Implement public outreach activities described in decommissioning communication plans to the extent consistent with any ongoing adjudication activities. Continue to respond to specific requests from affected units of local governments or others for public meetings on various aspects of NRC's HLW program to the extent consistent with any ongoing adjudication activities. Continue to engage the public as we make progress in the resolution of key technical issues. Conduct public outreaches on Package Performance Study to the extent consistent with any ongoing adjudication activities. Continue public outreach activities as stated in the Spent Fuel Transportation and Storage Communication Plan to the extent consistent with any ongoing adjudication activities. Conduct scoping meetings and public outreach activities on published draft environmental impact statements and other environmental issues as requested by private entities or other government agencies.					
<i>Target:</i>	New measure in FY 2001	Will meet target	Will meet target	Will meet target	Will meet target	Will meet target
<i>Actual:</i>		Met target <sup>9</sup>	Met target <sup>10</sup>	Met target <sup>11</sup>		
<b><i>Issue Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206<sup>12</sup> within an average of 120 days.<sup>13</sup> (PG2)</i></b>						
<i>Target:</i>	New measure in FY 2001	120 days	120 days	120 days	120 days	120 days
<i>Actual:</i>		No petitions received	167 days <sup>14</sup>	Met target		

**NUCLEAR WASTE SAFETY**

PERFORMANCE GOAL MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Complete those specific waste milestones in the Risk-Informed Regulation Implementation Plan (RIR-IP). (PG3)</b>						
<u>Milestones:</u>						
FY 2001	October 27, 2000 - RIR-IP sent to the Commission. November 17, 2000 - Commission briefed on RIR-IP.					
	August 2001 - Develop final criteria and milestones.					
FY 2002-05	Execute milestones identified in the final RIR-IP. (Identified at beginning of each fiscal year.)					
<i>Target:</i>	New measure in FY 2001	Will meet target	Will meet target	Will meet target	Will meet target	Will meet target
<i>Actual:</i>		Met target	Met target	Met target		
<b>Complete at least two key process improvements per year in selected program and support areas that increase effectiveness, efficiency, and realism. (PG3)</b>						
<i>Target:</i>	New measure in FY 2001	Will complete 2 key processes	Will complete 2 key processes	Will complete 2 key processes	Will complete 2 key processes	Will complete 2 key processes
<i>Actual:</i>		Completed 5 key processes	Completed 3 key processes	Completed 2 key processes		
<b>Complete all major precicensing milestones needed to prepare for a licensing review of the potential Yucca Mountain repository, consistent with DOE's schedules and before DOE submits its license application.<sup>15</sup> (PG3)</b>						
<u>Milestones:</u>						
FY 2000	Comments on DOE's draft Environmental Impact Statement. Resolution of key technical issues at the staff level (FY 2000 – FY 2003).					
FY 2001	Final regulation in 10 CFR Part 63 (previously FY 2000, currently FY 2001) in FY 2001, will conform to final EPA standard, issued in June 2001, for the potential Yucca Mountain repository. Comments on DOE's Draft Supplemental Environmental Impact Statement.					
FY 2002	Draft Yucca Mountain Review Plan (previously FY 2001; currently FY 2002). Site Characterization Sufficiency Comments (previously FY 2001; currently FY 2002, in response to an additional DOE request). Integrated Issue Resolution Status Report (FY 2002 and FY 2003).					
FY 2003	Review DOE's Final Environmental Impact Statement.					
FY 2004	Final Yucca Mountain Review Plan.					
FY 2004	Certification of the NRC's documentary material for the purposes of the Licensing Support Network.					
<i>Target:</i>	Will meet target	Will meet target	Will meet target	Will meet target	Will meet target	N/A
<i>Actual:</i>	2 of 3 milestones were completed.	3 of 5 milestones were completed. <sup>16</sup>	4 of 5 milestones were completed. <sup>17</sup>	Met target <sup>18</sup>		

**NUCLEAR WASTE SAFETY**

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<b>PERFORMANCE GOAL MEASURES</b>						
	<b>FY 2000</b>	<b>FY 2001</b>	<b>FY 2002</b>	<b>FY 2003</b>	<b>FY 2004</b>	<b>FY 2005</b>
<i>Complete those specific milestones to reduce unnecessary regulatory burden. (PG4)</i>						
<u>Milestones:</u>						
FY 2001	Staff will review and make recommendations for improving the Part 72 Cask Certification Process, including the resolution of the Nuclear Energy Institute petition.					
FY 2003	If an application to adopt the Standard Technical Specifications (STS) for a specific cask design is received, staff will begin a complete review of the application. Adoption and implementation of STS for Spent Fuel Dry Storage Cask Designs. Staff will issue Integrated Issue Resolution Status Report of technical information pertinent to the review of potential high-level waste repository.					
FY 2004	If an application to adopt STS for a specific cask design is received, staff will begin a complete review of the application and will implement STS, if the design is approved.					
FY 2005	If an application for STS adoption is approved, staff will proceed with rule making to approve STS adoption for the specific cask design.					
<i>Target:</i>	New Measure in FY 2001	Will meet target	No target established	Will meet target	Will meet target	Will meet target
<i>Actual:</i>		Met target	N/A	Met target <sup>19</sup>		

## NUCLEAR WASTE SAFETY

### BUDGET AUTHORITY AND FULL-TIME EQUIVALENT BY PROGRAM

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Program (\$K)</b>					
High-Level Waste Regulation	24,738	33,100	38,892	69,050	30,158
Spent Fuel Storage and Transportation Licensing and Inspection	21,836	15,572	20,823	21,423	600
Regulation of Decommissioning	17,219	15,718	20,183	19,503	-680
Environmental Protection and Low-Level Waste Management	3,377	4,598	5,800	4,737	-1,063
Homeland Security	3,246	3,291	5,111	3,383	-1,728
<b>Total Budget Authority</b>	70,416	72,279	90,809	118,096	27,287
<b>Full-Time Equivalent Employment by Program</b>					
High-Level Waste Regulation	69	77	98	151	53
Spent Fuel Storage and Transportation Licensing and Inspection	92	83	102	99	-3
Regulation of Decommissioning	88	74	90	89	-1
Environmental Protection and Low-Level Waste Management	14	17	21	20	-1
Homeland Security	7	20	27	16	-11
<b>Total FTE</b>	270	271	338	375	37

### Justification of Program Requests

The Nuclear Waste Safety Arena comprises five programs, which are discussed in the following pages.

## NUCLEAR WASTE SAFETY

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### *High-Level Waste Regulation*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	8,021	8,756	11,130	24,445	13,315
Contract Support and Travel	16,717	24,344	27,762	44,605	16,843
<b>Total Budget Authority</b>	24,738	33,100	38,892	69,050	30,158
FTE	69	77	98	151	53

*FY 2005 Activities.* This program fulfills the NRC's statutory responsibilities regarding the potential DOE application for a high-level waste (HLW) repository. The Congress has approved the President's recommendation of the Yucca Mountain, Nevada site, and DOE plans to submit its license application in December 2004. During the first quarter of FY 2005, the NRC will continue to resolve key technical issues as part of the prelicensing consultation process with DOE to enhance the likelihood that a license application from DOE will be complete and of high quality. Following the planned submission of DOE's license application, the NRC will begin to review the application, conduct thorough safety and security evaluations, prepare the safety evaluation report, initiate the HLW inspection program, and (to the extent practical) adopt DOE's final environmental impact statement (EIS). To achieve the performance goal of increasing public confidence, resources support communicating with stakeholders and making the regulatory process accessible to interested stakeholders. In addition, legal advice and representation will be provided for staff reviews and Commission actions, including review of the application, pre-hearing, hearing activities and any associated judicial challenges. Following the submission of DOE's license application, the NRC will also respond to allegations of safety, safeguards and/or discrimination violations, and HLW-related wrongdoing investigations.

The NRC will begin pre-hearings and hearings on DOE's potential license application, which are expected to be highly contested and involve 15 or more parties in litigation that has a 3-year goal for completion (with opportunity to extend 12 months). Related activities include (1) recruiting additional legal and technical judges for adjudicatory review; (2) implementing the Licensing Support Network (LSN), which provides party and public access to hearing-related documents and which will have been re-sized during FY 2004 in response to an increase in DOE's projected

## NUCLEAR WASTE SAFETY

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document volume; (3) developing and implementing a technology solution for the receipt, processing, and public availability of very large document submissions; (4) completing the Digital Data Management System (DDMS) in the Las Vegas-area hearing room to provide for the efficient management and use in the hearing room of a very large volume of multimedia data; and (5) paying rent and providing security for the Las Vegas-area hearing room.

Once the NRC accepts DOE's application, the NRC will be required to investigate and to address alleged wrongdoing by licensees, applicants, certificate holders, and contractors and to impose enforcement sanctions for violations for NRC requirements.

The NRC's Package Performance Study is responsive to public concerns about the performance of spent nuclear fuel shipping containers in extreme rail and highway accidents through the testing of a full-scale rail and a full-scale truck cask under impact and fire conditions. Objectives of this study include validating the capability of models and analysis codes to capture accurately the response of casks and spent fuel to accident conditions, and providing data to refine dose risk estimates. Activities will include procurement of the rail cask, completion of some testing, and construction of the test facility. The NRC will continue its efforts to establish co-sponsorship and funding with DOE, but the FY 2005 resources request fully supports the Package Performance Study needs for FY 2005.

The NRC has implemented several efficiencies in its HLW program. Beginning in FY 2001, staff began implementing a more efficient approach to resolving issues before receipt of DOE's license application by focusing on DOE's responses to specific key technical issue (KTI) agreements and increasing the use of the Yucca Mountain Review Plan to help ensure KTI resolution is consistent with the NRC's regulatory mission.

The NRC also is risk-informing the strategies used to review key technical issues as it prepares for a future licensing review of a high-level waste repository application. Risk insights will be used to increase the efficiency and effectiveness of the quality assurance and inspection activities and the review of DOE's proposed performance confirmation program.

*Change from FY 2004.* Resource increases in FY 2005 reflect DOE's planned submission of a license application for an HLW repository at Yucca Mountain, the initiation of pre-hearing and hearing activities, and full NRC support for the Package Performance study (including procurement of a rail cask and construction a test facility).

The requested resources will support agency efforts to achieve the output targets established in the following tables.

**NUCLEAR WASTE SAFETY**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Establish a site-specific, performance-based regulation applicable to the proposed repository at Yucca Mountain.</b>						
<i>Target:</i>	Publish final regulation	Publish final regulation**	Publish proposed amendment to 10 CFR Part 63 and prepare final rule	Publish final amendment to 10 CFR Part 63	N/A	N/A
<i>Actual:</i>	Target not met*	Final 10 CFR Part 63 approved by Commission 9/7/01, transmitted to OMB 9/20/01, published 11/2/01	Issued final rule for the proposed repository at Yucca Mountain, 10 CFR Part 63	Met target		
* Target was not met due to a lack of resolution of complex issues concerning Yucca Mountain standards.						
** EPA standard was issued in June 2001, and NRC 10 CFR Part 63 conformed to standards provided by EPA.						
<b>Output: Resolve key technical issues (KTI) subissues.</b>						
<i>Target:</i>	Resolve ≥ 5 KTI subissues.	Continue to resolve KTIs at staff level.	Resolve KTI integrated subissues with closure on 60 agreements. <sup>20</sup>	Resolve KTI integrated subissues/ keep pace with DOE schedule.	Resolution of KTI agreements meets staff timeliness and quality goals.	Resolution of KTI agreements meets staff timeliness and quality goals.
<i>Actual:</i>	Resolved 12 KTI subissues.	Resolved all subissues identified.*	Reviewed and closed 46 agreements.**	Met target		
* This measure was met as staff reached "closed" or "closed pending" status on all subissues identified for resolution in FY 2001, or agreement was reached with DOE to provide additional information by a certain date.						
** Delays in DOE's program prevented accomplishment of closure on 14 of the 60 scheduled agreements.						



**NUCLEAR WASTE SAFETY**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Development of the Yucca Mountain Review Plan (YMRP).</b>						
<i>Target:</i>	Publish draft YMRP.	Publish draft YMRP.	Publish draft YMRP and obtain public comments.	Complete final YMRP.	N/A	N/A
<i>Actual:</i>	Not met*	Not met*	Published Revision 2 of the Yucca Mountain Review Plan for public comment.	Met target		
* Target not met due to a lack of resolution of complex issues concerning Yucca Mountain standards.						
<b>Output: The activities necessary to make a decision on DOE's repository license application will be planned and executed such that the decision can be made on time or ahead of schedule and within requested budget resources.</b>						
<i>Target: Major milestones that are needed to evaluate and determine whether DOE's potential repository license application meets NRC's repository performance standard will be met within a specified number of days of each of their due dates.</i>						
<i>Target:</i>	Meet milestones within 90 days of due date	Meet milestones within 90 days of due date	Meet milestones within 90 days of due date	Meet milestones within 90 days of due date	Meet milestones within 90 days of due date	Meet milestones within 90 days of due date
<i>Actual:</i>	Met milestones within 90 days*	Met milestones within 90 days**	Met milestones within 90 days***	Met milestones within 90 days****		
* Provided comments on DOE's Part 963, completed revisions 0 and 1 of the YMRP, completed total performance assessment code to verify staff review findings on any licensing decision.						
** Provided comments on draft EIS, finalized 10 CFR Part 63 to conform with EPA regulation 40 CFR 197, and provided comments to DOE on 9 Process and Model Reports and numerous Analysis and Model Reports.						
*** Completed draft Yucca Mountain Review Plan, completed Site Characterization Sufficiency Comments, reviewed DOE's Final Environmental Impact Statement, and issued Integrated Issue Resolution Status Report.						
**** Issued the final Yucca Mountain Review Plan; published a final rule that addresses "unlikely events" for the proposed Yucca Mountain repository - such events can be excluded from certain required assessments because of their low probability of occurrence.						

**NUCLEAR WASTE SAFETY**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Ensure that NRC's high-level waste documentary material is made electronically available to the Licensing Support Network (LSN) in compliance with Part 2, Subpart J, to support a possible hearing on the proposed Yucca Mountain Repository.</b>						
Target:		New measure in FY 2004.			Resolve information technology and information management issues to keep pace with DOE's schedule. If appropriate, certify the availability of NRC's high-level waste document collection to the LSN 1 month after DOE certifies its document collection.	As appropriate, resolve information technology and information management issues to keep pace with DOE's schedule and ensure continued availability of the NRC high-level waste document collection to the LSN.
Actual:						
<b>Output: Timeliness in completing enforcement actions.</b>						
Target:		New measure in FY 2005				<u>Investigation</u> 100% ≤ 360 days <u>Non-Investigation</u> 100% ≤ 180 days
Actual:						
<b>Output: Percentage of Office of Investigations cases that will be investigated to a conclusion on the merits as either substantiated or unsubstantiated.*</b>						
Target:		New measure in FY 2005				90%
Actual:						
* The OI output measures will become effective in FY 2005 on the date that DOE files its application for a Yucca Mountain Repository with the NRC.						
<b>Output: Percentage of cases closed on the merits as either substantiated or unsubstantiated that will be completed in 10 months or less.*</b>						
Target:		New measure in FY 2005				Complete cases 80% ≤ 10 months
Actual:						
* The OI output measures will become effective in FY 2005 on the date that DOE files its application for a Yucca Mountain Repository with the NRC.						

**NUCLEAR WASTE SAFETY**

*Spent Fuel Storage and Transportation Licensing and Inspection*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	11,055	10,194	12,346	12,559	213
Contract Support and Travel	10,781	5,378	8,477	8,864	387
<b>Total Budget Authority</b>	21,836	15,572	20,823	21,423	600
FTE	92	83	102	99	-3

*FY 2005 Activities.* The NRC will license, certify, and inspect the interim storage of spent fuel from nuclear reactors and the domestic and international transportation of radioactive materials. The NRC’s implementation of 10 CFR Part 72.48 process changes, effective March 2001, resulted in a 20 percent reduction in forecasted license amendments and a savings of approximately 2 FTE each year beginning in FY 2004. The NRC expects to be reviewing four new applications for independent spent fuel storage installations (ISFSIs) at commercial nuclear power plants and reviewing several amendment requests for existing ISFSIs. Transport container design reviews and storage container and installation design reviews will be completed in a timely manner as defined by the output measures below. In addition, the NRC will complete approximately 15 safety inspections in FY 2005 as well as approximately 25 reviews of quality assurance programs to ensure that safety measures are correctly implemented by licensees and others responsible for NRC-certified spent fuel storage systems and transport packages. The NRC will address emergent technical issues such as moderator exclusion and will undertake rulemaking changes for compatibility of NRC, U.S. Department of Transportation (DOT), and International Atomic Energy Agency (IAEA) transport regulations. Research activities will support the development and demonstration of probabilistic risk assessment methods for dry cask storage and transportation, storage of high burn-up fuels, and development of technical bases and criteria for seismic design of ISFSIs. In addition, legal advice and representation will be provided for staff and Commission activities concerning spent fuel storage and transportation and, as appropriate, adjudicatory hearings related to ISFSIs will be held.

*Change from FY 2004.* Funding increases for the planned cooperative effort with the Electric Power Research Institute (EPRI) and DOE to demonstrate the potential effects of long-term dry storage of high burn-up fuel.

## NUCLEAR WASTE SAFETY

The requested resources will support agency efforts to achieve the output targets established in the following table.

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Transport container design review completions.*</b>						
<i>Target:</i>	74	74	100	80% ≤ 8 months 100% ≤ 2 years	80% ≤ 8 months 100% ≤ 2 years	80% ≤ 8 months 100% ≤ 2 years
<i>Actual:</i>	96	79	72**	80% ≤ 8 months 99% ≤ 2 years***		
<p><i>*Output modified in FY 2003 to exclude Request for Additional Information response time from the target completion time.</i></p> <p><i>** The storage and transportation casework was heavily impacted during FY 2002, as a result of redirection of staff efforts to response activities associated with the terrorist attacks on September 11, 2001, and follow-on vulnerability assessments; thus, fewer cases were completed in FY 2002 than originally projected.</i></p> <p><i>***Completion of the NAC-UMS cask took longer than the targeted period to complete due to time involved with obtaining additional information from the applicant, and applicant's interim suspension of NRC review.</i></p>						
<b>Output: Storage container and installation design review completions.*</b>						
<i>Target:</i>	30	25	40	80% ≤ 14 months 100% ≤ 2 years	80% ≤ 14 months 100% ≤ 2 years	80% ≤ 14 months 100% ≤ 2 years
<i>Actual:</i>	62	62	36**	89% ≤ 14 months 100% ≤ 2 years		
<p><i>*Output modified in FY 2003 to exclude Request for Additional Information response time from the target completion time.</i></p> <p><i>** The storage and transportation casework was heavily impacted during FY 2002, as a result of redirection of staff efforts to response activities associated with the terrorist attacks on September 11, 2001, and follow-on vulnerability assessments; thus, fewer cases were completed in FY 2002 than originally projected.</i></p>						

**NUCLEAR WASTE SAFETY**

*Regulation of Decommissioning*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	10,441	9,042	10,872	11,165	293
Contract Support and Travel	6,778	6,676	9,311	8,338	-973
<b>Total Budget Authority</b>	17,219	15,718	20,183	19,503	-680
FTE	88	74	90	89	-1

*FY 2005 Activities.* The NRC will conduct decommissioning licensing and inspection activities at 19 power reactors; as well as at 25 to 30 Site Decommissioning Management Plan (SDMP) and other complex and formerly licensed sites. These activities include project management, technical reviews, emergency preparedness and radiation protection inspections at decommissioning power reactors, and review of material and fuel facility decommissioning plans and financial assurance. In addition, the NRC will continue its oversight of the West Valley Demonstration Project as necessary to support the implementation of the West Valley Demonstration Project Act. The NRC will continue to work with the EPA on issues associated with the management of radioactive material, as well as supporting rulemaking on the disposition of solid materials. The NRC continues its initiative to improve the efficiency of inspections of decommissioning reactors by focusing its inspections on the basis of risk-significance. Other program efficiencies, which have been implemented over a period of several years, include reducing the scope and periodicity of inspections at decommissioning sites and facilities that have no remediation or other substantive work underway; establishing a rebaselined materials decommissioning program composed of a comprehensive integrated plan for each site and incorporating project management tools and streamlined inspection and licensing strategies; and using consolidated decommissioning guidance for SDMP and non-SDMP site removal. Beginning in FY 2004, efficiencies are expected from the further application of inspection insights and experience to enhance the safety focus.

Research activities will provide data and models for assessing public exposure to environmental releases of radioactive materials and the technical basis for decommissioning rulemakings and controlling the disposition of solid materials. Legal advice and representation will be provided for staff and Commission activities related to decommissioning nuclear power reactors and materials sites, and legal advice and counseling will be provided on low-level waste issues that may arise.

*Change from FY 2004.* Resources decrease because the NRC does not plan to utilize its Computerized Risk Assessment and Data Analysis Lab for the decommissioning program in FY

**NUCLEAR WASTE SAFETY**

2005. Resources also decrease due to the completion of research on more realistic databases for performance assessment and deferral of research related to entombment as an option for decommissioning. These decreases are partially offset by resources to support an increased workload associated with material and fuel facility decommissioning, including work on eight high-priority Pennsylvania sites that result from the delay in Pennsylvania becoming an Agreement State. Some of these sites are expected to complete cleanup and license termination by the end of FY 2005. Resources also increase for activities resulting from the NRC’s evaluation of the License Termination Rule and follow up associated with ongoing financial assurance analysis.

The requested resources will support agency efforts to achieve the output target established in the following table.

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<i>Output: Cleanup problem materials and fuel facility sites listed in the Site Decommissioning Management Plan (SDMP).</i>						
<i>Target:</i>	Remove 3 sites from SDMP list after satisfactory cleanup	Remove 1 site from SDMP list after satisfactory cleanup	Remove 1 site from SDMP list after satisfactory cleanup	Remove 1 site from SDMP list after satisfactory cleanup. Conduct 90-day Acceptance Review.*	Remove 1 site from SDMP list after satisfactory cleanup. Conduct 90-day Acceptance Review.*	Remove 1 site from SDMP list after satisfactory cleanup. Conduct 90-day Acceptance Review.*
<i>Actual:</i>	3 sites removed (Pesses, Minnesota Mining and Watertown)	1 site removed (Cabot-Performance Metals)	1 site removed (Lake City Army Ammunition Plant)	1 site removed (General Services Administration, Watertown, MA site) Acceptance reviews were completed within timeliness goals.		
<i>*Output modified in FY 2003 to conduct 90-day Acceptance Review of decommissioning plans and license termination plans submitted.</i>						

*Environmental Protection and Low-Level Waste Management*

				<b>FY 2005 Full Cost</b>
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**NUCLEAR WASTE SAFETY**

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	1,669	2,078	2,571	2,509	-62
Contract Support and Travel	1,708	2,520	3,229	2,228	-1,001
<b>Total Budget Authority</b>	3,377	4,598	5,800	4,737	-1,063
FTE	14	17	21	20	-1

*FY 2005 Activities.* The NRC will review environmental reports from licensees and applicants and prepare EISs for the construction, operation, and decommissioning of fuel cycle and spent nuclear fuel facilities, uranium recovery sites, and reactor and other non-routine decommissioning projects. Specifically, in FY 2005, the NRC will complete one final and one draft EIS. The environmental protection program will also review EISs prepared by other Federal and State agencies, prepare environmental assessments, and review environmental assessments and EISs of other NRC organizations. The NRC will participate in the International Commission on Radiological Protection’s initiative on standards for protecting the environment. In its regulatory activities for low-level waste, the NRC will license onsite disposal for low-level waste, conduct import/export reviews, and provide technical assistance to requesting Agreement States. Beginning in FY 2005, efficiencies are expected through the use of a methodology for prioritizing environmental assessments for review. Additional efficiencies are expected as a result of improvements in the guidance and training for staff in the environmental review process. This guidance, NUREG-1748, “Environmental Review Guidance for Licensing Actions Associated with NMSS Programs,” published in August 2003, is also a more structured framework for developing the environmental documents required by the National Environmental Policy Act.

*Change from FY 2004.* Resources decrease because of a reduced workload for EISs.

The requested resources will support agency efforts to achieve the output targets established in the following tables.

**NUCLEAR WASTE SAFETY**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<i>Output: Support Office of Nuclear Materials Safety and Safeguards licensing activities by preparing and/or reviewing required environmental reports.</i>						
<i>Target:</i>	New measure in FY 2002		Complete 1 draft EIS. Review 1 EIS of another agency.	Complete 1 final EIS. Publish NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs."**	Complete 1 final EIS and 1 draft EIS.*	Complete 1 final EIS and 1 draft EIS.*
<i>Actual:</i>			Reviewed 1 final EIS of another agency (DOE's final EIS for the Yucca Mountain Site)**	Completed 2 draft EISs. Final EIS for MOX facility was delayed due to licensee design changes.  Published NUREG-1748 in August 2003.		
<p>* Within 45 days of acceptance of an application and environmental report, publish notice of intent to prepare the EIS and proposed schedule in the Federal Register.</p> <p>** Did not meet target for completing one draft EIS; the MOX draft EIS was delayed because DOE revised its surplus plutonium disposition program, and the Sequoyah Fuels Corporation draft EIS was delayed because of a licensee request for reclassification of its waste as 11e.(2) byproduct material, which changed the method for decommissioning.</p>						



**NUCLEAR WASTE SAFETY**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<i>Output: Maintenance of regulatory framework for low-level waste disposal.</i>						
<i>Target:</i>	Complete Branch Technical Position on LLW Disposal Facility Performance Assessment.	None	Provide technical assistance to requesting Agreement States 90% of the time within schedule.	Provide technical assistance to requesting Agreement States 90% of the time within agreed upon schedule.  Initiate technical support on low activity mixed waste.*	Provide technical assistance to requesting Agreement States 90% of the time within agreed upon schedule.  Complete assured isolation rulemaking plan.  Initiate technical support on low activity mixed waste.*	Provide technical assistance to requesting Agreement States 90% of the time within agreed upon schedule.
<i>Actual:</i>	Completed NUREG on LLW Disposal Facility Performance Assessment.**	N/A	Met target	Met target		
<p>* Within 30 days of EPA's initiation of its rulemaking on mixed waste, initiate technical support for a proposed rule to establish conditions for disposal of low activity mixed waste in Resource Conservation and Recovery Act Subtitle C facilities.</p> <p>** Formerly referred to as the Branch Technical Position on LLW Disposal Facility Performance Assessment.</p>						

**NUCLEAR WASTE SAFETY**

*Homeland Security*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	830	2,468	3,214	2,010	-1,204
Contract Support and Travel	2,416	823	1,897	1,373	-524
<b>Total Budget Authority</b>	3,246	3,291	5,111	3,383	-1,728
FTE	7	20	27	16	-11

*FY 2005 Activities.* The NRC will ensure continued licensee implementation of the CY 2002 and 2003 additional security measures and implement recommendations from the agency’s recent integrated plan of mitigating strategies for potential security vulnerabilities for the storage and transportation of spent nuclear fuel and other radioactive materials. The NRC will also develop programs for inspecting security aspects of spent nuclear fuel storage and radioactive material transport and will review the security and safeguards provisions at decommissioned sites and spent fuel storage facilities. Rulemaking will be initiated for the transportation of spent fuel and Category I and II special nuclear material. The NRC will interact with other nations to leverage work addressing the security of spent fuel storage and transportation and the dispersal characteristics of potential attacks on spent fuel.

*Change from FY 2004.* The resources decrease as a result of the completion of analyses of the mitigating strategies for radioactive material transport and a decrease in the inspection effort associated with the Temporary Instructions for ISFSIs, and a slight reduction in the baseline inspection efforts.

**NUCLEAR WASTE SAFETY**

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*Additional Output Measure for Research Activities*

The following output measure applies to research activities in the Nuclear Waste Safety Arena.

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Timeliness of completing actions on critical programs.*</b>						
<i>Target: Percent of major milestones met on or before their due date.</i>						
<i>Target:</i>	New measure in FY 2002		85%	85%	85%	85%
<i>Actual:</i>			91%	80%**		
* <i>Definition: Critical research programs typically respond to high-priority needs from the Commission and NRC's licensing organizations. Critical research programs will be the highest-priority needs identified at the beginning of each fiscal year. In FY 2003, the highest-priority needs included package performance, clearance, and radionuclide transport.</i>						
** <i>The target was not met as a result of unanticipated requirements within critical research programs and emergent work of equal priority.</i>						

The Office of Nuclear Regulatory Research is developing a quality assessment process consistent with that proposed by the National Academy of Sciences, Committee on Science, Engineering, and Public Policy, in its report, "Evaluating Federal Research Programs: Research and the Government Performance and Results Act." The process will be developed and tested during FY 2004 and baselined in FY 2005. Performance will be measured against that baseline in FY 2006. Performance targets for FY 2006 will be defined at the end of FY 2005.

## NUCLEAR WASTE SAFETY

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### ARENA NOTES

1. Stated succinctly, risk-informed, performance-based regulation is an approach in which risk insights, engineering analysis and judgment, and performance history are used to (1) focus attention on the most important activities, (2) establish objective criteria based upon risk insights for evaluating performance, (3) develop measurable or calculable parameters for monitoring system and licensee performance, and (4) focus on the results as the primary basis for regulatory decision making.
2. “Significant radiation exposures” are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician.
3. Releases that have the potential to cause “adverse impact” are currently undefined. As a surrogate, we will use those that exceed the limits for reporting abnormal occurrences as given by Abnormal Occurrence criteria 1.B.1 (normally 5,000 times Table 2 (air and water) of Appendix B, Part 20).
4. In accordance with Appendix G to 10 CFR Part 73 and 10 CFR 74.11(a).
5. Over exposures are those exposures that exceed the dose limits specified in 10 CFR 10.2203(a)(2) as tracked in the Nuclear Materials Events Database (NMED).
6. The NRC recognizes that no explicit reporting requirements exist for substantiated breakdown determination. The NRC relies on its safeguards inspection findings and licensee notification.
7. Releases for which a 30-day reporting requirement under 10 CFR 20.2203(a)(3) is required.
8. Measuring the protection of future generations over the planning period of the next 5 years is a unique challenge which the Commission is continuing to evaluate.
9. Met target. Completed public meetings on HLW hearing process: 5/22/01, Pahump, NV; 5/23/01, Las Vegas, NV; 5/24/01, Mesquite, NV; and 9/26 - 27/01, Tribal interaction in Las Vegas, NV.
10. Met target. Conducted eight public meetings in Nevada that addressed the Yucca Mountain Review Plan, 10 CFR Part 63, and Site Sufficiency comments, along with broader topics such as the licensing process. Also conducted two public meetings on 10 CFR Part 71.
11. Met target. The NRC continued to respond to specific requests from affected units of local governments or others for public meetings on various aspects of the agency’s HLW program. Examples of public outreach efforts in FY 2003 included two public meetings held in California to provide an overview of the NRC’s role in the potential licensing of the proposed geologic repository at Yucca Mountain, with specific presentations on associated groundwater, transportation, and security issues. In FY 2003, the NRC also conducted several public meetings associated with environmental reviews conducted under the National Environmental Policy Act. These included meetings for the environmental review of the decommissioning of the Sequoyah Fuels Corporation facility on Gore, Oklahoma, and a scoping meeting on the Generic Environmental Impact Statement (GEIS) on Controlling the Disposition of Solid Materials. In addition, the NRC conducted a

## NUCLEAR WASTE SAFETY

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technical exchange with DOE on the adoption of the Yucca Mountain Final EIS, and participated in a scoping meeting for the EIS concerning the decommissioning of the West Valley Demonstration Project in West Valley, NY. The NRC participated in more than 20 workshops, conferences and town hall meetings with representatives of various Federal, State and local agencies; international bodies; the nuclear industry; and public interest groups. These outreach activities focused on spent fuel storage and transportation issues. The public meetings concerning the Package Performance Study, held in March 2003, were the most notable of these activities.

12. A 10 CFR 2.206 petition is a written request filed by any person to institute a proceeding to modify, suspend, or revoke a license, or for any other enforcement action. The petition specifies the action requested and sets forth the facts that constitute the basis for the request. The NRC evaluates the technical merits of the safety concern presented by the petition. Based on the facts determined by the NRC's technical evaluation or investigation of the merit of the petition, the Director will issue a decision to grant or deny the petition, in whole or in part. The Director's Decision explains the basis upon which the petition has been granted and identifies the actions that NRC staff has taken (or will take) to grant the petition in whole or in part. Similarly, if the petition is denied, the Director's Decision explains the basis for the denial and discusses all matters raised by the petitioner in support of the request.
13. The start time of the 120 days is the date that the Petition Review Board (PRB) determines that the proposed petition satisfies the criteria of NRC Management Directive 8.11, "Review Process for 10 CFR 2.206 Petitions", and acknowledges by letter the petitioner's request. For petitions received after October 1, 2000, the end time is the date of the proposed Director's Decision. Supplements to the petition which require extension of the schedule will reset the beginning of the metric to the date of a new acknowledgment letter.
14. The NRC received a number of security-related petitions in FY 2002. Because of the concentrated security-related efforts that were undertaken during this time, there was a need to address the security-related concerns raised by these petitions in an integrated fashion with the benefit of the interim compensatory measures (ICMs) and the orders that followed the ICMs. Therefore, in order to fully evaluate the issues, the NRC took longer than the 120-day goal to complete its review and issue a decision.
15. Prelicensing activities such as this constitute informal conferences between a prospective applicant and the staff and are not part of a potential licensing proceeding.
16. The NRC completed three of the five milestones: (1) the final regulation in 10 CFR Part 63, (2) continued resolution of key technical issues, reaching closures on 5 key technical subissues, and (3) comments on DOE's draft supplemental Environmental Impact Statement.
17. The NRC completed four of the five milestones: (1) the draft Yucca Mountain Review Plan, (2) the Site Characterization Sufficiency Comments, (3) the Integrated Resolution Status Report, and (4) the review of DOE's final Environmental Impact Statement. While the staff continued efforts to resolve key technical issues, it was not possible to close all of the agreements scheduled for FY 2002

## **NUCLEAR WASTE SAFETY**

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because of the timing of receipt of information from DOE. Nonetheless, the staff succeeded on closing 46 of the 60 agreements that were scheduled to be closed in FY 2002.

18. The Integrated Resolution Status Report (IIRSR) was completed in FY 2002
19. No applications to use STS were received in FY 2003, and the IIRSR was completed in FY 2002.
20. In FY 2001, all remaining key technical issues (KTI) subissues were resolved and classified by NRC as either “closed” or “closed pending.” Subissues classified as “closed pending” were resolved on the basis of agreements by DOE. The 293 agreements call for DOE deliverables over FY 2002-FY 2003, and beyond. Agreements are complete when NRC completes its review and finds the DOE deliverables acceptable.

**INTERNATIONAL NUCLEAR  
SAFETY SUPPORT**

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## INTERNATIONAL NUCLEAR SAFETY SUPPORT

International Nuclear Safety Support encompasses international nuclear safety, security and regulatory policy formulation, import/export licensing for nuclear materials and equipment, treaty implementation, international information exchange, international safety, security and safeguards assistance, and nuclear proliferation deterrence. The agency's international activities support broad U.S. national interests, as well as the NRC's domestic mission. The primary foundation for the NRC's international activities is the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Nuclear Non-Proliferation Act of 1978, other statutes, executive orders and directives, treaties and conventions, other international agreements, and Commission directives.

The scope of international activities carried out under this arena influences the incorporation of effective nuclear policies and practices of international organizations and other countries to improve safety and security and to reduce the potential for proliferation.

### **Budget Overview**

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	4,462	5,159	6,317	6,575	258
Contract Support and Travel	775	697	2,364	2,620	256
<b>Total Budget Authority</b>	5,237	5,856	8,681	9,195	514
FTE	38	43	53	53	0

The full-cost budget request of \$9.2M and 53 FTE for International Nuclear Safety supports the NRC's participation in international programs to exchange beneficial information with counterparts in the international community. These programs will enhance the safety and security of peaceful uses of nuclear materials both in the United States and throughout the world. This budget also supports international nuclear safety; security and regulatory policy formulation; issuance of import and export licenses for nuclear materials and equipment; safeguards licensing, and activities to ensure compliance with statutes, treaties, conventions, and agreements for cooperation and support for Agency for International Development related work for the countries of the Former Soviet Union and Central and Eastern Europe. These resources also support the implementation of the International Atomic Energy Agency (IAEA) safeguards and nuclear material physical protection program, the development of bilateral agreements for cooperation, safeguards bilateral meetings, and U.S. programs for the

## **INTERNATIONAL NUCLEAR SAFETY SUPPORT**

disposition of nuclear materials released from weaponry programs. The NRC will participate with organizations, such as the IAEA and the Nuclear Energy Agency, in activities to heighten domestic and global nuclear safety and security. As the regulator of the world's largest civilian nuclear program, the NRC has extensive regulatory experience to contribute to international programs in areas such as nuclear reactor safety, nuclear safety research, radiation protection, nuclear materials safety and safeguards<sup>1</sup>, waste management, and decommissioning of nuclear facilities.

Of the \$0.5M increase in FY 2005, \$0.25M is associated with the Government-wide FY 2005 pay raise and other increases in salaries and benefits. \$0.25M is to support the costs associated with international activities such as an Operational Safety Assessment Review Team (OSART) visit to a volunteer U.S. nuclear power plant.

International Homeland Security resources support export/import licensing, issuance of compensatory measures for security requirements by orders, and rulemaking to establish security requirements in regulations for import/export of radioactive material.

### **Measuring Results – Strategic Goal**

This strategic arena includes a strategic goal, performance measures, and strategies. The **strategic goal** is the overall outcome the NRC strives to achieve. The **performance measures** indicate whether the NRC is achieving its goal and establish the basis for performance management. These measures establish how far and how fast the agency will move in the direction established by the strategic goal. The **strategies** describe how the NRC will achieve its strategic goal and its associated measures. In other words, the strategies provide the direct link between what the agency wants to achieve (i.e., goals) and the key activities the agency will conduct to achieve those goals.

#### *Our Strategic Goal*

In the International Nuclear Safety Support Arena, the NRC will conduct activities that encompass international nuclear policy formulation, export-import licensing for nuclear materials and equipment, treaty implementation, nuclear proliferation deterrence, international safety and security assistance, and safeguards support and assistance by working to achieve the following strategic goal:

Support U.S. interests in the safe and secure use of nuclear materials <sup>2</sup> and in nuclear nonproliferation.
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#### *Implementing Strategies*

- We will continue to take a proactive<sup>3</sup> role, as appropriate, in strengthening safety, security, international safeguards, and nonproliferation worldwide.

## INTERNATIONAL NUCLEAR SAFETY SUPPORT

- We will focus appropriate agency activities and resources on significant international nuclear safety obligations and on U.S. and NRC international priorities.
- We will enhance integration of international activities within the NRC.

### Performance Measures

PERFORMANCE MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 <sup>4</sup>
<i>Fulfills 100 percent of the significant<sup>5</sup> obligations over which the NRC has regulatory authority arising from statutes, treaties, conventions, and Agreements for Cooperation.<sup>6</sup></i>						
Target:	100 percent	100 percent	100 percent	100 percent	100 percent	Measure discontinued
Actual:	100 percent	100 percent	100 percent	100 percent		
<i>No significant proliferation incidents attributable to some failure of the NRC.</i>						
Target:	0	0	0	0	0	Measure discontinued
Actual:	0	0	0	0		
<i>No significant safety or safeguards events that result from the NRC's failure to implement its international commitments.</i>						
Target:	0	0	0	0	0	Measure discontinued
Actual:	0	0	0	0		

*FY 2005 Activities.* The NRC will negotiate and or renew 3-6 technical exchange arrangements (involving both classified and unclassified information) with appropriate foreign counterparts to enhance the safety and security of peaceful nuclear activities within the United States and worldwide. The NRC will continue staff reviews of Executive Branch proposals concerning Part 810 licenses, subsequent arrangements and Section 123 Agreements for Cooperation within 60 days for all cases involving non-nuclear weapon states. In addition, the NRC will review for and issue approximately 85-125 import/export authorizations (licenses or amendments).

*Change from FY 2004.* The resource increase in the International Nuclear Safety Support program is associated with international activities such as an OSART visit to a volunteer U.S. nuclear power plant.

The requested resources will support agency efforts to achieve the output targets established in the following table.

## INTERNATIONAL NUCLEAR SAFETY SUPPORT

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: Negotiate and/or renew bilateral technical exchange arrangements between the NRC and appropriate foreign counterparts to ensure that an effective framework for the NRC's international exchanges is in place.</b>						
<i>Target:</i>	5	3 - 6	3 - 6	3 - 6	3 - 6	3 - 6
<i>Actual:</i>	8	4*	8	8		
<i>* While 4 arrangements were negotiated in FY 2001, none were signed due to cancellation of signing ceremonies as a result of the terrorist attacks on September 11, 2001.</i>						
<b>Output: Reviews of Executive Branch proposed Part 810 licenses, subsequent arrangements, and Section 123 Agreements for Cooperation.</b>						
<i>Target: Complete staff reviews for all cases involving non-nuclear weapon states.</i>						
<i>Target:</i>	Complete reviews < 60 days	Complete reviews < 60 days	Complete reviews < 60 days	Complete reviews < 60 days	Complete reviews < 60 days	Complete reviews < 60 days
<i>Actual:</i>	100% < 60 days (16 reviews) <sup>7</sup>	100% < 60 days (11 reviews) <sup>7</sup>	100% < 60 days (10 reviews) <sup>7</sup>	100% < 60 days (5 reviews) <sup>7</sup>		
<b>Output: Issuance of NRC licenses.</b>						
<i>Target: Complete review for and issue as appropriate NRC import/export authorizations (NRC licenses or amendments).</i>						
<i>Target:</i>	75-100 Complete 90% cases < 60 days	75-100 Complete 90% cases < 60 days	85-125 Complete 100% cases < 60 days	85-125 Complete 100% cases < 60 days	85-125 Complete 100% cases < 60 days	85-125 Complete 100% cases < 60 days
<i>Actual:</i>	100% < 60 days (156 reviews)	100% < 60 days (122 reviews)	100% < 60 days (104 reviews)	95% < 60 days (87 reviews) <sup>8</sup>		

## **INTERNATIONAL NUCLEAR SAFETY SUPPORT**

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### **ARENA NOTES**

1. Domestic safeguards are those nuclear material control and accounting measures and physical protection measures implemented by and within *any* country, including the United States, to prevent sabotage of nuclear materials or facilities or theft or diversion of nuclear materials by an individual or a group within that country. Secure use of nuclear materials is achieved through the successful implementation of domestic safeguards. International safeguards are the independent verifications performed by the International Atomic Energy Agency of a country's "peaceful use" declarations on nuclear materials and nuclear facilities.
2. "Nuclear materials" include source, special nuclear, and byproduct materials, as defined in the Atomic Energy Act of 1954 (Title 1, Chapter 2, Section II).
3. The NRC's proactive efforts help to ensure that international outcomes are consistent with U.S. goals. The NRC works collaboratively with other U.S. Government agencies to identify and frame U.S. interests and in cooperation with regulatory and safety entities from other countries addressing the same interests. The NRC provides international leadership to advance issues and provides support to countries that have taken leadership in advancing issues. The NRC represents the United States in international meetings, provides policy guidance and technical assistance to other countries and international organizations, and holds positions of influence and/or chairs and participates on interagency and international committees to help us guide the direction and scope of important international safety, safeguards, and nonproliferation initiatives.
4. Based on COMSECY-03-009 FY 2004-2009 Strategic Plan Goals, Strategies, and Measures dated June 17, 2003, International Nuclear Safety Support will no longer have performance measures.
5. "Significant" is defined as incidents that would include a loss by theft or diversion of one or more kilograms of weapons grade uranium or plutonium, the detonation by a non-nuclear weapon state of a nuclear explosive device, or the abrogation of Nonproliferation Treaty safeguards commitments by a non-nuclear weapon state.
6. Agreements for Cooperation in the Civil/Peaceful Use of Nuclear Energy are required under Section 123 of the Atomic Energy Act of 1954, as amended, to establish the legal framework for technical cooperation in the production and use of special nuclear material, as well as for the supply of such material or fuel cycle equipment, or related sensitive information, to another country or international organization. These Agreements for Cooperation (or Section 123 Agreements, as they are also known) include such nonproliferation conditions and controls as safeguards commitments; a guarantee of no explosive or military use; a guarantee of adequate physical protection; and U.S. rights to approve retransfers, enrichment, reprocessing, other alterations in form or content, and storage of U.S.-supplied or derived material. They must be in effect before an NRC export license can be issued.
7. The number of NRC reviews is driven by the volume of cases referred from Executive Branch agencies. The NRC's goal is to complete the reviews within 60 days of receiving the cases.

## **INTERNATIONAL NUCLEAR SAFETY SUPPORT**

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8. Of the 87 export and import licensing actions, all but four were completed within the 60-day processing deadline. Three licensing actions were delayed beyond 60 days due to a lack of information provided by the licensees and one licensing action was delayed pending additional views required from the Executive Branch. These delays were outside the control of the staff.

**INSPECTOR GENERAL**

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## OFFICE OF THE INSPECTOR GENERAL

The American people expect excellence and accountability from their Government. Toward that end, the U.S. Congress passed the Inspector General (IG) Act in 1978 to ensure integrity and efficiency within the Federal Government and its programs. In accordance with the 1988 amendment of the Act, the NRC's Office of Inspector General (OIG) was established as a statutory entity on April 15, 1989.

The OIG's mission is to (1) independently and objectively conduct and supervise audits and investigations related to NRC programs and operations; (2) prevent and detect fraud, waste, and abuse; and (3) promote economy, efficiency, and effectiveness in NRC programs and operations. In addition, the OIG reviews existing and proposed regulations, legislation, and directives and provides comments, as appropriate, regarding any identified significant concern. The Inspector General also keeps the NRC Chairman and members of Congress fully and currently informed about problems, makes recommendations to the agency for corrective action, and monitors the NRC's progress in carrying out such actions.

In FY 2003, the OIG updated its strategic plan. As part of this endeavor, the OIG identified the strategic challenges facing the NRC. From the related analysis, the OIG developed a strategic plan that generally aligns itself with the agency's mission and strategic direction, with a focus on those agency programs and operations that involve the major challenges and risk areas facing the NRC. Accordingly, the OIG established the following three strategic goals to guide the activities of its audit and investigative programs:

### *OIG STRATEGIC GOALS*

- Advance NRC's efforts to enhance safety and protect the environment.
- Enhance NRC's efforts to increase security in response to the current threat environment.
- Improve the economy, efficiency, and effectiveness of NRC corporate management.

The OIG's FY 2005 budget and performance plan supports the implementation of the OIG's strategic plan and its associated goals and strategies.

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### Budget Overview

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	5,497	5,975	5,975	6,193	218
Contract Support and Travel	1,300	1,325	1,325	1,325	0
<b>Total Budget Authority</b>	6,797	7,300	7,300	7,518	218
FTE	44	47	47	47	0

The OIG is requesting an FY 2005 budget of \$7.518 million and 47 FTE. This request reflects a total increase of \$0.218 million over FY 2004's budget. The increase of \$0.218 million represents increased personnel costs in salaries and benefits due to the Federal pay raise and other increases in base pay and benefits necessary to sustain existing staff.

These resources will enable the OIG to accomplish its strategic goals, thereby assisting the NRC in protecting public health and safety, as well as the Nation's common defense and security, by ensuring integrity, efficiency, and accountability in agency programs that regulate the civilian use of byproduct, source, and special nuclear materials.

Further, in accordance with Office of Management and Budget (OMB) requirements, the OIG is depicting the full cost associated with its programs for the FY 2004 and FY 2005 budgets with the following caveat. As a result of an October 1989 Memorandum of Understanding between the NRC's Chief Financial Officer and the Inspector General, and a subsequent amendment in March 1991, funding for some OIG management and support services was no longer requested for inclusion in the OIG appropriation. It was agreed that funds for OIG infrastructure requirements and other agency support services would instead be included in the NRC's main appropriation. For the most part, these costs are not readily severable. Thus, this funding continues to be included in the NRC's main appropriation.

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### Selected FY 2003 Accomplishments

The following sections discuss representative examples of the work performed in FY 2003 by the OIG audit and investigative programs.

#### Audits

In FY 2003, the OIG issued 22 audit reports pertaining to NRC programs and operations. These audits either evaluated high-risk agency programs or complied with mandatory financial and computer security-related legislation. The following are examples of recent work:

- The *2002 Survey of NRC's Safety Culture and Climate* generally concluded that the NRC safety culture and climate appears to be improving. Specifically, the workforce views itself as effective and dedicated to the NRC safety mission. Comparison with the 1998 survey results also indicates improvement in virtually every category or topical area. Further, the survey found that most scores exceed established national benchmarks for government research and technical composites. However, the survey did reflect that two program support offices will require substantial effort to improve organizational culture and climate. In addition, the survey found that *Continuous Improvement Commitment*, that is, employees' views on commitment to public safety and whether employees are encouraged to communicate ideas to improve safety, regulations, and operations, is below norm and a matter of concern. However, dramatic improvement was demonstrated in the category, *Future of the NRC*. This category focuses on items that evaluate employees' views on how the NRC's regulation of its licensees has changed in the past year and will change in the future. The survey concluded that improvement in these topics can positively affect issues assessed in the category, *Continuous Improvement Commitment*.
- The *Review of NRC's Handling and Marking of Sensitive Unclassified Information* found that the NRC has program guidance to prevent the release of sensitive unclassified information. However, the guidance did not adequately protect Official Use Only documents from inadvertent public disclosure. Additionally, training on handling, marking, and protecting sensitive unclassified information was not provided to all NRC employees and contractors on a regular basis. Consequently, many of the staff were not knowledgeable about NRC's requirements and guidance in this area. NRC employees were not consistently implementing the requirement to report incidents of inadvertent release of sensitive unclassified information to the Office of the Executive Director for Operations.
- The *Audit of NRC's Financial Statements* found that each year since 1994 the NRC has received an unqualified opinion on its annual financial statements. However, the annual audits identified a number of internal control issues, the majority of which were resolved.

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One internal control issue had remained open since the FY 1998 audit: implementation of managerial cost accounting in accordance with Federal standards. The agency implemented its cost accounting system in FY 2002 and focused its efforts in FY 2003 on remediating areas where the auditors reported that the agency was not compliant with Federal accounting standards and system requirements. The FY 2003 financial statements audit, issued on December 19, 2003, reported that NRC successfully achieved a redesign of the managerial cost accounting system and enhanced the documentation of controls and operating procedures. Accordingly, managerial cost accounting is no longer a material weakness.

- The *Assessment of the Most Serious Management Challenges Facing NRC* reported nine challenges for the agency for FY 2003. The *Reports Consolidation Act of 2000* requires the OIG to perform this annual assessment. The nine challenges were: (1) protection of nuclear material and facilities used for civilian purposes, (2) development and implementation of an appropriate risk-informed and performance-based regulatory oversight approach, (3) acquisition and implementation of information resources, (4) administration of all aspects of financial management, (5) clear and balanced communication with external stakeholders, (6) intra-agency communication (up, down, and across organizational lines), (7) integration of regulatory processes in a changing external environment, (8) maintenance of a highly competent staff (i.e., human capital management), and (9) protection of information.
- The *Reviews of NRC Regional Offices* disclosed the results of OIG's assessments of a wide range of regional technical and administrative activities in each of the four regions. Regional performance is monitored using operating plans that identify specific performance measures, or metrics, which the regions strive to accomplish. The regions report their metric data to headquarters in quarterly updates to their operating plans. While the regional public health and safety metrics were generally found to be valid and reliable, the administrative metrics were not. Regional action is needed to improve the validity and reliability of each metric and reported results and to enhance management controls in several administrative areas including facilities management, information management, and communication. Improved metrics will better enable the regional offices to evaluate their performance in specific technical and administrative areas.
- The *Computer Security Reviews at NRC's Technical Training Center and Regional Offices* revealed that controls implemented by the Technical Training Center and the regions are generally effective in reducing the risk associated with their operations. However, several areas need improvement. These areas include controls on administrative security, information technology, physical security, fire safety, as well as their supporting utilities.

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- The audit of *NRC's Regulatory Oversight of Special Nuclear Materials* disclosed that NRC's current levels of oversight of licensees' material control and accounting (MC&A) activities do not provide adequate assurance that all licensees properly control and account for special nuclear material (SNM). Specifically, the NRC performs limited inspections of licensees' MC&A activities and cannot assure the reliability of the SNM tracking system. Without adequate inspections to verify licensees' commitments to MC&A or a reliable SNM tracking system, the NRC has no independent means for determining if SNM was lost, stolen, or otherwise diverted while in a licensee's possession. Today's heightened sensitivity to the control of SNM warrants NRC's serious attention to its licensees' MC&A activities.

### Investigations

In FY 2003, the OIG completed 75 investigations and 4 Event Inquiries, focusing on violations of law or misconduct by NRC employees and contractors and allegations of irregularities or inadequacies in NRC programs and operations. The following are examples of recent work:

- The OIG completed an Event Inquiry into concerns raised by the Union of Concerned Scientists (UCS) regarding a perceived lack of NRC oversight of the Davis-Besse Nuclear Power Station (DBNPS). NRC Bulletin 2001-01 sought to have licensees perform inspections by December 31, 2001 on plants identified as highly susceptible to vessel head penetration nozzle cracking. These inspections could only be conducted when plants were shut down. UCS alleged that the NRC allowed DBNPS to continue operating until February 16, 2002, despite indications of significant cracking to the reactor vessel head. The OIG found, among other things, that NRC's decision to allow DBNPS to continue operating beyond December 31, 2001, without performing vessel head penetration nozzle inspections was driven in large part by a desire to lessen the financial impact on the licensee that would result from an earlier shutdown. In addition, the OIG found that NRC staff was reluctant to take regulatory action against a licensee absent absolute proof of a violation, despite strong indications that DBNPS was not in compliance with NRC regulations and plant technical specifications and may have operated with reduced safety margins.
- The OIG completed an Event Inquiry into the reported loss of two spent nuclear fuel rods at Millstone Nuclear Power Station Unit 1. In November 2000, the NRC license holder for Millstone discovered it could not locate two spent fuel rods which were last accounted for in 1978. As a result of this investigation, the OIG found that the missing fuel rods were last accounted for during a 1978 Nuclear Material Control and Accountability (MC&A) inspection at Millstone Unit 1 conducted by the NRC. In a 1982 MC&A inspection conducted by the NRC, the fuel rods were no longer present on the inventory. The OIG determined that the NRC inspector did not identify the loss of these fuel rods in

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the 1982 inspection because he relied on an inaccurate beginning inventory amount provided by the licensee instead of using the verified ending inventory amount reflected on the 1978 NRC inspection. The OIG also determined that the last MC&A inspection conducted at Millstone occurred in 1982, and that the NRC ended this inspection program for all nuclear power plants in 1988.

- The OIG conducted an investigation into allegations by the Attorney General of the State of Nevada pertaining to Government activities at the Yucca Mountain nuclear waste repository site. Specifically, it was alleged that NRC and Department of Energy (DOE) representatives conducted private meetings which, contrary to NRC regulatory and policy mandates, excluded Nevada State representatives and members of the public. Moreover, these private meetings violated restrictions placed on pre-licensing and ex-parte communications between the NRC and a potential licensee. It was also alleged that the NRC staff engaged in an inappropriate cooperative effort with the DOE to secure an opinion from the Office of Government Ethics (OGE) that adversely affected the State of Nevada. As a result of this investigation, the OIG determined that the NRC staff and DOE representatives were not involved in prohibited ex-parte communications because the Yucca Mountain licensing process was not in the adjudicatory phase. In addition, the OIG found that OGE representatives contacted the NRC and DOE staff in an effort to develop a consistent and comprehensive policy for all executive branch agencies whose former employees may, in the future, seek to represent private parties concerning Yucca Mountain.
- The OIG completed an investigation pertaining to a former NRC employee who allegedly received a Discontinued Service Retirement (DSR) to which he was not entitled. According to the information received by the OIG, an employee, who was under consideration for termination as a result of misconduct, received a DSR from the NRC after declining to be reassigned outside of his commuting area. Reportedly, there was no proof that the employee was actually offered a legitimate position outside of his commuting area, the declination of which would have qualified him for the DSR. This investigation disclosed that the employee and the NRC entered into a settlement agreement which allowed the employee to improperly obtain a DSR. The OIG found that the ostensibly directed reassignment was to a non-existent position, which was intended to allow the employee to decline the reassignment and qualify for the DSR without consideration of the employee's misconduct. According to U.S. Office of Personnel Management (OPM) retirement regulations, an employee is not eligible to receive a DSR as a result of a termination ensuing in any way from misconduct. OPM directed the employee to repay the Government the annuity he had already received in the amount of \$61,457. In addition, until the employee is eligible for a deferred annuity, the Government will realize a future cost savings of \$421,100 (absent future cost of living increases) that would have been paid to the employee absent this investigation.

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- The OIG completed an Event Inquiry to determine if the NRC licensee of the Indian Point 2 (IP2) Nuclear Power Facility violated commitments made to the NRC in 1997 regarding design bases requirements. These commitments were intended to improve plant programs and processes for controlling and maintaining reactor operations. The OIG also reviewed the adequacy of NRC oversight of the licensee regarding the implementation of these commitments. As a result of the inquiry, the OIG found that the NRC considered the licensee's progress towards meeting these commitments for plant improvement was slow and limited in effectiveness. However, the OIG found that the NRC's oversight of IP2's efforts toward fulfilling design bases requirements was adequate. The OIG found that NRC dedicated significant resources to intensify regulatory oversight of the plant. However, despite heightened levels of NRC attention to plant weaknesses, problems at IP2 remained unresolved.
- As a result of OIG investigations into the potential misuse of information technology (IT) resources by NRC employees and contractors for FY 2001 through FY 2003, the OIG completed 30 investigations of NRC employees and contractors who misused their Government computers. These investigations revealed that 22 NRC employees and 7 contractor employees accessed Internet sites containing sexually explicit material on their assigned NRC computer. Additionally, one investigation discovered that employees of the NRC contract guard force were utilizing NRC-issued computers to access sexually explicit material. Responsive action taken by the NRC toward its employees ranged from 21-day suspension to job termination. In addition, various contractors reimbursed the NRC approximately \$22,000 for the misuse of NRC-issued computer equipment.

**BUDGET AUTHORITY AND FULL-TIME EQUIVALENT BY PROGRAM**

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Program (\$K)</b>					
Audits	3,111	3,476	4,121	4,290	169
Investigations	2,453	2,559	3,179	3,228	49
Management and Operational Support	1,236	1,265	0	0 <sup>1</sup>	0
<b>Total Budget Authority</b>	<b>6,800</b>	<b>7,300</b>	<b>7,300</b>	<b>7,518</b>	<b>218</b>
<b>Full-Time Equivalent Employment by Program</b>					
Audits	18	21	25	25	0
Investigations	18	18	22	22	0
Management and Operational Support	8	8	0	0	0
<b>Total FTE</b>	<b>44</b>	<b>47</b>	<b>47</b>	<b>47</b>	<b>0</b>

**Justification of Program Requests**

The work to be performed by the OIG during FY 2005 will be carried out through OIG’s two major programs – Audits and Investigations. In accordance with OMB requirements, the OIG is providing the full cost associated with these programs for the FY 2005 budget. The FY 2005 budget identifies the OIG’s management and operational support costs, and distributes these costs to the audit and investigative programs as a portion of the full cost of these programs.

The following section presents program resource tables and descriptions detailing the requested resources, the associated efforts within each program, as well as the goals and measures for each program. The costs for management and operational support are included at the end of this chapter.



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### Audits

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	2,249	2,599	3,109	3,294	185
Contract Support and Travel	861	877	1,012	996	-16
<b>Total Budget Authority</b>	3,110	3,476	4,121	4,290	169
<b>FTE</b>	18	21	25	25	0

For FY 2005, the OIG requests \$4.290 million and 25 FTE to carry out its audit program activities. With these resources, the OIG will conduct approximately 21 audits and special evaluations that will focus on assessing agency programs involving the major management challenges and risk areas facing the NRC. This funding will sustain the existing program and its improved alignment with NRC activities and provide the necessary resources to identify opportunities for improvement in the agency and to conduct activities to prevent and detect fraud, waste, mismanagement, and inefficiency in NRC programs and operations.

To fulfill its audit mission, the OIG conducts performance, financial, and contract audits. Performance audits focus on NRC administrative and program operations and evaluate the effectiveness and efficiency with which managerial responsibilities are carried out and whether the programs achieve intended results. Financial audits attest to the reasonableness of NRC's financial statements and evaluate financial programs. Contract audits evaluate the cost of goods and services procured by NRC from commercial enterprises. In addition, the audit staff prepares special evaluation reports that present OIG perspectives or information on specific topics.

#### ***FY 2004/2005 Audit Performance Goals***

The OIG audits planned for FY 2004/2005 will link directly to the OIG Strategic Plan and its associated general goals and strategies. To accomplish this, the OIG will develop a comprehensive annual audit plan, which will include input from various elements of the NRC, Congress, other Federal agencies, the nuclear industry, and the OIG staff. This plan will identify the specific program areas and key priorities, strategies, and activities on which OIG audit resources will focus within the given year. The OIG will design the planned audits to encourage efficiency, economy, and effectiveness in NRC's critical risk programs and operations; improve

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program activities at headquarters and regional offices; and respond to unplanned priority requests and emerging issues.

The requested resources for the audit program will support OIG efforts to accomplish the following six performance goals:

**Audit products and activities will focus on identifying risk areas or management challenges relating to the improvement of NRC's safety, security, and/or corporate management programs. To measure its success, the OIG audit program has established the following FY 2005 performance goals:**

- Identify risk areas or management challenges relating to the improvement of NRC's safety programs on 100 percent of audit products or activities undertaken within the fiscal year.
- Identify risk areas or management challenges relating to the improvement of NRC's security programs on 100 percent of audit products or activities undertaken within the fiscal year.
- Identify risk areas or management challenges relating to NRC's corporate management programs on 80 percent of audit products or activities undertaken within the fiscal year.
- Have a high impact on improving NRC's safety, security, and/or corporate management programs on 70 percent of audit products or activities completed within the fiscal year.
- Obtain agency agreement on at least 90 percent of audit recommendations.
- Obtain final agency action on 65 percent of audit recommendations within 1 year.

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### *Investigations*

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Estimate Full Cost	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>					
Salaries and Benefits	2,248	2,356	2,866	2,899	33
Contract Support and Travel	203	203	313	329	16
<b>Total Budget Authority</b>	2,451	2,559	3,179	3,228	49
FTE	18	18	22	22	0

For FY 2005, the OIG requests \$3.228 million and 22 FTE to carry out its investigative program activities. With these resources, the OIG will conduct 50-70 investigations and Event Inquiries covering a broad range of misconduct and mismanagement affecting various NRC programs. The OIG will also continue its regional liaison activities to facilitate closer coordination between the OIG and the NRC's regional offices. The OIG will also continue to conduct fraud awareness briefings and participate in projects or task forces that strengthen agency operations. In addition, the OIG will continue working with the NRC staff to increase their awareness regarding the vulnerabilities associated with computer intrusion involving unauthorized access into the agency's operating systems.

Proactive investigations are also conducted when indications are raised concerning potentially systematic violations, such as theft of Government property or contract fraud. In addition, the OIG will periodically conduct Event Inquiries that identify staff actions that may have contributed to the occurrence of an event.

#### ***FY 2004/2005 Investigative Performance Goals***

The OIG investigative program for FY 2004/2005 will include investigative activities related to the integrity of the NRC's programs and operations. The OIG routinely receives and investigates allegations concerning violations of Federal laws and regulations, as well as allegations of mismanagement, waste, or staff misconduct that could adversely affect public health and safety. In addition, the OIG routinely undertakes proactive investigations directed at particular areas of agency programs that bear a high potential for fraud, waste, and abuse. On a priority basis, investigative program products and activities will be directed to address allegations in the safety, security, and corporate management mission-related areas articulated in the OIG Strategic Plan.

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The requested resources for the investigative program will support OIG efforts to achieve the following six performance goals:

**Investigative products and activities will focus on identifying risk areas or management challenges relating to the improvement of NRC's safety, security, and/or corporate management programs. To measure its success, the OIG investigative program has established the following FY 2005 performance goals:**

- Identify risk areas or management challenges relating to the improvement of NRC's safety programs on 75 percent of investigative products or activities undertaken within the fiscal year.
- Identify risk areas or management challenges relating to the improvement of NRC's security programs on 80 percent of investigative products or activities undertaken within the fiscal year.
- Identify risk areas or management challenges relating to the improvement of NRC's corporate management programs on 60 percent of investigative products or activities undertaken within the fiscal year.
- Have a high impact on improving NRC's safety, security and/or corporate management programs on 70 percent of investigative products or activities completed within the fiscal year.
- Obtain 90 percent agency action in response to OIG investigative reports.
- Obtain 70 percent acceptance by NRC's Office of the General Counsel of OIG-referred Program Fraud and Civil Remedies Act cases.

Following is a description of the linkage between OIG's Strategic Plan goals and its Performance Plan for FY 2004 - FY 2005.

**Linkage Between OIG’s Strategic Plan Goals  
and the OIG’s Performance Plan for FY 2004 - FY 2005**

The OIG updated its Strategic Plan for FY 2003 - FY 2008 and associated performance goals to present a results-based business case and return-on-investment. The plan serves to strengthen the OIG by establishing a shared set of expectations for OIG’s stakeholders regarding the goals it expects to achieve and the strategies and actions that it will use to do so. We will adjust the plan as circumstances necessitate, use it to develop our annual plan and budget submission, report on progress in OIG’s semiannual reports, and hold OIG managers and staff accountable for achieving the goals and outcomes.

The OIG's strategic plan includes three strategic goals and six general goals with a number of supporting strategies and actions that describe planned accomplishments over a five-year period. Through associated annual planning activities, audit and investigative resources will focus on assessing those NRC’s safety, security, and corporate management programs involving the major challenges and risk areas facing the NRC in the given budget year. The work of OIG auditors and investigators support and complement each other in the pursuit of these objectives.

Following is a discussion of how the three strategic goals and six general goals of the OIG strategic plan link with the FY 2004-FY 2005 Performance Plan. This includes a tie-in between the level of activity by the OIG in its audit and investigation functions with the strategies and actions related to the strategic and general goals. It also includes the performance goals for FY 2004 and FY 2005. Since the FY 2003-FY 2008 Strategic Plan is a departure from OIG’s previous plan, FY 2004 performance data will represent OIG’s baseline year.

**Goals and Strategies**

<b><u>Strategic Goal 1</u></b>	
<b>Advance NRC’s efforts to enhance safety and protect the environment.</b>	
<b><u>General Goals</u></b>	
<b>1.</b>	<b>80% of OIG products and activities undertaken to accomplish Strategic Goal 1 will identify risk areas or management challenges related to enhancing safety.</b>
<b>2.</b>	<b>70% of OIG products and activities undertaken to accomplish Strategic Goal 1 will have a high impact on improving safety.</b>

**Discussion:** The NRC faces many safety challenges and an associated increasing workload in the coming years concerning nuclear reactor oversight, the regulation of nuclear materials, and the handling of high-level waste.

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A significant concern for the NRC is ensuring the safe operation of the Nation's operating nuclear power plants through an established oversight process developed to ensure that licensees identify and resolve safety issues before they affect safe plant operation.

In addition, the NRC must address an increasing number of license amendment requests to increase the power generating capacity of specific commercial reactors; license renewal requests to extend reactor operations beyond originally set expiration dates; and the introduction of new technology such as new and advanced reactor designs.

In fulfilling its responsibilities to regulate nuclear materials, the NRC must ensure that its regulatory activities regarding nuclear fuel cycle facilities and nuclear materials adequately protect public health and safety. The NRC is especially reliant on the effectiveness of the Agreement States Program in meeting these responsibilities. Additionally, NRC's regulatory activities concerning nuclear materials must protect against radiological sabotage and theft or diversion of these materials. Further, licensing of new facilities (e.g., mixed oxide (MOX) fuel fabrication) and the potential oversight of DOE non-weapons laboratories pose additional challenges.

In the high-level waste area, the NRC will face significant issues involving the licensing of the Yucca Mountain repository and the transportation of designated high-level waste from plants and facilities. Additional high-level waste issues include the interim storage of spent nuclear fuel both at and away from reactor sites, certification of storage and transport casks, and the oversight of the decommissioning of reactors and other nuclear sites. Further, the DOE and the industry will need contingency plans if the repository is not licensed or not available in 2012, and the NRC will need to be able to respond to those plans.

In response to these agency challenges, the OIG will implement the following strategies and actions over a 5-year period:

**Strategy 1-1: Identify risk areas associated with NRC efforts to implement the Reactor Oversight Program and make recommendations, as warranted, for addressing them.**

Actions:

- a. Assess the adequacy of NRC's implementation of licensing and other oversight activities with regard to the safe operation of existing nuclear reactors.
- b. Assess the extent to which the NRC has integrated into the reactor oversight process its emergency preparedness and incident response obligations associated with a potential significant nuclear event or incident.
- c. Assess NRC's implementation of its risk-informed inspection process.
- d. Assess the impact that an increase in license renewal requests would have on the licensing process.

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- e. Assess the effectiveness of the NRC regulatory process and related enforcement actions.
- f. Assess NRC's actions to address the potential risks associated with aging facilities and with the introduction of new technology.
- g. Monitor NRC activities and gather stakeholder information to identify potential gaps in NRC regulatory oversight. Conduct, as appropriate, Event Inquiries when gaps are identified.

### **Strategy 1-2: Identify risk areas facing the materials program and make recommendations, as warranted, for addressing them.**

#### Actions:

- a. Assess NRC's implementation of programs for controlling, accounting for, tracking, and inspecting nuclear materials.
- b. Assess the extent to which the NRC has integrated into the materials program its emergency preparedness and incident response obligations associated with a potential significant nuclear event or incident.
- c. Assess NRC activities concerning the licensing and oversight of fuel cycle facilities, including MOX fuel fabrication and the potential oversight of DOE non-weapons laboratories.
- d. Assess NRC's handling of low-level waste issues, including security, disposal, and coordination with Agreement States.
- e. Assess impact of Agreement States program on the safety and security of materials and on NRC funding and regulatory activities.
- f. Review NRC and licensee reports and engage interested stakeholders to identify issues of concern in NRC oversight of nuclear material held by NRC licensees.
- g. Assess NRC's oversight of the nuclear waste issues associated with the decommissioning and cleanup of nuclear reactor sites and other facilities.

### **Strategy 1-3: Identify risk areas associated with the prospective licensing of the high-level waste repository and make recommendations, as warranted, for addressing them.**

#### Actions:

- a. Assess NRC's regulatory activities involving the interim storage of high-level waste and spent fuel both at and away from reactor sites.
- b. Assess issues involving the review of a Yucca Mountain repository application, if received by the NRC, and the transportation of designated high-level waste from plants and facilities.
- c. Assess the consequences of Yucca Mountain not being licensed or not being available as planned, including NRC's ability to respond to DOE and industry contingency plans.

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- d. Closely monitor the Yucca Mountain license review process to ensure that there are no indications of process deviations and that the review is being conducted in a thorough and impartial manner.

<b><u>Strategic Goal 2</u></b>
<b>Enhance NRC's efforts to increase security in response to the current threat environment.</b>
<b><u>General Goals</u></b>
<b>1. 85% of OIG products and activities undertaken to accomplish Strategic Goal 2 will identify risk areas or management challenges related to security.</b>
<b>2. 70% of OIG products and activities undertaken to accomplish Strategic Goal 2 will have a high impact on improving security.</b>

**Discussion:** The NRC faces a number of challenges in increasing its emphasis on security since September 11, 2001. The terrorist attacks which occurred that day resulted in a sharpened focus on the security and protection of operating nuclear power plants and nuclear materials. The NRC, in concert with other agencies, is assessing current risks faced by licensed activities, reviewing existing security measures, and identifying vulnerabilities. Further, a comparable risk and vulnerability assessment is underway concerning NRC office facilities. Given this increased security focus, it is anticipated that the NRC will expend considerable effort in developing responsive security plans and enhanced security capabilities.

In addition to ensuring the security and protection of domestic nuclear facilities and materials, the NRC faces new challenges in supporting United States international interests in the safe and secure use of nuclear materials and in nuclear nonproliferation. These challenges include improving controls on the export of nuclear materials and equipment and NRC's successful exercising of its international commitments.

In response to these agency challenges, the OIG will implement the following strategies and actions over a 5-year period:

**Strategy 2-1: Identify risk areas involved in effectively securing operating nuclear power plants and nuclear materials and make recommendations, as warranted, for addressing them.**

**Actions:**

- a. Assess the extent to which the NRC has developed a comprehensive threat assessment with regard to nuclear power plants and nuclear materials and a process for keeping it up to date.



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- b. Assess the adequacy of the process for developing existing regulations to respond to an evolving threat environment and the extent to which the NRC is making appropriate regulatory adjustments.
- c. Assess NRC's coordination with other agencies.
- d. Assess NRC's acquisition of resources and expertise to meet its security responsibilities.
- e. Monitor the development of NRC requirements intended to enhance nuclear plant security.

### **Strategy 2-2: Identify risks associated with nonproliferation and make recommendations, as warranted, for addressing them.**

#### Actions:

- a. Assess NRC's efforts to improve controls on the export of nuclear materials or equipment.
- b. Assess NRC's responsibilities linked to established statutes, international treaties, conventions, and agreements of cooperation.

### **Strategy 2-3: Identify threats to NRC security and make recommendations, as warranted, for addressing them.**

#### Actions:

- a. Assess the extent to which the NRC has developed a comprehensive threat assessment for its facilities and personnel and a process for keeping it up to date.
- b. Assess the extent to which the NRC has implemented physical and information security controls and procedures.
- c. Assess the effectiveness of NRC approaches for balancing physical and information security and public openness.
- d. Assess NRC's steps in ensuring continuity of its operations in the event that a significant incident occurs.
- e. Assess other issues involving NRC security, including regional vulnerabilities and temporary facilities needed for Yucca Mountain hearings.
- f. Through proactive initiatives and reactive investigations, assist the Office of the Chief Information Officer (OCIO) and NRC systems administrators in the protection of the NRC IT infrastructure against internal and external computer intrusions.

Strategic Goal 3

**Improve the economy, efficiency, and effectiveness of NRC corporate management.**

General Goals

1. **65% of OIG products and activities undertaken to accomplish Strategic Goal 3 will identify critical risk areas or management challenges related to corporate management.**
2. **70% of OIG products and activities undertaken to accomplish Strategic Goal 3 will have a high impact on corporate management.**

**Discussion:** The NRC faces significant challenges to efficiently, effectively, and economically manage its resources. In the IG’s assessment of the most serious management challenges facing the NRC, the IG identified three specific challenges that have the potential for a perennial weakness or vulnerability that, without substantial management attention, would seriously impact agency operations or strategic goals. The IG identified:

- Acquisition and implementation of information resources,
- Administration of all aspects of financial management, and
- Maintenance of a highly competent staff (i.e., human capital management).

These management challenges dovetail with the President’s Management Agenda, which the NRC is striving to implement. The President’s Management Agenda, announced in the summer of 2001, is an aggressive strategy for improving the management of the Federal Government. It focuses on five areas of management weakness across the Government where improvements and the most progress can be made.

- Improve workforce planning,
- Improve financial management practices,
- Integrate budget and performance,
- Increase competitive sourcing, and
- Expand electronic Government.

In addition, the NRC has other challenges in the control and accountability of property, facilities management operations, and the acquisition of goods and services.

In response to these agency challenges, the OIG will implement the following strategies and actions over a 5-year period:

**Strategy 3-1: Assess progress made in implementing the President’s Management Agenda.**

Actions:

- a. Assess NRC strategies for addressing loss of knowledge, skills, and abilities through retirement and turnover and the impact of a diminishing “academic pipeline.”

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- b. Assess NRC efforts to comply with OMB competitive sourcing requirements.
- c. Assess steps taken by the NRC to improve its financial management practices, including the overall process and steps undertaken to implement cost accounting capabilities and integrate financial systems.
- d. Assess NRC efforts to embrace e-Government initiatives.
- e. Assess NRC progress in integrating budget and performance.

### **Strategy 3-2: Identify other areas of corporate management risk within the NRC and make recommendations, as warranted, for addressing them.**

#### Actions:

- a. Assess NRC property accountability and controls.
- b. Assess NRC facilities management operations.
- c. Assess NRC actions taken to address issues cited in the NRC safety culture and climate survey.
- d. Assess NRC IT issues, including the return-on-investment obtained from IT initiatives, integration of NRC technology and systems, and NRC procedures for IT life cycle management.
- e. Assess NRC acquisition and contracting controls and processes.
- f. Coordinate with the Office of the Chief Financial Officer and OCIO to identify any instances of misuse of NRC equipment and resources, such as computers, and travel and procurement credit cards.
- g. Reduce instances of employee criminal and administrative misconduct through investigations and proactive initiatives.
- h. Use proactive initiatives, in support of improved financial performance, to identify and investigate any instances of fraudulent payments associated with NRC programs.

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**Performance Measures**

Measures	Goal 1 Advance NRC's Safety Efforts		Goal 2 Enhance NRC's Security Efforts		Goal 3 Improve NRC's Corporate Management	
	Baseline 2004	Target 2005	Baseline 2004	Target 2005	Baseline 2004	Target 2005
1. Percent of OIG products/activities <sup>2</sup> undertaken to identify risk areas or management challenges <sup>3</sup> relating to the improvement of NRC's safety, security, and/or corporate management programs.		80%		85%		65%
2. Percent of OIG products/activities that have a high impact <sup>4</sup> on improving NRC's safety, security, and/or corporate management programs.		70%		70%		70%
3. Number of audit recommendations agreed to by agency.		90%		90%		90%
4. Final agency action within one (1) year on audit recommendations.		65%		65%		65%
5. Agency action in response to investigative reports.		90%		90%		90%
6. Acceptance by NRC's Office of the General Counsel of OIG-referred Program Fraud and Civil Remedies Act cases.						70%

**Verification and Validation of Measured Values and Performance**

In FY 2004, the OIG will implement an automated management and information system that will be used to capture the majority of required performance data. In addition, the OIG will use a performance review panel to determine product and activity impact on agency programs.

**Crosscutting Functions with Other Government Agencies**

The NRC's OIG has a crosscutting function relating to its investigatory case referrals to the Department of Justice and other State and local law enforcement entities.

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**FY 2005 Office of the Inspector General Budget Resources  
Linked to Strategic and General Goals**

The following table depicts the relationship of the Inspector General program and associated resource requirements to its strategic and general goals.

Program Links to Strategic and General Goals	OIG Strategic and General Goals		
	Advance NRC's Safety Efforts	Enhance NRC's Security Efforts	Improve NRC's Corporate Management
<b>FY 2005 Programs (\$7,518K, 47 FTE)</b>			
<b>Audits (\$4.290K, 25 FTE)</b>	X	X	X
<b>Investigations (\$3.228K, 22 FTE)</b>	X	X	X

Following is a discussion of the OIG Management and Operational Support activities.

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### *Management and Operational Support*

The Inspector's General Management and Operational Support staff consists of senior executive managers, general counsel, and an administrative support staff. OIG's senior executive managers will provide the continued vision, strategic direction, and guidance regarding the conduct and supervision of audits and investigations. Senior management will also ensure accountability regarding OIG's established goals and strategies and achievement of intended results. Further, senior management will ensure a diverse workforce with the proper focus on the President's Management Agenda.

In furtherance of OIG's mission to promote economy and efficiency, and to prevent fraud, waste, and abuse in agency programs and operations, OIG's general counsel, in coordination with cognizant OIG staff, will conduct analyses of existing and proposed legislation, regulations, directives, and policy issues. These objective analyses will result in timely written commentaries to the agency that prospectively identify and prevent potential problems.

The administrative support staff will support OIG programs by providing independent personnel services; information technology and information management support; financial management; policy and strategic planning support; training coordination; and the preparation, coordination, and publication of the OIG's Semiannual Report to Congress in accordance with the requirements of the IG Act.

The FY 2005 budget will be the first full cost budget to be submitted by the OIG to OMB and Congress and will identify management and operational support costs distributed to the audit and investigative programs as a portion of their total program cost. To carry out the functions of this program in FY 2005, the OIG estimates its costs to be \$1.256 million, which includes salaries and benefits for 8 FTE. The tables below provide a breakdown of the FY 2005 budget estimates for Management and Operational Support by program and a cost comparison by function.

### **ALLOCATION OF SUPPORT COSTS TO OIG PROGRAMS**

Management & Operational Support Allocation by Program	FY 2005	FY 2005	FY 2005
	FTE	Salaries & Benefits	Contract and Support
Audits	4	527	108
Investigations	4	527	94
Total	8	\$1,054	\$202

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**COMPARATIVE COSTS OF MANAGEMENT AND OPERATIONAL SUPPORT**

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2005 Estimate	
			Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>				
Salaries and Benefits	1,000	10,209	1,054	34
Contract Support and Travel	236	245	202	-43
<b>Total Budget Authority</b>	1,236	1,265	1,256	-9
FTE	8	8	8	0

**NOTES**

1. The OIG Management and Operational Support staff consists of senior managers, a general counsel, and an administrative support staff. To carry out the function of this program in FY 2005, the OIG estimates its costs to be \$1.256 million which includes salaries and benefits for 8 FTE. The associated FTE and salaries and benefits estimates were equally divided between the Audits and Investigations programs. The contract support and travel estimate for information technology, travel, training, and technical support were divided by a FTE ratio to Audits and Investigations programs. Contract support and travel estimate for reports production and office supplies were divided equally to the Audits and Investigations programs.
2. OIG products are issued OIG reports – by the audit unit, an audit report or special evaluation; by the investigative unit, an investigation, an event inquiry, or a special inquiry. Activities are OIG Hotline activities or proactive investigative projects.
3. Congress left the determination and threshold of what constitutes a most serious management challenge to the discretion of the Inspectors General. As a result, the OIG applied the following definition: *Serious management challenges are mission critical areas or programs that have potential for a perennial weakness or vulnerability that, without substantial management attention, would seriously impact agency operations or strategic goals.*
4. High impact is the effect of an issued report or activity undertaken that results in:
  - a) confirming risk areas or management challenges that caused the agency to take corrective action,
  - b) real dollar savings or reduced regulatory burden,
  - c) identifying significant wrongdoing by individuals that results in criminal or administrative action,
  - d) clearing an individual wrongly accused, and
  - e) identifying regulatory actions or oversight that may have contributed to the occurrence of a specific event or incident or resulted in a potential adverse impact on public health or safety.



# **APPENDICES**

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**APPENDIX I: SUPPORTING TABLES**

**BUDGET AUTHORITY BY FUNCTION**

NRC Appropriation	FY 2003 Enacted	FY 2004 Full Cost	FY 2005 Full Cost Estimate	
			Request	Change from FY 2004
<b>Salaries and Expenses (S&amp;E) (\$K)</b>				
Salaries and Benefits	332,056	356,558	386,440	29,882
Contract Support	229,718	248,690	260,130	11,440
Travel	16,032	13,552	16,207	2,655
Total (S&E)	577,806	618,800	662,777	43,977
<b>Office of the Inspector General (OIG) (\$K)</b>				
Salaries and Benefits	5,497	5,975	6,193	218
Contract Support	1,080	1,095	1,095	0
Travel	220	230	230	0
Total (OIG)	6,797	7,300	7,518	218
<b>Total NRC Appropriation (\$K)</b>				
Salaries and Benefits	337,553	362,533	392,633	30,100
Contract Support	230,798	249,785	261,225	11,440
Travel	16,252	13,782	16,437	2,655
Total (NRC)	584,603	626,100	670,295	44,195

**APPENDIX I: SUPPORTING TABLES**

**HOMELAND SECURITY**

	FY 2003 Enacted	FY 2004 Estimate	FY 2004 Full Cost Estimate	FY 2005 Full Cost	
				Request	Change from FY 2004
<b>Budget Authority by Strategic Arena (\$K)</b>					
Nuclear Reactor Safety	19,845	34,618	43,772	35,568	-8,204
Nuclear Materials Safety	6,375	12,114	16,178	16,086	-92
Nuclear Waste Safety	3,246	3,291	5,111	3,383	-1,728
International Nuclear Safety Support	807	1,114	1,724	1,793	69
Management and Support	3,474	0	0	0	0
<b>Total Budget Authority</b>	<b>33,747</b>	<b>51,137</b>	<b>66,785</b>	<b>56,830</b>	<b>-9,955</b>
<b>Full-Time Equivalent Employment by Strategic Arena</b>					
Nuclear Reactor Safety	78	128	161	158	-3
Nuclear Materials Safety	25	49	64	66	2
Nuclear Waste Safety	7	20	27	16	-11
International Nuclear Safety Support	6	8	10	10	0
Management and Support	0	0	0	0	0
<b>Total FTE</b>	<b>116</b>	<b>205</b>	<b>262</b>	<b>250</b>	<b>-12</b>

**APPENDIX II: LEGISLATIVE PROGRAM PROJECTIONS**

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<b>U.S. NUCLEAR REGULATORY COMMISSION LEGISLATIVE PROGRAM PROJECTIONS</b> (Dollars in Millions)				
	<b>SALARIES AND EXPENSES APPROPRIATION</b>		<b>INSPECTOR GENERAL APPROPRIATION</b>	
	Budget Authority <sup>1</sup>	Budget Outlays <sup>1</sup>	Budget Authority <sup>1</sup>	Budget Outlays <sup>1</sup>
FY 2004 Enacted	619	609	7	7
FY 2005 Estimate	663	653	7	7
FY 2006 Estimate	675	672	7	7
FY 2007 Estimate	688	685	7	7
FY 2008 Estimate	704	699	7	7
FY 2009 Estimate	719	715	8	7

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<sup>1</sup> Projections as reported in OMB's MAX database.

## **APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

### **EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

The FY 2005 budget will be the first full-cost budget to be submitted by the NRC to Congress and will identify the agency's infrastructure and support costs distributed to programs as a portion of total program cost. The allocation methodology is consistent with the methodology used for preparing the agency's financial statements.

The agency infrastructure and support or management and support, encompasses those activities that are necessary for the staff and agency programs to achieve goals, but which are more efficiently and effectively performed centrally. These activities include rental of space and facilities management, physical and personnel security, administrative support services, acquisition of goods and services, human resources management, training and development, matters involving small and disadvantaged businesses and civil rights, information resources management, planning and budget analysis, accounting and finance, and policy support services to the Commission and program area staff in performing their regulatory mission activities and achieving their performance goals. The following tables provide a breakdown of the costs of infrastructure and support by program.

**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

**MANAGEMENT & SUPPORT ALLOCATION BY PROGRAM**

Program/Arena	FY 2004		FY 2005	
	FTE	Allocation (\$K)	FTE	Allocation (\$K)
Reactor Licensing	110	30,465	110	32,359
Reactor License Renewal	28	7,576	28	8,092
Reactor Inspection and Performance Assessment	187	51,234	184	53,828
Reactor Safety Research	36	9,834	35	10,298
New Reactor Licensing	30	8,241	30	8,775
Reactor Homeland Security	33	9,154	31	9,091
<b>Subtotal - Nuclear Reactor Safety</b>	<b>424</b>	<b>116,504</b>	<b>418</b>	<b>122,443</b>
Fuel Facilities Licensing and Inspection	27	7,295	30	8,684
Nuclear Materials Users Licensing and Inspection	68	18,662	65	19,062
Materials Homeland Security	15	4,064	15	4,391
<b>Subtotal - Nuclear Materials Safety</b>	<b>110</b>	<b>30,021</b>	<b>110</b>	<b>32,137</b>
High-Level Waste Regulation	21	5,792	30	8,836
Environmental Protection and Low-level Waste Management	4	1,202	4	1,140
Regulation of Decommissioning	16	4,465	16	4,604
Spent Fuel Storage and Transportation Licensing and Inspection	19	5,251	18	5,337
Waste Homeland Security	7	1,820	4	1,123
<b>Subtotal - Nuclear Waste Safety</b>	<b>67</b>	<b>18,530</b>	<b>72</b>	<b>21,040</b>
International	10	2,825	10	2,920
<b>Subtotal - International Nuclear Safety</b>	<b>10</b>	<b>2,825</b>	<b>10</b>	<b>2,920</b>
<b>Total</b>	<b>611</b>	<b>167,880</b>	<b>610</b>	<b>178,540</b>

**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

**BUDGET AUTHORITY AND FULL-TIME EQUIVALENT BY FUNCTION**

Summary	FY 2003 Enacted	FY 2004 Estimate	FY 2005	
			Request	Change from FY 2004
<b>Budget Authority by Function (\$K)</b>				
Management Services	61,204	63,372	66,162	2,790
Information Technology and Information Management	55,810	57,210	60,249	3,039
Financial Management	15,520	16,397	17,901	1,504
Homeland Security	3,474	0	0	0
Policy Support	23,586	25,301	26,368	1,067
Permanent Change of Station	6,185	5,600	7,860	2,260
<b>Total</b>	<b>165,779</b>	<b>167,880</b>	<b>178,540</b>	<b>10,660</b>
<b>Full-Time Equivalent Employment by Function</b>				
Management Services	160	160	160	0
Information Technology and Information Management	169	173	173	0
Financial Management	104	105	105	0
Homeland Security	0	0	0	0
Policy Support	168	173	172	-1
Permanent Change of Station	0	0	0	0
<b>Total FTE</b>	<b>601</b>	<b>611</b>	<b>610</b>	<b>-1</b>

**Justification of Costs by Function**

Infrastructure and support comprises six functions. Only the significant changes from FY 2004 resources are discussed below.

**Management Services**

- Resources increase primarily as a result of the increase in rent for the lot adjoining NRC headquarters and an increase in fees assessed by the General Services



## **APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

Administration (GSA). Salaries and benefits increase to support the Government-wide FY 2005 pay raise and other increases in salaries and benefits.

### **Information Technology and Information Management**

- The resource increase in FY 2005 is primarily attributable to escalation clauses in existing contracts and expected vendor rate increases for planned services to provide Enterprise Architecture (EA) training, EA reference services, and access to EA and technology assessment experts. Other resource increases beginning in FY 2005 are for a three-tier Web architecture infrastructure to allow for the refresh of aging hardware and software to accommodate future requirements, the planning and migration to the next-generation operating system, a Web portal pilot to support remote networking access and telecommuting, and a more structured and proactive process to control the release of commercial-off-the-shelf (COTS) software in the NRC environment. Salaries and benefits increase to support the Government-wide FY 2005 pay raise and other increases in salaries and benefits.

### **Financial Management**

- Resources increase in FY 2005 to complete the transition the time-and-labor system to a cross-servicing provider (Department of Interior) and to begin the development of the new Fee Billing System. Salaries and benefits also increase to support the Government-wide FY 2005 pay raise and other increases in salaries and benefits.

### **Policy Support**

- Resources increase to provide services to the Commission and program area staff in performing their regulatory mission activities and achieving their performance goals.

### **Permanent Change of Station**

- Resources increase in FY 2005 to support a projected increase in the number of NRC employees who will move between duty stations and an anticipated increase in the number of “outside” hires.

### **Measuring Results - Corporate Management Strategies**

The NRC has developed four corporate management strategies to help accomplish the agency’s strategic and performance goals. Our corporate management strategies describe the means by which the NRC will conduct its business to ensure success in implementing the

## APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION

FY 2000 - FY 2005 Strategic Plan and accomplishing the agency's mission. These strategies also help the support offices better serve their customers within the agency to help them achieve the agency's goals. Our strategic and performance goals focus on the mission or business of the NRC.

### Four Corporate Management Strategies and Their Implementing Strategies

- (1) To **employ innovative and sound business practices**, the NRC will employ the following strategies:
  - We will strengthen collaborative processes for conducting business among support offices and between support and program offices.
  - We will improve customer service, balancing internal customer needs with overall agency priorities and available resources.
  - We will find new and better ways of doing business to increase effectiveness and efficiency of operations.
  - We will create and maintain a Planning, Budgeting, and Performance Management (PBPM) process that is focused on outcomes and provides an effective tool for setting goals, allocating resources, tracking progress, measuring results, and identifying areas for improvement.
  - We will strengthen our financial systems and processes to ensure that our financial assets are adequately protected consistent with risk and that our financial information is better integrated with decisionmaking.
  - We will acquire goods and services in an efficient manner that helps to accomplish our mission, ensures fair and equitable treatment for all parties wishing to do business with the NRC, and results in the best value to the NRC.
  - We will modify our management and organizational structure, as appropriate, to meet the changing demands of internal and external factors, such as the economic deregulation of the electric utility industry and any resulting consolidation of the nuclear industry.
  
- (2) To **sustain a high-performing, diverse workforce**, the NRC will employ the following strategies:

## **APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

- We will recruit, hire, and retain a high-quality, diverse workforce with the skills needed to achieve our mission and goals.
- We will assess our scientific, engineering, and technical core competency needs and design a strategic workforce plan to address critical skill gaps and guide the agency in the recruitment, development, and retention of a highly-skilled, diverse workforce. Following the initial assessment of the agency's technical skills and competencies, and based on lessons learned in the course of that undertaking, this effort will be expanded to address skill and competency requirements in IT, and infrastructure and support areas.
- We will foster a work environment that is free of discrimination and provides opportunities for all employees to optimally use their diverse talents in support of our mission and goals.
- We will base our human resource decisions on sound workforce planning and analysis, and will develop succession strategies for key positions and critical skills.
- We will improve the capability of our workforce through training, development, and continuous learning.
- We will select and develop strong managers who can provide vision and strategic leadership.
- We will focus on results by linking rewards and recognition to outcomes and organizational effectiveness.

**(3) To provide proactive information management and information technology services,** the NRC will employ the following strategies:

- We will work jointly with program and support offices to align information technology and business planning as a means of achieving agency goals and strategies.
- We will make it more efficient and effective for the staff to acquire, access, and use the information they need to perform their work.
- We will assume a leadership role in improving the agency staff's capability to use current and planned information technology to enhance performance.

### **APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

- We will provide and maintain a robust, reliable, cost-effective, and “user-friendly” information technology infrastructure that is driven by the agency’s business needs.
- We will work jointly with stakeholders to optimize the delivery of information technology and information management services.
- We will improve the ability of the NRC and external entities to conduct our mutual business electronically.
- We will give external stakeholders the ability to easily access desired publicly available information to aid in their participation in the NRC’s regulatory processes, and to enhance understanding of the agency’s mission, goals, and performance.

(4) To **communicate strategic change**, the NRC will use the following strategies:

- We will review and assess the effectiveness of communication channels and methods within the NRC to ensure that they support the needs of a changing environment.
- We will examine strategies and develop actions for improving internal communications in the agency.
- We will review and assess specific areas where internal communications can be improved in the agency, including the use of information technology and efficiency of staff meetings.
- We will build and maintain an environment in which safety, excellence, teamwork, creativity and innovation among our employees contribute to achieving our public confidence goals.
- We will assess the effectiveness of communications by evaluating the effectiveness of communication channels or methods used to provide information to the public.
- On the basis of the assessments discussed above, we will develop and implement communication plans that support strategic change and foster the desired work environment.
- We will improve communication with the public by using strategies that recognize the ongoing changes in the environment external to the agency.

### **APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

- We will respond to requests and inquiries from stakeholders in a timely, courteous, and professional manner.
- We will identify regulatory decisions or issues that are most likely to generate substantial public interest at an early stage of development and initiate actions to inform and involve the public.

**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

**OUTPUT MEASURES BY FUNCTION**

The requested resources will support the agency’s efforts to achieve the output targets established in the following tables.

*Management Services*

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output: GSA biennial customer satisfaction report on building services provided by ADM at the White Flint Complex.</b>						
<b>Target:</b>	New measure in FY 2002		Rating of ≥ 80 93.5%	N/A	Rating of ≥ 80	N/A
<b>Output: Review of draft rules to ensure that the rules submitted for publication are acceptable by the Office of the Federal Register without substantive changes that would delay publication and affect the promulgation of the rule and the implementation of Commission policy.*</b>						
<i>Target: Complete reviews within schedule, agreed to by the Office of Administration and the requesting office (percent of time).</i>						
<b>Target:</b>	99%	99%	<b>99%</b>	<b>99%</b>	<b>99%</b>	<b>99%</b>
<b>Actual:</b>	100%	100%	<b>100%</b>	<b>100%</b>		
<b>* Output modified in FY 2002 to provide clarification.</b>						
<b>Output: Performance-based service contracting.</b>						
<i>Target: Percent of eligible service contracting dollars (contracts over \$25,000) that use Performance-Based Contracting techniques during the fiscal year.</i>						
<b>Target:</b>	New measure in FY 2002		≥ 20% eligible service dollars	≥ 20% eligible service dollars	≥ 20% eligible service dollars	≥ 20% eligible service dollars
<b>Actual:</b>			53%	59%		
<b>Output: Use of governmentwide procurement point-of-entry website.</b>						
<i>Target: Percent of required synopses for acquisitions that are posted on the governmentwide point-of-entry Web site (www.FedBizOpps.gov) during the fiscal year. Synopses for acquisitions are those valued at over \$25,000 for which widespread notice is required by the Federal Acquisition Regulation.</i>						
<b>Target:</b>	New measure in FY 2002	100% required synopses	100% required synopses	100% required synopses	100% required synopses	100% required synopses
<b>Actual:</b>			100%	100%		
<b>Output: Competitive sourcing.</b>						
<i>Target: Percent of commercial FTEs listed on Federal Activities Inventory which are subjected to a streamlined cost comparison, public-private competition, or direct conversion,<sup>3</sup></i>						
<b>Target:</b>	New measure in FY 2002		≥ 5% FTE	≥ 10%	TBD	TBD
<b>Actual:</b>			5%	N/A		

**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
<b>Output:: Staffing strategies achieve targeted workforce levels.</b>						
<i>Target: FTE utilization is within authorized ceiling (percent) at the beginning of fiscal year and employee/supervisory ratio is maintained.</i>						
<i>Target:</i>	Within 2% of ceiling Supervisory ratio 8:1	Within 2% of ceiling Supervisory ratio 8:1	Within 2% of ceiling Supervisory ratio 8:1	<b>Within 2% of ceiling Supervisory ratio 8:1</b>	<b>Within 2% of ceiling Supervisory ratio 8.5:1</b>	<b>Within 2% of ceiling Supervisory ratio 8.5:1</b>
<i>Actual:</i>	within 1.3% Supervisory ratio 8:1	within 0.3% Supervisory ratio 8:1	within 2.0% Supervisory ratio 8:1	<b>within 0.6% Supervisory ratio 8:1</b>		
<b>Output: Measure: Human capital strategies support achievement of the NRC's corporate management strategies to sustain a high-performing, diverse workforce.</b>						
<i>Target: Hire new professional staff at entry level and retain new entry level and experienced professional hires.</i>						
<i>Target:</i>			Hire 25% at entry level Retain 75% over 4 years	Hire 25% at entry level Retain 75% over 3 years	Hire 25% at entry level Retain 75% over 3 years	Hire 23% at entry level Retain 75% over 3 years
	New measure in FY 2002					
<i>Actual:</i>			Hired 41% t entry level Retained 84% over 3 years	Hired 24% at entry level Retained 86% over 3 years		
<b>Output:: Diversity of agency workforce groups compares favorably with relevant American labor market (based on Oak Ridge Institutes of Science and Education availability data).</b>						
<i>Target: Workforce groups in occupations relevant to NRC (percent).</i>						
<i>Target:</i>	< 25% under represented	< 25% under represented	< 25% under represented	< 25% under represented	< 25% under represented	< 25% under represented
<i>Actual:</i>	< 25%	< 25%	< 25%	< 25%		
<b>Output:: The most significant critical workforce skills imbalances are identified each year, and human capital strategies are developed</b>						
<i>Target: Closure strategies will be developed to fill vacancies for identified high priority skill gaps within specified number of days.</i>						
<i>Target:</i>		New measure in FY 2004			< 60 days of identifying the need	< 60 days of identifying the need
<i>Actual:</i>						

**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

*Information Technology and Information Management*

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 <sup>3</sup>
<b>Output: Availability of key infrastructure services which are provided as part of the agency information technology infrastructure.</b>						
<i>Target:</i>	99.6% availability	99.6% availability	99.6% availability	99.6% availability	99.6% availability	99.6% availability
<i>Actual:</i>	99.6%	99.6%	99.8%	99.6%		
<b>Output: Availability of agency network servers within the agency information technology infrastructure (determined by the percentage of work hours agency network servers available for staff use exceeding scheduled downtime and scheduled outages).</b>						
<i>Target:</i>	99.8% availability	99.8% availability	99.8% availability	99.8% availability	99.8% availability	99.8%
<i>Actual:</i>	99.8%	99.8%	99.8%	99.8%		
<b>Output: Network security (respond to any new network security vulnerability upon discovery).</b>						
<i>Target:</i>	New measure in FY 2002		Respond within 24 hours	Respond within 24 hours	Respond within 24 hours	Respond within 24 hours
<i>Actual:</i>			Target met (216 potential network security vulnerabilities responded to within 24 hours of discovery)	Target met (238 potential network security vulnerabilities responded to within 24 hours of discovery)		
<b>Output: Security and availability of critical email and Web access infrastructure services (restore email and web access to operational status upon discovery of a security incident).<sup>1</sup></b>						
<i>Target:</i>	New measure in FY 2002		Restore access < 1 hour 99.9% of time	Restore access < 4 hours 99.9% of time	Restore access < 4 hours 99.9% of time	Restore access < 4 hours 99.9% of time
<i>Actual:</i>			No security incidents reported	No security incidents reported		
<b>Output: Level of staff satisfaction with information in NRC's primary application systems (on a scale of 1 to 5)<sup>2</sup>.</b>						
<i>Target:</i>	No target, changed to biennial	3.8	Biennial measure	3.8	Biennial measure	3.8
<i>Actual:</i>	N/A	3.7	N/A	Survey delayed to first quarter FY 2004	N/A	



**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 <sup>3</sup>
<i>Output: Respond to requests and resolve problems through the Infrastructure Services and Support Contract in a timely fashion. Applies to desktops, printers, servers, communications equipment, relocations, additions, modifications and restoration of files.</i>						
<i>Target:</i>		New Measure in FY 2003		96% of time on average that contracts are meeting their agreed upon service levels	96% of time on average that contracts are meeting their agreed upon service levels	96% of time on average that contracts are meeting their agreed upon service levels
<i>Actual:</i>				96.4%		
<i>Output: Complete the milestones specific to the ADAMS Assessment Action Plan for Challenge Area 5 for improving access to ADAMS.</i>						
<i>Target:</i>		Install ADAMS Version 3.3; conduct public outreach programs; complete plan for future releases	Complete evaluation of alternative approach to providing Web availability of ADAMS. If evaluation warrants and a decision is made to proceed, implement a prototype of the alternative approach	Evaluate results of alternative approach and feed-in to work on ADAMS	Provide improved Web-based access to ADAMS public library, if needed	None
<i>Actual:</i>		Installed ADAMS 3.3 version; completed public outreach effort with establishment of ADAMS Public Users Group; completed plan for future releases with development of plan for alternative Web-based public user interface	Completed evaluation, acquired software, and developed a prototype system that provides Web-based access to ADAMS publicly-available documents. Systems will be deployed in first quarter FY 2003	Deployed Web-based access to the ADAMS public library in January 2003. Based on positive user feedback and experience, acquired site license and initiated technical work to deploy search and retrieval engine on other ADAMS libraries.	Completed in FY 2003	

**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 <sup>3</sup>
<i>Output: Percent of initial responses to requests for correction of information that meet response time frame established in the final Information Quality Guidelines. Percent of appeal requests for correction of information that meet response time frame established in the final Information Quality Guidelines.</i>						
<i>Target:</i>	New Measure in FY 2003			70% of responses are within the established timeliness guidelines	80% of responses are within the established timeliness guidelines	80% of responses are within the established timeliness guidelines
<i>Actual:</i>	No requests have been received					
<i>Output: Customer satisfaction with FOIA Services.</i>						
<i>Target:</i>	New measure in FY 2003			At least 50% of responses to simple requests are completed within 20 working days. At least 50% of responses to complex requests are completed within 30 working days	At least 50% of all request closed within 20 working days: Median days no greater than 20 working days for simple requests. Median days no greater than 30 working days for complex documents	At least 50% of all request closed within 20 working days: Median days no greater than 20 working days for simple requests. Median days no greater than 30 working days for complex documents
<i>Actual:</i>	Simple - 67% Complex - 50%					
<i>Output: Increase the average security level for all NRC major applications and general support systems in accordance with the Federal IT Security Assessment Framework, as defined by the National Institute of Standards and Technology (NIST) and the CIO Council.</i>						
<i>Target:</i>	New measure in FY 2003			Achieve an average NIST level of 4.0 with all systems at a minimum level of 3	Achieve an average NIST level of 4.0 with all systems at a minimum level of 3	Achieve an average NIST level of 4.0 with all systems at a minimum level of 3
<i>Actual:</i>	Target Achieved					

**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 <sup>3</sup>
<i>Output: All operational NRC major applications and general support systems meet the requirements of Management Directive 12.5, "NRC Automated Information Systems Program," including a system security plan, contingency plan, certification and accreditation.</i>						
<i>Target:</i>		New Measure in FY 2003		90 percent of systems meet Management Directive 12.5 requirements	95 percent of systems meet Management Directive 12.5 requirements	100 percent of systems meet Management Directive 12.5 requirements
<i>Actual:</i>				The NRC has reviewed all major IT systems to ensure that they are operating within 90 percent of the targets for cost, scheduling, and reliability.		
<i>Output: Complete at least one key process improvement per year in select program and support areas that increase efficiency, effectiveness and realism.</i>						
<i>Target:</i>		New Measure in FY 2003		1 key process completed	1 key process completed	1 key process completed
<i>Actual:</i>				A contract has been awarded and a list of tasks has been identified by the contractor and is in the process of prioritization by OCIO management. The first of a series of process improvement studies will begin during the first quarter, FY 2004.		
<i>Output: Ensure that system investments are effective, efficient and realistic.</i>						
<i>Target:</i>		New measure in FY 2003		90% of major systems operate within cost, schedule, and performance targets as defined by their business case	90% of major systems operate within cost, schedule, and performance targets as defined by their business case	90% of major systems operate within cost, schedule, and performance targets as defined by their business case

**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 <sup>3</sup>
<i>Actual:</i>				The NRC verified that all major IT systems are operating within 90 percent of their targets.		
<b><i>Output: Level of customer satisfaction with NRC's public web site.</i></b>						
<i>Target:</i>	New measure in FY 2003			Achieve an overall average of at least 3 on a scale of 1-4 for respondent ratings of key service quality factors in responses to public web site satisfaction survey (average of all ratings across all respondents)	Achieve an overall average of at least 3 on a scale of 1-4 for respondent ratings of key service quality factors in responses to public web site satisfaction survey (average of all ratings across all respondents)	Achieve an overall average of at least 3 on a scale of 1-4 for respondent ratings of key service quality factors in responses to public web site satisfaction survey (average of all ratings across all respondents)
<i>Actual:</i>				Achieved 3.04		

**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 <sup>3</sup>
<b>Output: NRC is addressing all statutory requirements.</b>						
<i>Target:</i>	New measure in FY 2003			For 100% of statutory requirements, the NRC has action plans in place to address requirements	For 100% of statutory requirements, the NRC has action plans in place to address requirements	For 100% of statutory requirements, the NRC has action plans in place to address requirements
<i>Actual:</i>	Actions are underway for all statutory requirements.					
<b>Output: IT security training for all employees appropriate to their individual interaction with and responsibility for IT systems.</b>						
<i>Target:</i>	New measure in FY 2003			100% new employees; 50% existing employees; 50% employees with direct IT responsibility	100% new employees; 50% existing employees; 75% employees with direct IT responsibility	100% new employees; 50% existing employees; 75% employees with direct IT responsibility
<i>Actual:</i>	Target met					
<b>Output: Security, availability, and integrity of NRC major applications and general support systems will ensure no interruption to business functions due to IT system security breaches.</b>						
<i>Target:</i>	New measure in FY 2003			A robust computer security incident response capability is established and maintained, to include the regional offices	A security vulnerability patch testing, dissemination, and tracking capability is maintained for all major applications and general support systems	All major applications and general support systems have updated security accreditation packages
<i>Actual:</i>	Target met					

**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 <sup>3</sup>
<i>Output: Minimize burden on licensees and the public by using open standards to receive transmissions.</i>						
<i>Target:</i>		New measure in FY 2003		30% of agency external transaction processes are made available to the public to be conducted electronically	40% of agency external transaction processes are made available to be conducted electronically	50% of agency external transaction processes are made available to be conducted electronically
<i>Actual:</i>				Target met (59%)		
<i>Output: New IT Technologies demonstrate productivity improvements in business processes through technical assessments.</i>						
<i>Target:</i>		New measure in FY 2004			50% of new technology assessments identify potential productivity gains	50% of new technology assessments identify potential productivity gains
<i>Actual:</i>						

**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

*Financial Management*

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 <sup>3</sup>
<b>Output: Submit and publish the Budget Estimates and Performance Plan and Program Performance Report annually to OMB, Congress, and the President on time.</b>						
<i>Target:</i>	Submit FY 01 Budget Estimates and Performance Plan on time Submit FY 99 Performance Report on time	Submit FY 02 Budget Estimates and Performance Plan on time Submit FY 00 Performance Report 3/31/01	Submit FY 03 Budget Estimates and Performance Plan (Congress) 2/4/02 and FY 04 Budget Estimates and Performance Plan 9/9/02 (OMB) Submit FY 01 Performance Report 2/27/02	Submit FY 04 Budget Estimates and Performance Plan (Congress) 2/3/03 and FY 05 Budget Estimates and Performance Plan 9/8/03 (OMB) Submit FY 02 Performance Report 2/1/03	Submit Final FY 05 Budget Estimates and Performance Plan (Congress) 2/2/04 and Initial FY 06 Budget Estimates and Performance Plan 9/13/04 (OMB) Submit FY 03 Performance and Accountability Report by 2/1/04	Submit FY06 Budget Estimates and Performance Plan (Congress) 2/2/05 and FY 07 Budget Estimates and Performance Plan 9/13/05 (OMB) Submit FY 04 Performance and Accountability Report by 11/15/04
<i>Actual:</i>	Met target	Met target	Met target	2 of 3 targets met*		
<i>*Additional senior management review time was needed for discussions on the FY 2005 Budget Estimates and Performance Plan to OMB. OMB was consulted and agreed on the revised due date of 9/16/03, which was met.</i>						
<b>Output: Submit and publish the triennial Strategic Plan to Congress and OMB on time.</b>						
<i>Target:</i>	Submit and publish FY 00 - FY 05 Strategic Plan 9/29/00*	Not required until FY 03	Not required until FY 03	Submit and publish FY 03 - FY 08 Strategic Plan 9/29/03*	Not required until FY 06	Not required until FY 06
<i>Actual:</i>	Met target	N/A	N/A	Not Met*		
<i>* Date extended until March 31, 2004, due to extensive Agency rewrite and review.</i>						
<b>Output: Collect amounts due NRC.</b>						
<i>Target: Percent Actual collections compared with projected collections. Maintain past due accounts receivable as a percent of annual billings for the fiscal year.</i>						
<i>Target:</i>	100% collections Past due ≤ \$5M	100% collections Past due ≤ 1% of billings	100% collections Past due ≤ 1% of billings	100% collections Past due ≤ 1% of billings	100% collections Past due ≤ 1% of billings	100% collections Past due ≤ 1% of billings
<i>Actual:</i>	100.7% collections Past due \$2M	100.4% collections Past due .5%	99.4% collections Past due .004%	100.7% collections Past due .003%		

**APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

OUTPUT MEASURES						
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 <sup>3</sup>
<b>Output: Fee Rule (Publish proposed and final rules).</b>						
<i>Target:</i>	Proposed Rule 3/00 Final Rule 6/00	Proposed Rule mid-March Final Rule mid-June	Proposed Rule late-March Final Rule mid-June	Proposed Rule late-March Final Rule mid-June	Proposed Rule late-March Final Rule mid-June	Proposed Rule late-March Final Rule mid-June
<i>Actual:</i>	Met target	Met target	Met target	Met target		
<b>Output: Pay bills (Percent of bills paid by EFT and percent payments on time).</b>						
<i>Target:</i>	98% by EFT 94% on time	100% by EFT 87% on time*	100% by EFT 95% on time	100% by EFT 95% on time	100% by EFT 95% on time	100% by EFT 95% on time
<i>Actual:</i>	99% by EFT 96% on time	100% by EFT 95% on time	100% by EFT 87% on time	100% by EFT 94% on time		



## **APPENDIX III: EXPLANATION OF THE FULL COST BUDGET ALLOCATION**

### NOTES

33. The FY 2002 target was developed prior to the implementation of the Infrastructure Service Support Contract (ISSC) contract. Once the ISSC contract was put in place, it was determined that the target of less than one hour would be extremely cost prohibitive and not practical. In order to meet this target, parallel systems would have to be put in place. Therefore, it is proposed that the target be changed to less than 4 hours, which is consistent with the service levels supported by the current ISSC contract.
34. The basic question asks for overall satisfaction with reliability, accuracy, and accessibility of information in selected systems.
35. A public-private competition is one in which the affected Government unit and vendors may submit proposals to perform commercial work previously performed by the Government unit or an assessment of the cost of government performance versus commercial sources through a streamlined cost comparison method. A direct conversion is a competition in which a management judgement is made that it is more cost effective to contract out an activity performed by Government employees (e.g., mail delivery). The requirement then would be competed among private sector contractors only.

## **APPENDIX IV: VERIFICATION AND VALIDATION**

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### **VERIFICATION AND VALIDATION OF NRC MEASURES AND METRICS**

#### **The NRC's data collection procedures**

Most of the data used to measure the NRC's performance against its strategic and performance goals related to maintaining safety are obtained or derived from the NRC's abnormal occurrence (AO) data and reports submitted by licensees. The NRC developed its AO criteria in order to comply with the legislative intent of Section 208 of the Energy Reorganization Act of 1974, as amended. The Act requires the NRC to inform Congress of unscheduled incidents or events that the Commission determines to be significant from the standpoint of public health and safety. Events that meet the AO criteria are included in an annual "Report to Congress on Abnormal Occurrences" (NUREG-0090). In addition, in 1997, the Commission determined that events occurring at Agreement State licensed facilities that meet the AO criteria should be reported in the annual AO report to Congress. Therefore, the AO criteria developed by the NRC are uniformly applied to events that occur at facilities licensed or otherwise regulated by the NRC and the Agreement States.

Data for abnormal occurrences originate from external sources, such as Agreement States and NRC licensees. The NRC believes these data are credible because (1) the information needed from external sources is required to be reported to the NRC by regulations; (2) the NRC maintains an aggressive inspection program that, among other activities, audits licensees and evaluates Agreement State programs to determine whether information is being reported as required by the regulations; and (3) there are agency procedures for reviewing and evaluating licensees. The NRC database systems that support this process include the Sequence Coding and Search System (SCSS), the Accident Sequence Precursor (ASP) Database, the Nuclear Materials Events Database (NMED), and the Radiation Exposure Information Report System.

The NRC has established procedures for the systematic review and evaluation of events reported by NRC licensees and Agreement State licensees. The objective of the review is to identify events that are significant from the standpoint of public health and safety based on criteria that include specific thresholds. The NRC uses a number of sources to determine the reliability and the technical accuracy of event information reported to the NRC. Such sources include (1) the NRC licensee reports, which are carefully analyzed, (2) NRC inspection reports, (3) Agreement State reports, (4) periodic review of Agreement State regulatory programs, (5) NRC consultant/contractor reports, and (6) U.S. Department of Energy Operating Experience Weekly Summaries. In addition, there are daily interactions and exchanges of event information between headquarters and the regional offices, as well as periodic conference calls between headquarters, the regions, and Agreement States to discuss event information. Identified events that meet the AO criteria are validated and verified by all applicable NRC headquarters program offices, regional offices, and agency management before submission to Congress.

## **APPENDIX IV: VERIFICATION AND VALIDATION**

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The Agency Action Review meeting provides another opportunity for NRC's senior management to discuss significant events, licensee performance issues, trends, and the actions NRC needs to take to mitigate recurrences.

Data protection is maintained by the agency's computer security program, which provides administrative, technical, and physical security measures to protect the agency's information, automated information systems, and information technology infrastructure. These measures include special safeguards to protect classified information, unclassified safeguards information, and sensitive unclassified information that are processed, stored, or produced on designated automated information systems.

### **Validation and Verification for Each Strategic and Performance Measure**

The discussion of NRC's data verification and validation for each individual strategic and performance goal measure is divided into two parts. Specifically, Section 1, of this appendix address the safety-related strategic and performance goals and measures for each arena, and Section 2, address all of the non-safety-related performance goals and measures for each arena. The reason for this division is twofold. First, many of the non-safety-related performance goals and measures are the same across the arenas, and combining similar performance goals across the arenas eliminates unnecessary duplication. Second, the non-safety-related performance goals and measures were introduced in the NRC's Strategic Plan for FY 2000–FY 2005 and are less developed than the safety-related performance goals and measures, most of which have been in place for several years and have been refined over time.

## APPENDIX IV: VERIFICATION AND VALIDATION

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### SECTION 1

#### **Safety-related Strategic and Performance Goals**

##### *Nuclear Reactor Safety*

The NRC will conduct an efficient regulatory program to ensure that civilian nuclear power reactors, as well as nonpower reactors, are operating in a manner that adequately protects public health and safety, promotes the common defense and security, protects the environment, and safeguards special nuclear materials used in reactors by working to achieve the following strategic goal:

***Strategic Goal: Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of civilian nuclear reactors.***

##### ***Measures:***

- ***No nuclear reactor accidents.***
- ***No deaths resulting from acute radiation exposure from nuclear reactors.***
- ***No events at nuclear reactors resulting in significant radiation exposures.***
- ***No events that result in releases of radioactive material from nuclear reactors causing an adverse impact on the environment.***

*Verification:* Licensees report any nuclear reactor events at their facilities in licensee event reports (LERs). The NRC then uses its Sequence Coding and Search System to review the LER data. The NRC's abnormal occurrence coordinators then discuss each potential AO during their periodic meetings at headquarters and the regional offices to determine whether it meets the AO reporting criteria. Any nuclear reactor accidents, deaths from acute radiation exposure from nuclear reactors, events at nuclear reactors that result in significant radiation exposure, or events that result in releases of radioactive material from reactors that cause an adverse impact on the environment that meet the criterion for an abnormal event would be identified through LERs. In addition, NRC specialists periodically conduct inspections to assess licensee compliance with reporting criteria as well as radiological and environmental release criteria. If a licensee reports an event involving core damage, NRC inspectors carefully investigate the event to ensure the validity of the information contained in the licensee's report. In addition, a resident inspector on duty at each reactor monitors the facility on a real-time basis. The resident inspector verifies the safe operation of the facility and would be aware of any instances in which core damage has occurred or any instance in which radiation was released from the reactor in excess of reporting limits.

## **APPENDIX IV: VERIFICATION AND VALIDATION**

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The NRC staff prepares abnormal occurrence write-ups and evaluates events using specific criteria to select those events that the staff recommends to the Commission to be considered abnormal occurrences. The NRC's Office of Nuclear Regulatory Research makes the final determination of which events should be recommended to be considered potential abnormal occurrences. NRC Management Directive 8.1 "Abnormal Occurrence Reporting Procedure," provides thorough documentation of the abnormal occurrence reporting process.

*Validation:* No nuclear reactor accidents. Nuclear reactor accidents are those that result in significant core damage and have the potential to endanger public safety or to harm the environment.

No deaths resulting from acute radiation exposure from nuclear reactors. Determining whether or not any deaths result from acute radiation exposure is fundamentally essential to protecting public health and safety. Events of this magnitude are rare. If such an unlikely event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and necessary actions by the licensee and/or the NRC to mitigate the consequences and prevent recurrence. This strategic goal measure is a direct measurement of the occurrence of radiation-related deaths at nuclear reactors.

No events at nuclear reactors resulting in significant radiation exposures. Nuclear power generation produces radiation, which can be harmful if not properly controlled. Measuring the number of *events* resulting in significant radiation exposures, as well as any deaths from radiation exposure, indicates whether radiation-related deaths and illness are being prevented.

No events that result in releases of radioactive material from nuclear reactors causing an adverse impact on the environment. The radiation produced in the process of generating power from nuclear materials can also potentially harm the environment if it is not properly controlled. Releases that have the potential to adversely impact the environment are currently undefined. As a surrogate for this performance measure, the NRC collects data on the frequency with which radiation is released into the environment in excess of specified limits. Appendix A to NUREG-0090, Criterion 1.B.1 defines such releases as those involving "the release of radioactive material to an unrestricted area in concentrations which, if averaged over a period of 24 hours, exceed 5,000 times the values specified in Table 2 of Appendix B to 10 CFR Part 20, unless the licensee has demonstrated compliance with 20.1301 using 20.1302(b)(1) or 20.1302(b)(2)(ii)." The essence of the criterion is that events that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician are used as the measure for events that result in releases of radioactive material causing an adverse impact on the environment. Such events are reported in LERs, which are sent to the NRC as reportable occurrences. This strategic goal measure is a direct measurement of instances in which harmful impacts on the environment occur from nuclear reactors.

- *No radiological sabotages at nuclear reactors.*

## **APPENDIX IV: VERIFICATION AND VALIDATION**

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*Verification:* Licensees are required to call the NRC to report any breaches of security or other event that may potentially lead to sabotage at a nuclear facility within 1 hour of its occurrence. The NRC's safeguard requirements are described in Section 73.71 of 10 CFR Part 73, "Physical Protection of Plants and Materials," and Appendix G to 10 CFR Part 73, "Reportable Safeguards Events." Information Assessment Teams conduct follow-up assessments for any significant events to determine what further actions are needed. The licensee also files a written report within 30 days of the incident to describe the incident and the steps that the licensee took to protect the nuclear facility. This information enables the NRC to adequately assess whether a radiological sabotage has occurred.

*Validation:* The events to be reported are those that endanger nuclear reactor facilities by deliberate acts of sabotage directed against those facilities. Events of this type are extremely rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and/or NRC to mitigate the situation and prevent recurrence. The investigation ensures the validity of the information and assesses the significance of the event.

***Performance Goal: Maintain safety, protection of the environment, and the common defense and security.***

***Measures:***

- ***No more than one event per year identified as a significant precursor of a nuclear accident.***

*Verification:* The Commission has an ASP program to systematically evaluate U.S. nuclear power plant operating experience to identify, document, and rank those operating events that were most significant in terms of the potential for inadequate core cooling and core damage (i.e., precursors). The ASP program evaluation process has five steps. First, the NRC screens operating experience data to identify events and/or conditions that may be potential precursors to a nuclear accident. The data that are evaluated include LERs from an SCSS database; Incident Investigation Team or Augmented Inspection Team reviews; the NRC's daily screening of operational events; and other events identified by NRC staff as candidates. The second step is to conduct an engineering review of these screened events, using specific criteria, to identify those events requiring detailed analyses as candidate precursors. Third, the NRC staff calculates a conditional core damage probability by mapping failures observed during the event to accident sequences in risk models. Fourth, the preliminary potential precursor analyses are provided to the NRC staff and the licensee for independent peer review. Lastly, findings from the analyses are provided to the licensee and the public.

## APPENDIX IV: VERIFICATION AND VALIDATION

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*Validation:* The ASP program identifies significant precursors as those events that have a 1/1000( $10^{-3}$ ) or greater probability of leading to a nuclear reactor accident.

- ***No statistically significant adverse industry trends in safety performance.***

*Verification:* The data for this performance measure are derived from data supplied by all power plant licensees in LERs, and monthly operating reports, as well as performance indicator data submitted for the reactor oversight process (ROP). These data are required by 10 CFR 50.73 and/or plant-specific technical specifications, or are submitted by all plants as part of the ROP. Detailed NRC guidelines and procedures are in place to control each of these reporting processes. The NRC reviews these procedures for appropriateness both periodically and in response to licensee feedback. The NRC also conducts periodic inspections of licensees' processes for collecting and submitting the data to ensure completeness, accuracy, consistency, timeliness, and validity.

All licensees report the data at least quarterly. The NRC staff reviews all of the data and conducts inspections to verify safety-significant information. The NRC also employs a contractor to review the data submitted by licensees, input the data into a database, and compile the data into various indicators. Quality assurance processes for this work have been established and included in the statement of work for the contract. The experience and training of key personnel are controlled through administration of the contract. The contractor identifies discrepancies to both licensees and the NRC for resolution. The NRC reviews the indicators and publishes them on the agency's Web site on a quarterly basis. The agency also incorporates feedback from licensees and the public, where appropriate.

*Validation:* The data and indicators that support reporting against this performance measure provide a broad range of information on nuclear power plant performance. The NRC staff tracks indicators and applies statistical techniques to provide an indication of whether industry performance is improving, steady, or degrading over time. If the staff identifies any adverse trends, the NRC addresses the problem through its processes for addressing generic safety issues and issuing generic communications to licensees. The NRC is developing additional, risk-informed indicators to enhance the current set of indicators. In doing so, the staff considers the costs and benefits of collecting the data through ongoing, extensive interactions with industry regarding the indicators. The Industry Trends Program is reviewed by senior agency managers on an annual basis, and the results are reported to the Commission.

- ***No events resulting in radiation overexposure from nuclear reactors that exceed applicable regulatory limits.***

*Verification:* Licensees report overexposures through the SCSS LER database, maintained at the Oak Ridge National Laboratory, which receives all LERs and codes them into a searchable database. The SCSS database is used to identify those LERs that report overexposures. NRC resident

## **APPENDIX IV: VERIFICATION AND VALIDATION**

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inspectors stationed at each nuclear power plant provide a high degree of assurance that all events meeting reporting criteria are reported to the NRC. In addition, the NRC conducts inspections if there is any indication that an exposure exceeded, or could have exceeded, a regulatory limit. Finally, areas of the facility that may be subject to radiation contamination have monitors that record radiation levels. These monitors would immediately reveal any instances in which high levels of radiation exposure occurred.

*Validation:* Given the nature of the process of using radioactive materials to generate power, overexposure to radiation is a potential danger from the operation of nuclear power plants. Such exposure to radiation in excess of the applicable regulatory limits may potentially occur through either a nuclear accident or other malfunctions at the plant. Consequently, tracking the number of overexposures that occur at nuclear reactors is an important indicator of the degree to which safety is being maintained.

- ***No more than three releases per year to the environment of radioactive material from nuclear reactors that exceed the regulatory limits.***

*Verification:* As with overexposures, licensees report environmental releases of radioactive materials through the SCSS LER database maintained at the Oak Ridge National Laboratory. The SCSS database will be utilized to identify those LERs reporting releases and the number of reported releases is then applied to this measure. The NRC also conducts periodic inspections of licensees to ensure that they properly monitor and control releases to the environment through effluent pathways. In addition, onsite monitors would record any instances in which the plant releases radiation into the environment. If the inspections or the monitors reveal any indication that an accident or inadvertent release has occurred, the NRC conducts follow-up inspections.

*Validation:* The generation of nuclear power creates radioactive materials that can be harmful if not properly controlled. Consequently, the NRC tracks all releases of radioactive materials in excess of regulatory limits as a performance measure because they have the potential to endanger public safety or harm the environment.

- ***No breakdowns of physical security that significantly weaken the protection against radiological sabotage or theft or diversion of special nuclear materials in accordance with abnormal occurrence criteria.***

*Verification:* Licensees are required to report to the NRC, within 1 hour, any known breakdowns of physical security, based on the requirements in Section 73.71 of 10 CFR Part 73, "Physical Protection of Plants and Materials," and Appendix G to Part 73, "Reportable Safeguards Events." If a licensee reports such an event, the Headquarters Operations Officer prepares an official record of the initial event report. The NRC begins responding to such an event immediately upon



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notification, with the activation of its Information Assessment Team. A licensee's initial telephonic notification(s) must be followed within a period of 30 days by a written report submitted to the NRC.

Once each quarter, the NRC staff evaluates all of the reported events based on the criteria contained in 10 CFR 73.71, prepares a summary of the evaluation results is prepared and reports the findings in the NRC office operating plan. The NRC also reports events to the public on an annual basis in the "Safeguards Summary Event Lists," NUREG-0525, 1999, Vol. 3. While all details of the event (sensitive security safeguards information) may not be available to the public, the existence of all events is made public.

*Validation:* The events to be reported are those that threaten nuclear activities by deliberate acts, such as radiological sabotage, directed against reactor facilities. If a licensee reports such an event, the Information Assessment Team evaluates and validates the initial report and determines what further actions may be necessary. Tracking breakdowns of physical security gives an indication of whether the licensee is taking the necessary security precautions to protect the public, given the potential consequences of a nuclear accident attributable to sabotage or the inappropriate use of nuclear material either in this country or abroad.

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### *Nuclear Materials Safety*

The NRC will conduct an efficient regulatory program that allows the Nation to use nuclear materials for civilian purposes in a safe manner to protect public health and safety and the environment by working to achieve the following strategic goal:

***Strategic Goal: Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of source, byproduct, and special nuclear material.***

#### ***Measures:***

- ***No deaths resulting from acute radiation exposures from civilian uses of source, byproduct, or special nuclear materials, or deaths from other hazardous materials used or produced from licensed material.***

*Verification:* Determining whether or not a death resulted from acute radiation exposure is fundamentally essential to protecting the public health and safety. In the event that a death should occur, it would be reported to the NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. These events are summarized in event notifications and preliminary notifications, which are used to widely disseminate the information to the appropriate managers and staff. For activities related to the Nuclear Materials Safety arena, the NMED is an essential system used to collect information on such events. The fuel cycle and materials inspection programs are key elements in verifying the completeness and accuracy of licensee reports. The Integrated Materials Performance Evaluation Program (IMPEP) also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

The NRC has taken a number of steps to improve the timeliness and completeness of materials event data. These steps include assessment of the NMED data during periodic reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and Agreement States, and discussions at all meetings of Agreement States and the Conference of Radiation Control Program Directors (CRCPD).

*Validation:* Determining whether or not death resulted from acute radiation exposure is valid and fundamentally essential to protecting public health and safety. Events of this magnitude are not expected. In the unlikely event that a death should occur, the decision on whether or not to ascribe the cause of a death to conditions related to acute radiation exposures, or other hazardous materials (for fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material consistent with 10 CFR Part 70), is made by the NRC or Agreement State technical specialist, or our consultants.

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If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and the NRC to mitigate the situation and prevent recurrence.

- ***No more than six events per year resulting in significant radiation or hazardous material exposures from the loss or use of source, byproduct, and special nuclear materials.***

*Verification:* Should an event meeting this threshold occur, it would be reported to the NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. Event notifications and preliminary notifications are used to communicate this information internally. For activities related to the Nuclear Materials Safety arena, the NMED is an essential system used to collect information on such events.

Events of this magnitude are infrequent. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions needed by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic meetings where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

The fuel cycle and materials inspection programs are key elements in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

NRC has taken a number of steps to improve the timeliness and completeness of materials event data. These steps include assessment of the NMED data during periodic staff reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and CRCPD meetings.

*Validation:* Significant exposures are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician, as agreed upon by NRC or Agreement State technical specialists, or our consultants. Hazardous material exposures only apply to fuel cycle activities in the Nuclear Materials Safety arena. For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material consistent with 10 CFR Part 70. Any event resulting in unintended permanent functional damage to an organ or physiological system compromises public health and safety. Events of this magnitude are infrequent. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions needed by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic meetings, where staff and management validates the occurrence of these events.

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- ***No events resulting in releases of radioactive material resulting from civilian uses of source, byproduct, or special nuclear materials that cause an adverse impact on the environment.***

*Verification:* Should an event meeting this threshold occur, it would be reported to the NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. Event notifications and preliminary notifications are used to communicate this information internally. For activities related to the Nuclear Materials Safety arena, the NMED is an essential system used to collect information on such events.

Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic meetings, where staff and management validate the occurrence of these events.

The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

The NRC has also taken a number of steps to improve the timeliness and completeness of materials event data. These steps include assessment of the NMED data during periodic staff reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and CRCPD meetings.

*Validation:* Releases that have the potential to cause “adverse impact” are currently undefined. As a surrogate, we will include those that exceed the limits for reporting AOs as given in AO criteria 1.B.1. The events reported under this measure are those that threaten the environment. Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic meetings, where staff and management validate the occurrence of these events.

- ***No losses, thefts, or diversion of formula quantities of strategic special nuclear material; radiological sabotages; or unauthorized enrichment of special nuclear material regulated by the NRC.***

*Verification:* Licensees are required to report events that involve losses, thefts, or diversions of formula quantities of strategic special nuclear material; radiological sabotage; or unauthorized enrichment of special nuclear material regulated by the NRC to the NRC Headquarters Operations

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Center within 1 hour of their occurrence. The licensee is also required to submit to the NRC a follow-up written report within 30 days of the event. Such reports must include sufficient information for NRC analysis and evaluation. Events are entered and tracked in the NMED.

The NRC initiates independent investigations that verify the reliability of reported information. NRC investigation teams evaluate the validity of materials event data, in order to assure that licensees are reporting and collecting the proper event data. Any failures of appropriate licensee reporting would be discovered through the routine inspection program. The NRC also holds periodic meetings to validate previously screened events.

*Validation:* Events collected under this performance measure are actual losses, thefts, diversions of formula quantities of strategic special nuclear material; actual radiological sabotage; or unauthorized enrichment of special nuclear material. Such events could compromise public health and safety, the environment, and the common defense and security. Events of this magnitude are not expected and would be rare. This measure does not apply to attempts to steal, divert, or enrich special nuclear material without authorization. Attempts to steal, divert, or inappropriately enrich special nuclear material are covered by a parallel measure at the performance goal level. The information reported under 10 CFR Parts 73 and 74 is required so that the NRC is aware of events that could endanger public health and safety or national security. Any strategic-plan-level failures would result in immediate investigation and follow-up.

- ***No unauthorized disclosures or compromises of classified information causing damage to national security.***

*Verification:* Any alleged or suspected violations of the Atomic Energy Act, Espionage Act, or other Federal statutes related to classified information is reported to the NRC under the requirements of 10 CFR 95.57. However, for performance reporting, the NRC only counts those disclosures or compromises that actually cause damage to national security. Such events are reported to the cognizant security agency (i.e., the security agency with jurisdiction) and the regional administrator of the appropriate NRC regional office, as listed in Appendix A to 10 CFR Part 73. The regional administrator then contacts the Division of Facilities and Security at NRC headquarters, which assesses the violation and notifies other offices of the NRC as well as other Government agencies, as appropriate. A determination is then made as to whether the compromise caused damage to national security. Any unauthorized disclosures or compromises of classified information causing damage to national security would result in immediate investigation and follow-up by the NRC.

*Validation:* Events collected under this performance measure are unauthorized disclosures of classified information causing damage to national security. Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation, including consequences, root causes, and necessary actions by the licensees and the NRC to mitigate the consequences and prevent recurrence. NRC investigation teams also validate

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the materials event data in order to ensure that licensees are reporting and collecting the proper event data.

***Performance Goal: Maintain safety, protection of the environment, and the common defense and security.***

***Measures:***

- ***No more than 300 losses of control of licensed material per year.***

*Verification:* Events meeting this threshold would be reported to NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. Event notifications and preliminary notifications are used to communicate this information internally. For activities of the Office of Nuclear Material Safety and Safeguards (NMSS), the NMED is an essential system used to collect information concerning such events.

The Materials Inspection program is a key element in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

The NRC has also taken a number of steps to improve the timeliness and completeness of materials event data. These steps include assessment of the NMED data during periodic staff reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and CRCPD meetings.

The NRC holds periodic meetings where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

*Validation:* This measure tracks reportable incidents of material entering the public domain in an uncontrolled manner. Nuclear material outside the control of the licensee has the potential to compromise public health and safety, and/or the environment, and also has potential safeguards consequences. Many of the events counted here do not, on an individual basis, have a public health and safety impact. For example, most losses of control of licensed material involve shielded material, which is unlikely to result in overexposure or releases to the environment. However, such losses are included because they may indicate licensee program weaknesses, which, if ignored, could later trigger a more significant problem.

The NRC holds periodic meetings where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

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- ***No occurrences of accidental criticality.***

*Verification:* Inadvertent criticality accidents are required to be reported, regardless of whether they result in exposures or injuries to workers or the public, and regardless of whether they result in adverse impacts to the environment. Licensees immediately report criticality events to the NRC Headquarters Operations Center by telephone through the cognizant licensee safety officer. Follow-up written reports are required to be submitted to the NRC within 30 days of the initial report. Such reports must contain specific information concerning the event, as specified by 10 CFR 70.50(c)(2) and 10 CFR 76.120(d)(2). The NRC dispatches an Augmented Inspection Team to confirm the reliability of the data. The event is also tracked by the NMED. An event of this nature is immediately investigated and followed-up by the NRC.

*Validation:* Events collected under this performance measure are actual occurrences of accidental criticality. Such events could compromise public health and safety, the environment, and the common defense and security. Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation, including consequences, root causes, and necessary actions by the licensee and the NRC to mitigate the consequences and prevent recurrence.

- ***No more than 30 events per year resulting in radiation over exposure from radioactive material that exceed applicable regulatory limits.***

*Verification:* Events meeting this threshold would be reported to NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. Event notifications and preliminary notifications are used to communicate this information internally. For NMSS activities, the NMED is an essential system used to collect information of such events.

The fuel cycle and materials inspection programs are key elements in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

The NRC has also taken a number of steps to improve the timeliness and completeness of materials event data. These steps include assessment of the NMED data during periodic reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and CRCPD meetings.

The NRC holds periodic meetings where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

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*Validation:* Overexposures are those exposures that exceed the dose limits specified in 10 CFR 20.2202(a)(2). Multiple people may be affected by a single causal event. For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material, consistent with 10 CFR Part 70. Reportable chemical exposures are those that exceed license commitments, including chemical exposures involving uranium recover activities under the Uranium Mill Tailings Radiation Control Act. Radiation overexposures and reportable chemical exposures collected under this measure may be indicative of licensee programmatic weaknesses that could ultimately compromise public health and safety.

The NRC holds periodic meetings where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

- ***No more than 45 medical events per year.***

*Verification:* Events meeting this threshold would be reported to NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. Event notifications and preliminary notifications are used to communicate this information internally. For NMSS activities, the NMED is an essential system used to collect information of such events. The Materials Inspection program is a key element in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

The NRC has also taken a number of steps to improve the timeliness and completeness of materials event data. These steps include assessment of the NMED data during periodic staff reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and CRCPD meetings.

The NRC holds periodic meetings where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

*Validation:* Medical events reported under 10 CFR Part 35.3045 are counted under this performance measure. Multiple people may be affected by a single causal event. Medical events can potentially be significant from a health and safety standpoint. The NRC holds periodic meetings, where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

- ***No more than 5 releases per year to the environment of radioactive material from operating facilities that exceed the regulatory limits.***



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*Verification:* Events meeting this threshold would be reported to the NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. Event notifications and preliminary notifications are often used to communicate this information internally. For NMSS activities, the NMED is an essential system used to collect information of such events.

The materials inspection program is a key element in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

The NRC has also taken a number of steps to improve the timeliness and completeness of materials event data. These steps include assessment of the NMED data during periodic staff reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and CRCPD meetings.

The NRC holds periodic meetings where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

*Validation:* Releases under the 30-day reporting requirement under 10 CFR 20.2203(a)(3)(ii) are counted under this performance measure. Releases are tracked in order to ensure protection of the environment. The NRC holds periodic meetings where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

- ***No nonradiological events that occur during the NRC-regulated operations that cause impacts on the environment that cannot be mitigated within applicable regulatory limits, using reasonably available methods.***

*Verification:* Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, although other sources may also report events. Morning Reports are used to communicate this information internally, and the reports are entered into the NMED for tracking and evaluation purposes. Any failure to meet this performance target would result in immediate follow-up by the NRC. Failures to meet performance targets in Agreement States would require follow-up actions coordinated through the NRC's Office of State and Tribal Programs. Releases that cause impacts to the environment that cannot be mitigated within applicable regulatory limits using reasonably available methods are not readily defined. The expert judgement of NRC personnel and that of other agencies, such as the EPA, is relied upon to make such determinations.

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*Validation:* This measure only involves chemical releases from NRC-regulated activities under the Uranium Mill Tailings Radiation Control Act. As such, this measure is limited to nonradiological environmental impacts from operations, including remediation. Note that this measure does not apply to decommissioning of sites under the Nuclear Waste Safety arena. Events reported under this measure are those that could lead to a nonradiological impact on the environment that could not be mitigated within applicable regulatory limits, using reasonably available methods. Examples of events include chemical releases resulting from excursions at in situ leach facilities or releases from mill tailings piles that could contaminate the groundwater. Events of this magnitude would be rare. If such an event were to occur, it would result in prompt and thorough investigation.

- ***No more than five substantiated cases per year of attempted malevolent use of source, byproduct, or special nuclear material.***

*Verification:* Malevolent use is defined as the deliberate misuse of radioactive material with the intent to cause physical or psychological harm to a person or persons, or to cause physical damage to a facility or to the environment. The NRC evaluates intentional violations and deliberate acts against this definition, including events involving NRC or Agreement State licensees. Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, although reports may also be received from other sources (e.g., allegations could be another source for such reports). Event notifications and preliminary notifications are used to communicate this information internally and the reports are entered into the NMED for tracking and evaluation purposes. The NRC responds to either a licensee report or an allegation by initiating an independent investigation. The NRC holds periodic meetings, where management and staff validate previously screened events.

*Validation:* Events collected under this performance measure are substantiated cases of attempted malevolent use of source, byproduct, or special nuclear material. Such events could compromise public health and safety, the environment, and the common defense and security.

- ***No breakdowns of physical protection, material control, or accounting systems resulting in a vulnerability to radiological sabotage, theft, diversion, or unauthorized enrichment of special nuclear material.***

*Verification:* Events associated with this measure must be recorded within 24 hours of the identified event in a safeguards log maintained by the licensee. The log must be retained as a record for 3 years after the last entry is made or until termination of the license. The NRC relies on its safeguards inspection program to ensure the reliability of recorded data. A determination of whether a substantiated breakdown has resulted in a vulnerability to radiological sabotage, theft, diversion, or unauthorized enrichment of special nuclear material is made by the NRC. When making substantiated breakdown determinations, the NRC evaluates the materials event data, in order to ensure that licensees are reporting and collecting the proper event data.

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*Validation:* Events collected under this performance measure may indicate a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials. Such events could compromise public health and safety, the environment, and the common defense and security. The NRC relies on its safeguards inspection program to help validate the reliability of recorded data and determine whether a breakdown of a physical protection, material control, or accounting system has, in actuality, resulted in a vulnerability.

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### *Nuclear Waste Safety*

The NRC will conduct an efficient regulatory program to ensure the safe transport, storage, and disposal of radioactive waste that adequately protects public health and safety, and promotes the common defense and security by working to achieve the following strategic goal:

***Strategic Goal: Prevent significant adverse impacts from radioactive waste to the current and future public health and safety and the environment, and promote the common defense and security.***

#### ***Measures:***

- ***No deaths resulting from acute radiation exposure from radioactive waste.***

*Verification:* Determining whether or not a death resulted from acute radiation exposure is fundamentally essential to protecting the public health and safety. In the event that a death should occur, it would be reported to the NRC and/or Agreement States primarily through required licensee notifications, although reports could also be received from other sources. These events are summarized in event notifications and preliminary notifications, which are used to widely disseminate the information to the appropriate managers and staff. The reports are also entered into the NMED for tracking and evaluation purposes.

Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and NRC to mitigate the situation and prevent recurrence.

The Integrated Materials Performance Evaluation Program (IMPEP) also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

*Validation:* Determining whether or not deaths resulted from acute radiation exposures is valid and fundamentally essential to protecting public health and safety. The decision on whether or not to ascribe the cause of a death to conditions related to acute radiation exposures will be made by NRC or Agreement State technical specialists, or our consultants.

If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and the NRC to mitigate the situation and prevent recurrence.

- ***No events resulting in significant radiation exposure from radioactive waste.***

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*Verification:* Should an event meeting this threshold occur, it would be reported to the NRC and/or Agreement States primarily through required licensee notifications, although reports may also be received from other sources. Event notifications and preliminary notifications are used to communicate this information internally. The reports are also entered into the NMED for tracking and evaluation purposes. The IMPEP provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and the NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic meetings, where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

*Validation:* Significant exposures and defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician, as agreed upon by NRC or Agreement State technical specialists, or our consultants. Any event resulting in an unintended permanent functional damage to an organ or physiological system compromises public health and safety. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and the NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic meetings, where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

- ***No releases of radioactive waste causing an adverse impact on the environment.***

*Verification:* Events meeting this threshold would be reported to the NRC and/or Agreement States primarily through required licensee notifications, although reports may also be received from other sources. Event notifications and preliminary notifications are used to communicate this information internally. The reports are also entered into the NMED for tracking and evaluation purposes.

Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic meetings, where staff and management

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review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

The IMPEP provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

*Validation:* Releases that have the potential to cause “adverse impact” on the environment are currently undefiled. As a surrogate, we will use those that exceed the limits for reporting abnormal occurrences as given in Abnormal Occurrence criteria 1.B.1. The events reported under this measure are those that threaten the environment. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic meetings, where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

- ***No losses, thefts, diversions, or radiological sabotages of special nuclear material or radioactive waste.***

*Verification:* Licensees report events that entail losses, thefts, diversions, or radiological sabotages of special nuclear material or radioactive waste within 1 hour of their occurrence to the NRC Headquarters Operations Center. Licensees are also required to submit to the NRC a follow-up written report within 30 days of the event. Such reports must include sufficient information for NRC analysis and evaluation. The NRC also initiates an independent investigation of the reported event, and events are entered and tracked by the NMED. Any strategic plan failure results in immediate investigation and follow-up, and is tracked in the Safeguards Summary Event List Database.

Any lack of appropriate licensee reporting would be discovered through the routine inspection program. The NRC also holds periodic meetings, where staff and management validate previously screened events.

*Validation:* This measure only applies to *actual* losses, thefts, diversions, or *actual* radiological sabotage. *Attempts* to steal, divert, or conduct sabotage using special nuclear material or radioactive waste is covered by a parallel measure at the performance goal level. Such events could compromise public health and safety, the environment, and the common defense and security.

***Performance Goal: Maintain safety, protection of the environment, and the common defense and security.***

***Measures:***

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- ***No events resulting in radiation overexposure from radioactive waste that exceed applicable regulatory limits.***

*Verification:* Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, although reports may also be received from other sources. Event notifications and preliminary notifications are used to communicate this information internally. The reports are entered into the NMED for tracking and evaluation purposes.

The NRC holds periodic meetings where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrences of these events.

The IMPEP provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

*Validation:* Overexposures are those exposures that exceed the dose limits provided by 10 CFR 20.2203(a)(2). Radiation overexposures collected under this measure may be indicative of programmatic weaknesses that could ultimately compromise public health and safety. The NRC also holds periodic meetings, where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

- ***No breakdowns of physical protection resulting in a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste.***

*Verification:* Breakdowns of physical protection resulting in a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste are recorded within 24 hours in a safeguards log maintained by the licensee. The log must be retained as a record for 3 years after the last entry is made or until termination of the license. No explicit reporting requirements exist for substantiated breakdowns of physical protection. The NRC relies on its safeguards inspection program to ensure the reliability of recorded data. The NRC uses the inspection program information to determine whether a breakdown of physical protection has occurred. The NRC evaluates the event data when making a determination whether a breakdown of physical protection has occurred in order to ensure that licensees are reporting and collecting the proper event data.

*Validation:* Events collected under this performance measure may indicate a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste. Such events could compromise public health and safety, the environment, and the common defense and security. The NRC relies on its safeguards inspection program to help validate the reliability of recorded data and determine whether a breakdown of a physical protection or material control and accounting system has, in actuality, resulted in a vulnerability.

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- ***No radiological releases to the environment from operational activities that exceed the regulatory limits.***

*Verification:* Events meeting this threshold would be reported to the NRC and/or Agreement States primarily through required licensee notifications, although reports may also be received from other sources. Event notifications and preliminary notifications are used to communicate this information internally. The reports are entered into the NMED for tracking and evaluation purposes.

The NRC holds periodic meetings where staff and management review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

*Validation:* Radiological releases subject to the 30-day reporting requirement under 10 CFR 20.2203(a)(3) are counted under this performance measure. Releases are tracked in order to ensure protection of the environment. The NRC also holds periodic meetings, where staff and management Review events that appear to meet this performance measure. At these reviews, staff and management validate the occurrence of these events.

- ***No instances where radioactive waste and materials under the NRC's regulatory jurisdiction cannot be handled, transported, stored, or disposed of safely now or in the future.***

*Verification:* Reporting of events under the NRC's existing regulations is the primary method for determining whether this performance measure has been met. The activities of handling, storage, transportation, and disposal are subject to NRC regulations and licensing. Reported events are entered into NMED and available for examination to determine whether there have been any instances where waste was not handled safely. In coordination with the Department of Transportation, the NRC monitors reports and events that could affect the safe transportation of materials and wastes.

For the disposal of waste, additional verification and validation for future performance is required, since releases of radioactive materials in the future could occur for a facility with a terminated license (i.e., there would be no licensee to file reports to the NRC or an Agreement State for reportable events). At the present time, all of the operating commercial low-level radioactive waste disposal sites in the United States are licensed by Agreement States (i.e., Utah, South Carolina, and Washington). The NRC's IMPEP reviews ensure that the States have adequate and compatible programs for disposal of radioactive wastes, including (and especially) their ability to ensure that



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waste will be safely isolated in the future. NRC and Agreement State regulations address future performance of disposal facilities, and the NRC has published guidance on how to assess such performance. In a few cases, the NRC specifically authorizes other disposals in, for example, conventional landfills or hazardous waste facilities, in accordance with agency regulations.

*Validation:* Events collected under this performance measure are actual occurrences of releases in excess of regulatory limits for reportable events, for the licensed activities of handling, storage, transportation, and disposal. Such events could compromise public health and safety, the environment, and the common defense and security. Events of this magnitude are not anticipated. If such an event were to occur, it would result in prompt and thorough investigation, including consequences, root causes, and necessary actions by the licensee and NRC to mitigate the consequences and prevent recurrence. For the disposal of radioactive material, involving future performance of a facility that is no longer under an NRC or Agreement State license, ensuring that the NRC and Agreement States have used appropriate licensing procedures, during present day licensing oversight, will adequately protect public health and safety and the environment in the future.

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### *International Nuclear Safety Support*

The NRC will conduct activities that encompass international nuclear policy formulation, export-import licensing for nuclear materials and equipment, treaty implementation, nuclear proliferation deterrence, international safety and security assistance, and safeguards support and assistance by working to achieve the following strategic goal:

***Strategic Goal: Support U.S. interests in the safe and secure use of nuclear materials and in nuclear nonproliferation.***

#### ***Measures:***

- ***Fulfills 100 percent of the significant obligations over which the NRC has regulatory authority arising from statutes, treaties, conventions, and Agreements for Cooperation.***

*Verification:* At the beginning of the fiscal year, the NRC prepares a list of its significant obligations. This list is coordinated with the NRC International Council (IC) and forwarded to the Commission for review and comment. The NRC monitors activities it undertakes during the year in regard to these obligations. A year-end status report is forwarded to the Department of State (DOS) Office of Nuclear Energy Affairs for its information and as a means of external confirmation.

*Validation:* The obligations to be tracked are those that, if unfulfilled, could undermine U.S. interests in the safe and secure use of nuclear materials and in nuclear nonproliferation. The circumstances surrounding any such failures of the NRC, as well as their implications and recovery plans, are reported to the Commission and separately described in reports to DOS or the International Atomic Energy Agency (IAEA), confirming their national and international significance.

**The following representative examples illustrate significant obligations over which the NRC has regulatory authority arising from statutes, treaties, conventions, and Agreements for Cooperation.**

Nuclear Non-Proliferation Treaty [1969] and the U.S. Nuclear Non-Proliferation Act [1978]. NRC is obliged to carry out procedures to facilitate the timely processing of requests for export licenses in order to enhance the reliability of the United States in meeting its commitments to supply nuclear reactors and fuel to countries that adhere to effective nonproliferation policies. The NRC is also obliged to provide timely views to the Executive Branch when consulted regarding proposed Agreements for Cooperation in the Peaceful Uses of Nuclear Energy, as well as subsequent arrangements and transfers of nuclear technology.

Convention on Early Notification of a Nuclear Accident [1986]. The U.S. Government is obliged to report to the IAEA and affected countries any U.S. nuclear accidents that have the potential for

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international transboundary release of radioactive material that could be of safety significance to another country. In that context, the NRC must report such accidents within its purview to Executive Branch contacts, following established U.S. Government procedures.

Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency [1987]. The U.S. Government is obliged to cooperate in order to facilitate prompt assistance and support in the event of nuclear accidents or radiological emergencies. The U.S. Government is also required to notify the IAEA of its available experts, equipment, and other materials for providing assistance and deciding whether it can render requested assistance and on what terms. In that context, the NRC must advise Executive Branch contacts of its assistance capabilities, following established U.S. Government procedures.

Convention on the Physical Protection of Nuclear Material [1987]. The NRC is obliged to require U.S. licensees to meet mandatory criteria for the physical protection of nuclear material during international transport.

Convention on Nuclear Safety (CNS) [1996]. The NRC is obliged to take regulatory and administrative measures to implement obligations under the CNS as they apply to NRC-licensed nuclear facilities, including provisions for reporting, existing nuclear installations, legislative and regulatory framework, regulatory body, responsibility of the license holder, priority to safety, financial and human resources, human factors, quality assurance, assessment and verification of safety, and radiation. Significant obligations of the CNS which may require NRC actions beyond those inherent in our domestic regulatory program, are in the areas of reporting, emergency preparedness and siting, as follows.

- Reporting: The NRC has the lead responsibility within the U.S. Government to prepare, prior to each meeting of the Parties, a report on the measures taken to implement each of the obligations of the Convention.
- Emergency Response: The NRC must ensure that the competent authorities of Canada and Mexico are provided with appropriate information for emergency planning and response for any licensed nuclear facilities in their vicinities.
- Siting: The NRC must ensure that appropriate procedures are established and implemented for consulting the competent authorities of other Parties to the Convention in the vicinity of a proposed nuclear installation, insofar as they are likely to be affected by that installation and, upon request, providing the necessary information in order to enable them to evaluate and make their own assessment of the likely safety impact on their own territory of the nuclear installation.

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The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management [Opened for Signature, 1997]. The Convention was ratified by the United States in July 2003, obligating the NRC to implement its provisions. These obligations are comparable to those described above for the CNS, with the exception that the NRC would support, rather than lead, preparation of the U.S. reports.

- ***No significant proliferation incidents attributable to some failure of the NRC.***

*Verification:* The NRC monitors State Department and Central Intelligence Agency reports, as well as newspapers, nuclear journals, and other open sources of information, for reports of significant proliferation incidents. Such incidents would include: the detonation of a nuclear explosive device by any country other than the United States, United Kingdom, Russia, France, or China; refusal by any non-nuclear weapon state with which the United States has an Agreement for Cooperation to accept IAEA safeguards on all its nuclear activities; refusal by any such country to give specific assurances that it will not manufacture or otherwise acquire any nuclear explosive device; engagement of any such country in activities involving source or special nuclear material and having direct significance for the manufacture or acquisition of nuclear explosive devices; or the theft or diversion from authorized peaceful use by any country, sub-national group or individual of 1 kilogram or more of U.S.-supplied or obligated highly enriched uranium or plutonium-239.

The NRC prepares an analysis of any reported significant incidents to determine whether some failure of the NRC contributed to its occurrence. This information is reported to the IC and, as appropriate, to the Commission.

*Validation:* The proliferation incidents of interest are those of such significance that they would be reported to the Congress by DOS. The NRC would necessarily consider whether the incident was abetted by some action or inaction on its part. If so, the incident would represent an NRC performance failure.

- ***No significant safety or safeguards events that result from the NRC's failure to implement its international commitments.***

*Verification:* Significant safety events are those events that are rated 2 or above on the International Nuclear Events Scale (INES). Significant safeguards or security events are those events that are judged by the IAEA Director General and staff to require notification to the IAEA Board of Governors. The NRC monitors INES reports and IAEA Board of Governors documents to identify any and all significant events during the fiscal year.

The NRC staff specialists prepare a quick-look analysis of each significant event to determine whether some failure of the NRC may have materially contributed to its occurrence. This information is promptly reported to the IC and, as appropriate, to the Commission.

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*Validation:* Significant safety and safeguards events usually raise questions from Congressional oversight committees and the trade press, if not the major news media. The NRC would necessarily consider whether the incident was abetted by some action or inaction on its part. If so, the incident would represent an NRC performance failure.

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### SECTION 2

#### Nonsafety-related Strategic and Performance Goals

*Unless specifically noted, the Verification and Validation for the Nonsafety measures apply equally to the Nuclear Reactor Safety, Nuclear Materials Safety, and Nuclear Waste Safety arenas.*

**Performance Goal: Increase public confidence.**

- ***Complete the milestones in the annual performance plan relating to collecting, analyzing, and trending information for measuring public confidence.***

*Verification:* On September 5, 2000, Dr. William D. Travers, the NRC's Executive Director for Operations, issued a memorandum regarding the use of a public meeting feedback form to assess the effectiveness of the agency's communications plans (CPs) and interactions with the public. This memorandum directed the NRC staff to begin using the form on October 1, 2000, for an 18-month pilot. The memorandum further directed the staff to introduce and distribute the feedback form to attendees at the start of public meetings where the NRC is the main presenter, and at select meetings between the NRC and a licensee, where the public attends as observers but does not participate (e.g., enforcement conferences). Meeting attendees can submit the completed forms at the end of the meeting or mail the forms to the designated NRC meeting contact following the meeting.

Following each public meeting, the meeting contact collects and reviews the completed forms. Improvements resulting from feedback comments will be tracked in the office operating plan and communications plan for future meetings. Additionally, the completed feedback forms, along with any prepared meeting summary and staff comments or observations, are forwarded to the Office of the Deputy Executive Director for Management Services. That office performs a semiannual evaluation of the forwarded information in an effort to identify any generic areas for improving NRC staff communications at public meetings.

*Validation:* The feedback form is a qualitative method for collecting the information that will be analyzed as a measure of public confidence. This information provides the NRC with a mechanism to identify any generic areas for improving NRC staff communications at public meetings.

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- ***Complete all of the public outreaches as scheduled in the annual performance plan.***

*Verification:* Conducting public outreach meetings is a method for providing the public with opportunities for meaningful participation in NRC activities. These meetings are conducted in with the May 28, 2002, policy statement on enhancing public participation in NRC meetings. The need for public outreach and the method by which it is conducted is identified in individual communication plans.

*Validation:* Notification of the agency's intent to conduct a public outreach meeting is published in the Federal Register and a press release issued. Within 30 days of conducting the meeting, a meeting summary is written and made publicly available.

- ***Issue Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206 within an average of 120 days.***

*Verification:* 10 CFR 2.206 give individuals an opportunity to file a request to institute a proceeding to modify, suspend, or revoke a license, or for any other action that may be proper. NRC Management Directive (MD) 8.11 provides the procedures for handling and resolving such petitions filed under 10 CFR 2.206. This measure tracks the staff's timeliness in reaching proposed Director's Decisions to address such petitions.

The metric begins with the date the acknowledgment letter is sent to the petitioner (following the Petition Review Board) and ends on the date the proposed Director's Decision is sent out for comment. This information is reported to the EDO. Supplements to the petition that require extension of the schedule will reset the beginning of the metric to the date of issuance of a new acknowledgment letter. Petition Review Boards will determine whether such submissions meet the conditions of a 10 CFR 2.206 petition, as outlined in MD 8.11.

*Validation:* Timely assessment, review, and agency response to a proposed 10 CFR 2.206 petition is important to the agency's ability to maintain public confidence. The criteria established by MD 8.11 ensure that proposed petitions are appropriately assessed, provided with the appropriate management oversight, and reviewed and responded to in a timely manner.

***Performance Goal: Make NRC activities and decisions more effective, efficient, and realistic.***

- ***Complete those specific milestones in the Risk-Informed Regulation Implementation Plan (RIRIP) identified for completion in the annual performance plan.***

*Verification:* In developing the RIRIP, milestones to be included in the performance plan will be identified by arena. The NRC's Office of Nuclear Regulatory Research will coordinate semiannual updates of the RIRIP, which will document the status of these milestones.

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*Validation:* The RIRIP replaces the Probabilistic Risk Assessment Implementation Plan. It is to be a comprehensive report on the agency's risk-informed plans and activities, organized by arena.

- ***Complete at least two key process improvements per year in selected program and support areas that increase efficiency, effectiveness, and realism.***

### *Verification and Validation for the Nuclear Reactor Safety Arena*

*Verification:* Annually, as part of the planning phase of the planning, budgeting, and performance management (PBPM) cycle, the Office of Nuclear Reactor Regulation (NRR) Leadership Team (LT) evaluates their activities to determine whether any processes might be conducted more efficiently or effectively and, thus, merit a process improvement initiative. The LT prioritizes the candidate activities based on their potential contribution to achieving greater efficiency and/or effectiveness. Resources to accomplish the identified process improvement initiative, as well as any anticipated resource savings, are considered during the PBPM planning and budgeting phases. The LT identifies the proposed process improvements to the NRR Executive Team (ET) as part of its budget recommendation.

Progress of the process improvement initiative is tracked throughout the year in monthly leadership-level reports and quarterly arena-based executive-level reports. Upon completion of all of the milestones, a brief report will be developed describing the results.

*Validation:* In most cases, the process improvement is considered complete at the time a report is issued. Process improvements are a fundamental method to make NRC activities more efficient, effective, and realistic.

### *Verification and Validation for the Nuclear Materials Safety and Nuclear Waste Safety Arenas*

*Verification:* Annually, as part of the budget development cycle, each NMSS Division evaluates its activities to determine whether any areas might be conducted more efficiently or effectively and, thus, merit a process review. In doing so, each NMSS Division prioritizes the candidate efforts based on their potential contribution to achieving greater efficiency and/or effectiveness in the conduct of NMSS activities. Resources estimates to accomplish the effort(s) are considered during the planning and budgeting process.

In developing their operating plans for the upcoming fiscal year, each NMSS organization identifies the process improvement efforts planned for that year, including the intermediate milestones that have been established as being necessary to complete the effort. Nonetheless, "fact-of-life changes" in NMSS programs may dictate that newly identified process improvements should be given higher priority than those planned during the planning and budget cycle for a given fiscal year, and may replace those previously planned. An unanticipated need for a process improvement review may also



## **APPENDIX IV: VERIFICATION AND VALIDATION**

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be identified during the operating year. In such cases, the prioritization scheme developed in connection with the PBPM process is used to make workload decisions. The NMSS Office Director reviews the proposed process improvements as part of his review of the baseline operating plans for the new fiscal year and as unanticipated reviews are identified outside of the planning, budget, and operating plan development phases, and uses the PBPM prioritization as a guide for decision making.

The progress of the process improvement reviews is tracked in the operating plans. A general description of the process improvement is included in the arena-based leadership-level operating plan, and a more detailed description of the milestones leading to completion of the effort is contained in the operational-level operating plans. These operating plans are updated to reflect the current status at the end of each quarter of the fiscal year. The updated operating plans are presented to the NMSS Office Director and/or Deputy Director each quarter, and the office-approved updates are provided to the EDO each quarter.

A process improvement effort that spans both the Nuclear Materials Safety and the Nuclear Waste Safety arenas is counted in each arena.

*Validation:* In most cases, the process improvement is considered complete at the time the staff issues its report, or briefs senior NRC management on the findings and recommendations (not including interim status briefings). Ensuing implementation efforts are tracked as part of the operating plan process, but those efforts are outside the scope of this measure.

- ***Complete all license renewal application reviews within 30 months of receipt if a hearing is held, within 22 months without a hearing beginning in FY 2003 (25 months without a hearing prior to FY 2003).***

**This performance measure applies only to the Nuclear Reactor Safety arena.**

*Verification:* Upon receiving a license renewal application for review, the staff opens a TAC number for the licensing action in NRR's automated TRIM with a 30-month target completion date. The TAC number is used to report staff hours charged in reviewing the application and documenting completion of the review. The TAC number and its 30-month completion date are maintained in TRIM for the duration of the renewal application review if a hearing is held. If a hearing is not held, the target completion date in TRIM is revised to 22 months after receipt for renewal reviews to be completed in FY 2003 and beyond. (Prior to FY 2003, the target completion date for applications without a hearing was 25 months after receipt.)

Compliance with the established schedule is monitored by the assigned Project Manager and the License Renewal Program Director or his designee throughout the review of the license renewal

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application. TRIM reports compliance with the measure either by accessing the individual TAC or through the TRIM Project Manager's Report.

*Validation:* The TRIM system provides a readily accessible reporting system that clearly demonstrates whether the NRC meets its 30-month measure.

- ***Complete all major prelicensing milestones needed to prepare for a licensing review of the potential Yucca Mountain repository, consistent with the Department of Energy's (DOE's) schedules and before DOE submits its license application.***

**This performance measure applies only to the Nuclear Waste Safety arena.**

*Verification:* The NRC will complete all of the milestones listed for this measure in the Performance Plan before DOE's submittal of its proposed license application. The milestones and schedules, and changes thereto, are tracked by NMSS.

*Validation:* The milestones will provide guidance to DOE in preparing its proposed application and guidance to the NRC's review of DOE's proposed application, thereby making the licensing process more effective and efficient.

***Performance Goal: Reduce unnecessary regulatory burden on stakeholders.***

- ***Complete those specific milestones to reduce unnecessary regulatory burden as identified in the annual performance plan.***

### *Verification and Validation for the Nuclear Reactor Safety Arena*

*Verification:* The specific items to be included within the initiative described in SECY-02-081 will be assessed and adjusted as staff activities progress and stakeholder input is received and evaluated. Verification of these milestones will be accomplished by determining that the identified actions or products have been completed. The status of the initiative and specific milestone completion will be described in periodic reports to the Commission.

The milestone schedule for FY 2004 includes completing the limited-scope, short-term initiative described in SECY-02-081, including issuing the associated rulemakings.

*Validation:* Performance can be validated by timely completion of milestones, such as the issuance of final rulemakings or other products that address items included in the limited-scope, short-term initiative described in SECY-02-081. Validation that the actions achieve the goal of reducing unnecessary regulatory burden will be achieved through interactions with stakeholders. In some

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cases, such as items involving rulemaking, the associated processes include steps to validate the regulatory analyses of the proposed actions.

### *Verification and Validation for the Nuclear Material Safety Arena*

*Verification:* This measure will be implemented in the context of active projects. The FY 2003 Performance Plan specifies that one rulemaking primarily designed to reduce unnecessary regulatory burden will be completed each year.

*Validation:* Performance can be validated by timely completion of milestones, such as the issuance of final rulemakings or similar products.

### *Verification and Validation for the Nuclear Waste Safety Arena*

*Verification:* In an effort to reduce unnecessary regulatory burden, the NRC routinely seeks input from licensees and other external stakeholders on revisions to the agency's regulatory framework. This measure tracks instances where the NRC may have overlooked a potential unnecessary regulatory burden associated with implementation of modification or application of the regulatory framework for the Nuclear Waste Safety arena during the reporting period. Licensees or other external stakeholders may inform the NRC of a potential regulatory burden in writing or via email, or may present a potential unnecessary regulatory burden issue to the NRC during transcribed meetings. Progress on the implementation of NRC action is reflected, reviewed, and monitored on a monthly basis in the NMSS division's operational-level operating plan. Any deviations are reported to the Director and Deputy Director of the responsible division.

FY 2005 Performance Plan Activity: Adoption and Implementation of Standard Technical Specifications (STS) for Spent Fuel Dry Storage Cask Designs.

#### *Milestones:*

*FY 2004:* If an application to adopt the STS for a specific cask design is received, staff will begin a complete review of the application and will implement STS, if the design is approved.

*FY 2005:* If an application for STS adoption is approved, staff will proceed with rulemaking to approve STS adoption for the specific cask design.

*Verification:* If a vendor or licensee adopts the STS for a cask design, it would be valuable to track the number of 10 CFR 72.48 evaluations supporting cask design changes that would be implemented over a 1-year period after the STS is in place. This would help to determine the potential cost

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savings a vendor or licensee could realize because of not having to process the cask design changes via NRC approval of license amendments.

*Validation:* For subsequent cask users who adopt the STS approved for the first vendor or licensee, the number of 10 CFR 72.48 evaluations following STS adoption could be tracked to verify that the regulatory burden has been reduced to a similar extent.

## **APPENDIX V: MANAGEMENT CHALLENGES**

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### **MANAGEMENT CHALLENGES**

#### **INTRODUCTION**

This appendix lists the nine most serious management and performance challenges facing the agency, as identified by NRC's Office of the Inspector General in a memorandum dated November 18, 2002. This appendix also describes the actions being taken by NRC to address these challenges and related milestones. Senior management continues to address most of these challenges through the strategic planning process.

The management challenge described as "Protection of Information" was the latest challenge added to the list. NRC is currently analyzing this challenge and will identify actions, milestones and schedules in the FY 2005 Performance Plan.

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### **OIG MANAGEMENT CHALLENGES**

**CHALLENGE 1:** Protection of nuclear material and facilities used for civilian purposes.

The NRC is currently reviewing the agency's strategic plan to determine whether our goals, strategies, and measures adequately address the actions that we now consider necessary as a result of the terrorist attacks on September 11, 2001. During FY 2002-2003, the NRC staff conducted extensive efforts and made significant enhancements to the security of civilian nuclear facilities and materials.

**APPENDIX V: MANAGEMENT CHALLENGES**

<i>Actions/Milestones</i>	<i>Schedule</i>
<p><b>NUCLEAR REACTOR SAFETY ARENA</b></p> <p>The NRC is re-analyzing the vulnerabilities and physical protection requirements for NRC-licensed facilities. Representative nuclear power plant structures have been analyzed to determine their vulnerability to aircraft attack. Toward that end, the NRC has conducted an integrated assessment of the effects of various attack scenarios. Research products will provide data to assist decisionmakers in identifying practical mitigation strategies and allocating resources.</p> <p><b>Status:</b> The staff is pursuing a number of additional efforts related to generic issues to support the vulnerability assessments. Specifically, these efforts include aircraft impact vulnerability analysis, cyber threat analysis, research on terrorist attack scenarios, effects of fire analysis, small arms conflict situation analysis, radiological consequences from attacks on nuclear power plants, protective strategies for attacks on nuclear power plants, spent fuel testing, characterization of insider threats, and continued effort on the Enhanced Terrorist Response (ETR) Project.</p> <p>In FY 2003, the staff completed detailed analyses of the vulnerability of two representative nuclear power plants to aircraft attack. NRC shared preliminary results of these analyses with cognizant federal agencies and affected licensees. The industry is evaluating and implementing prudent followup action. During FY 2004, the methods and results of these analyses will undergo peer review. In the meantime, the results are being used to assist decisionmakers in developing and applying implementation strategies.</p> <p>In April 2003, the NRC issued orders (to be effective October 29, 2004), that revised the design-basis threat (DBT). The NRC staff is working with the industry to clarify the revised DBT where necessary and to facilitate implementation of revisions to the licensees' physical protection strategies.</p> <p>The NRC issued additional orders in January 2003 to enhance access authorization and in April 2003, to control security force fatigue and to enhance training and qualifications for security force members.</p> <p>In early FY 2004, the NRC staff completed inspections of interim compensatory measures imposed by Order on February 25, 2002. In CY 2004, the staff will implement a revised baseline inspection program that takes into consideration security enhancements that have been put in place since 9/11/2001. In addition, in FY 2003, the NRC implemented pilot program to enhance Force-on-Force exercisers at power reactors. The program is intended to enhance the effectiveness and realism of the exercises and provides the basis for resuming the performance evaluation program with substantially increased frequencies of exercises (from 8 years to 3 years). The NRC will implement the enhanced program in FY 2004 concurrent with the effective date.</p>	<p>FY 2003 - FY 2005</p>

**APPENDIX V: MANAGEMENT CHALLENGES**

<i>Actions/Milestones</i>	<i>Schedule</i>
<p>The NRC plans to re-analyze the processes used to authorize access to licensed facilities. Activities will include evaluating and improving the adequacy and robustness of existing access authorizations, determining the feasibility of integrating a national security check program, and determining the feasibility of obtaining overseas criminal history checks.</p> <p><b>Status:</b> Additional security measures for access authorization/insider were issues in January 2003. The NRC continues to consult and coordinate with other Federal agencies to enhance access authorization. The staff will initiate a rulemaking on access authorization in FY 2004.</p>	<p>FY 2003–FY 2005</p>
<p>The NRC will re-assess its emergency preparedness activities and response capabilities. Activities will include evaluating the NRC’s response capabilities to respond to multiple events, including mobilizing and responding to a national threat; evaluating regulatory requirements for emergency preparedness programs; increasing coordination with stakeholders related to emergency preparedness and response; evaluating the adequacy of policy and programs for public protective actions; developing inspection guidance on licensees’ integration of security and emergency plans to assess licensees’ capabilities to respond to attacks; and enhancing intelligence community communications.</p> <p><b>Status:</b> The reassessment of emergency preparedness activities and response capabilities includes a review of incident response operations, which was completed in early FY 2003; implementation of the Homeland Security Advisory System (HSAS) was completed in the last quarter of FY 2002; a revised Continuity of Operations (COOP) plan was completed in FY 2003; development of response protocols with Federal and State agencies will continue throughout the planning period; the Operations Center Information Management System (OCIMS) requirements assessments were completed late FY 2003, and the upgrade of OCIMS data and display subsystems is scheduled for completion during FY 2004; the Defense Messaging Services (DMS) system test was completed during FY 2003; and the Incident Response Program Review was completed in FY 2003. Beginning in FY 2005, the Emergency Response Data System (ERDS) will be replaced with a system utilizing the latest communications platforms; the ERDS upgrade will be completed in FY 2006. NRC is also developing enhanced secure communications and information management systems in FY 2004.</p>	<p>FY 2003-FY 2005</p>



**APPENDIX V: MANAGEMENT CHALLENGES**

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<i>Actions/Milestones</i>	<i>Schedule</i>
<p>The NRC will conduct a comprehensive reassessment to evaluate the policies and procedures related to the protection of the agency’s critical infrastructure at headquarters, regional offices, and resident inspector offices. This will include evaluating the adequacy of contingency plans to maintain continuity of operations (COOP) during terrorist events that are capable of disrupting response activities, as well as the agency’s emergency response planning, staffing, and training for handling protracted events at multiple locations as a result of terrorist activities.</p> <p><b>Status:</b> The staff completed a comprehensive physical security assessment of the NRC’s infrastructure in FY 2002, and has implemented most of the recommendations from this assessment. The staff completed an additional assessment of the physical security of the NRC headquarters facilities in the second quarter of FY 2003. The relocation of the Sensitive Compartmented Information Facility (SCIF) to the fourth floor of Two White Flint North was completed during FY 2003.</p>	FY 2003–FY 2005

**APPENDIX V: MANAGEMENT CHALLENGES**

<i>Actions/Milestones</i>	<i>Schedule</i>
<p><b>NUCLEAR MATERIALS SAFETY AND NUCLEAR WASTE SAFETY ARENA</b></p> <p>The NRC will continue to re-analyze its threat assessment framework and threats characterizations, which are used to design safeguards systems to protect against acts of radiological sabotage and to prevent the theft of special nuclear material. The NRC will also increase its interactions with other Federal agencies to ensure coordination of national infrastructure decisions that may impact activities in this area.</p> <p><b>Status:</b> The NRC has enhanced the DBT for Category 1 fuel facilities taking into consideration threat characteristics for other facilities and activities identified in coordination with other Federal agencies. The NRC is continuing its actions to enhance its liaison activities with Federal agencies and other stakeholders in order to ensure timely coordination of decisionmaking regarding threats to nuclear facilities, activities, and the critical infrastructure.</p>	<p>FY 2003–FY 2005</p>
<p>The NRC will continue to re-analyze the vulnerabilities, physical protection, and safeguards programs and requirements for NRC-licensed facilities and radioactive materials. Activities include re-examining the agency’s statutory and regulatory requirements and guidance on security and safeguards for facilities, evaluation of the need for additional security and safeguards requirements at NRC-licensed facilities and materials currently not covered by existing physical protection regulations, and examination of the need for physical protection against chemical and/or industrial sabotage at NRC-licensed facilities.</p> <p><b>Status:</b> Preliminary vulnerability assessments to support development of additional security measures for materials licensees were completed in FY 2003. Other vulnerability assessments pertaining to materials licensees will be completed in stages through FY 2004. Results of vulnerability assessments will be used to inform decisionmakers in identifying practical mitigating strategies and new requirements, as appropriate.</p>	<p>FY 2003–FY 2005</p>
<p>The NRC will also work with other Federal agencies (such as the Department of Homeland Security (DHS), Federal Bureau of Investigation (FBI), Department of Defense (DOD)) and States to enhance and coordinate U.S. detection, prevention, and response for terrorist actions against NRC-regulated facilities and activities.</p> <p><b>Status:</b> The NRC worked concurrently with DHS and other federal and state partners to enhance detection, prevention and response in FY 2003. Actions included response to changes in the National Threat Level, Operation Liberty Shield, and development of the Initial National Response Plan. The NRC also initiated integrated response planning at the national and local levels, working in conjunction with DHS. In addition, NRC has exercised its response procedures through a series of interagency exercises, such as TOPOFF 2 in FY 2003. The NRC will continue to enhance preparedness with Federal and State agencies, including improving its coordination with DHS, law enforcement agencies, and the intelligence community, including implementation of the National Response Plan and the National Incident Management Plan in FY 2003 - 2005.</p>	<p>FY 2003–FY 2005</p>

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<i>Actions/Milestones</i>	<i>Schedule</i>
<p>The NRC will re-analyze the vulnerabilities and physical protection requirements for NRC-licensed facilities (such as spent fuel storage installations) and transportation of special nuclear material. The staff will also conduct an assessment of the ability of spent fuel storage casks and radioactive material transportation packages to withstand various attack scenarios. In addition, the agency will reassess its capabilities for first response, independent assessment, and oversight of incidents at licensee facilities.</p> <p><b>Status:</b> The staff continues to assess potential vulnerabilities associated with spent fuel storage and radioactive material transportation. The staff used the early results of this work to issue orders to operating ISFSIs to implement safeguards and security compensatory measures. The vulnerability assessments are nearing completion and will result in development of mitigative strategies during FY 2004 for any identified vulnerabilities. The staff is currently using the early results of this work to identify and require necessary enhancements to security measures for spent fuel storage and transportation and materials licensees; staff continues to coordinate with the Department of Transportation and other federal and state partners to promote a coherent National approach to enhanced transportation security.</p>	<p>FY 2003–FY 2005</p>
<p>The Office of Nuclear Materials Safety and Safeguards (NMSS) will conduct or support the following efforts:</p> <ul style="list-style-type: none"> <li>• Continue the studies of the consequences from potential terrorist attacks to selected transportation packages (non-spent fuel and spent fuel) and selected spent fuel transportation and spent fuel storage casks, and the consequences of an irradiator explosion.</li> <li>• Continue to support the comprehensive safeguards and security vulnerability assessments of fuel cycle and materials licensees, spent fuel and non-spent fuel transportation packages, and spent fuel storage casks.</li> <li>• Issue regulatory improvements to address any significant weaknesses identified during the vulnerability assessments.</li> <li>• Review facility security plans to ensure that the facilities protect against identified threats.</li> <li>• Require remaining materials licensees to implement appropriate compensatory measures. Review licensee compliance with the interim compensatory measures; assess proposals to revise regulatory requirements (e.g., rulemaking, orders) and guidance (e.g., information notices, NUREGs) in the area of security.</li> <li>• The Compensatory Measure (CM) Tracking system is being developed to track the implementation of CMs within NMSS’ area of responsibility. The system will allow information on CMs to be entered into a database and will provide reports (data relating to the NRC orders requiring implementation of CMs) for managers’ and staff’s use.</li> <li>• Continue to participate in the interagency and international efforts to address life-cycle management of radioactive sources.</li> </ul>	<p>FY 2003–FY 2005</p>

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**CHALLENGE 2:** Development and implementation of an appropriate risk-informed and performance-based regulatory oversight approach. (GAO identified a comparable challenge.)

<i>Actions/Milestones</i>	<i>Schedule</i>
<p><b>NUCLEAR REACTOR SAFETY ARENA</b>            Publish report on lessons learned from implementation of the reactor oversight process.</p> <p><b>Status:</b> The staff last issued this report via SECY-03-0062, dated April 21, 2003. The staff plans to continue to perform annual self-assessments and report the results to the Commission.</p>	FY 2004
<p>Develop a proposed rule to risk-inform 10 CFR 50.46.</p> <p><b>Status:</b> The staff is currently evaluating potential risk-informed changes to the requirements for analysis of design-basis loss-of-coolant accidents (LOCAs) contained in 10 CFR 50.46. These requirements specify the assumptions, methods, and acceptance criteria for use in evaluating the adequacy of the emergency core cooling system (ECCS) for design basis LOCAs. The development of a risk-informed approach to 10 CFR 50.46 has the potential to significantly reduce regulatory burden and improve the effectiveness or regulatory oversight related to ECCS performance, while maintaining safety. In July 2002, the staff completed the technical work to assess the practicality of possible rulemaking associated with the technical requirements of 10 CFR 50.46, Appendix K to 10 CFR Part 50, and General Design Criterion (GDC) 35. The Commission provided guidance to the staff in an SRM dated March 31, 2003, SECY-02-0057.</p>	FY 2002–FY 2004
<p>Issue Revision 1 to Regulatory Guide (RG) 1.174, “An Approach for Using Probabilistic Risk Assessment In Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis.”</p> <p><b>Status:</b> The staff published Revision 1 to RG 1.174 as DG-1110 for public comment on July 23, 2001. Revisions 1 of RG 1.174 and SRP Chapter 19 were issued in November 2002 with relatively minor enhancements. No significant items have been identified since that time that would cause the staff to revise these documents. Future communications regarding these and other risk-informed regulatory guides will be integrated into the individual risk-informed initiatives, as described in the Risk-Informed Regulation Implementation Plan (RIRIP).</p>	Complete
<p>Modify the scope of special treatment requirements and submit the final rule (10 CFR 50.69) to the Commission.</p> <p><b>Status:</b> The public comment period for the proposed rule has ended, and the staff is evaluating a large number of comments.</p>	FY 2004
<p>Provide a draft rule to the Commission that risk-informs the pressurized thermal shock requirements in 10 CFR 50.61.</p> <p><b>Status:</b> The staff documented the technical basis in a draft report, which was issued on December 31, 2002.</p>	FY 2004-FY 2005

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<i>Actions/Milestones</i>	<i>Schedule</i>
<p>Issue Regulatory Guide and Standard Review Plan for the ASME Standard for Probabilistic Risk Assessment Quality.</p> <p><b>Status:</b> The staff has prepared a draft Regulatory Guide (DG-1122) to provide guidance to licensees on the quality needed for PRA information used in risk-informed applications. This guide also addresses the staff's position on the ASME PRA Standard and the industry's guidance on PRA peer reviews. The guide is expected to be issued for trial use early in FY 2004, followed by a number of industry pilots.</p>	FY 2004
<p>Develop a plan for improving coherence among risk-informed activities.</p> <p><b>Status:</b> The staff is formulating a proposed process for a risk-informed coherence effort that provides the guidelines and criteria for translating the Commission's high-level guidance into specific activities. However, in order to address reactor safety risk-informed rulemaking priorities identified in the staff requirements memorandum on COMSECY-03-0029, the staff redirected FY 2004 resources from the coherence program. This prioritization was supported by the industry during the August 2003 Probabilistic Risk Assessment (PRA) steering committee meeting. The staff is re-evaluating future activities in this area.</p>	FY 2004-FY 2005
<p>Complete Significance Determination Process (SDP) Task Force action items and make appropriate adjustments.</p> <p><b>Status:</b> The staff has reviewed the task force report and has begun to address the recommendations.</p>	Ongoing
<p>Complete acceptance review of industry submittals for Risk Management Technical Specifications Initiative 4b (flexible completion times), resolve acceptance issues, and commence detailed review.</p> <p><b>Status:</b> The industry provided a draft risk management guidance document and the Combustion Engineering Owners Group single system pilot proposal, Technical Specifications Task Force (TSTF) number 424, on January 21, 2003. In addition, the South Texas Project (STP) submitted a whole-plant proposal in support of the draft regulatory guide (DG-1122) on PRA quality and this initiative in June 2003. The NRC staff has commenced the review process for the Industry Risk Management Guide, TSTF-424 and STP submittals. In July 2003, the staff provided acceptance review questions regarding the Risk Management Guide and initial impressions of the STP Pilot submittal. The staff provided acceptance review questions regarding TSTF-424 in October 2003.</p>	FY 2004
<p>Develop a risk-informed environment for the NRC staff.</p> <p><b>Status:</b> The staff reviewed the results of an evaluation of the current environment (ML022460161) and is implementing several pilot projects designed to test recommendations from the evaluation report.</p>	FY 2004
<p>Develop an alternative risk-informed and performance-based fire protection standard for nuclear power plants.</p> <p><b>Status:</b> An industry standard, NFPA-805, was issued in April 2001. The staff published a proposed rule endorsing NFPA-805 in November 2002. A final rule is expected to be published in 2004. The staff is working with the industry to develop implementing guidance for NFPA-805 that will be endorsed by the NRC via a regulatory guide.</p>	FY 2004

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<i>Actions/Milestones</i>	<i>Schedule</i>
<p><b>NUCLEAR MATERIALS SAFETY AND NUCLEAR WASTE SAFETY ARENAS</b></p> <p>Solicit public and other stakeholder views in developing revisions to the fuel cycle facilities oversight program.</p> <p><b>Status:</b> During FY 2002, the NRC canceled the public outreach and major program revisions to the fuel cycle oversight process to allow for development and incorporation of additional risk information. The staff completed its plan for process changes in FY 2002.</p>	Complete
<p>Issue Integrated Issue Resolution Status Report (IRSR) associated with proposed high-level waste repository.</p> <p><b>Status:</b> The NRC published the Integrated IRSR as NUREG-1762 in July 2002.</p>	Complete
<p>Develop case studies in Nuclear Materials Safety and Nuclear Waste Safety arena program areas to test screening criteria and develop draft risk guidelines.</p> <p><b>Status:</b> The staff has completed its development of case studies and screening criteria (now referred to as screening considerations), and is continuing to develop risk guidelines.</p>	FY 2002–FY 2005
<p>Develop and conduct training in application of risk analysis.</p> <p><b>Status:</b> Generally applicable risk training for Office of Nuclear Material Safety and Safeguards (NMSS) staff and management was offered on numerous occasions throughout FY 2003 and is ongoing. Application-specific risk training began in FY 2001 and is ongoing. An additional course, P-405, Byproduct Materials System of Risk Analysis and Evaluation in NMSS, was conducted in FY 2003. Another course, P-406, Human Error Analysis/Human Reliability Analysis, was piloted in FY 2003 and will be offered in FY 2004.</p>	FY 2002–FY 2005
<p>Conduct a probabilistic risk assessment for dry cask storage. Issue draft report on screening analysis.</p> <p><b>Status:</b> The staff is updating the draft pilot PRA to reflect peer review.</p>	FY 2002–FY 2004
<p>Identify NMSS regulatory applications amendable to increased use of risk insights.</p> <p><b>Status:</b> In FY 2002, the NRC implemented changes to the materials inspection program, which resulted in a 20-percent efficiency by (1) focusing inspection scheduling on those facilities of highest risk to safety, (2) implementing changes to streamline the preparation for materials inspections, and (3) empowering inspectors to streamline the inspection report writing process.</p>	FY 2002–FY 2004
<p>Revise the Licensee Performance Review process (MC 2604) to make it more timely and efficient, and revise the guidance documents governing the implementation of the fuel cycle inspection program (MC 2600).</p> <p><b>Status:</b> The staff completed its revision of MC 2604 on June 27, 2002, followed by MC 2600 on September 30, 2002.</p>	Complete

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<i>Actions/Milestones</i>	<i>Schedule</i>
<p>Revise fuel cycle inspection procedures. Review and revise all inspection procedures for fuel cycle facilities to determine applicability, delete duplication of effort, incorporate risk-informed and performance-based approaches, and ensure compatibility with new 10 CFR Part 70 requirements.</p> <p><b>Status:</b> A plan and schedule for review and revision of the fuel cycle inspection procedures was developed in August 2003. A detailed schedule is planned to be issued in the first quarter of FY 2004, with the earliest revisions scheduled for the second quarter of FY 2004.</p>	FY 2003–FY 2004
<p>Develop guidance document to aid in using a risk-informed decision making process on applicable NMSS regulatory issues.</p> <p><b>Status:</b> The staff completed a preliminary draft guidance document on risk-informed decision making and is testing it with NMSS regulatory applications. Lessons learned will be factored into modification of the draft guidance before issuance.</p>	FY 2003–FY 2005

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**CHALLENGE 3:** Identification, acquisition, and implementation of information technologies. (GAO identified a comparable challenge.)

<i>Actions/Milestones</i>	<i>Schedule</i>
Automated Information Systems (AIS) Security Complete updates and revisions to the NRC's AIS Security Policy <b>Status:</b> Issued final draft, revised policy and handbook in FY 2003.	Complete
Enhance the interim information systems security incident response procedures and enhance the vulnerability patch dissemination and tracking process. <b>Status:</b> Incorporated revised policies into MD 12.5 in FY 2003.	Complete
Formally specify the NRC Firewall Policy. <b>Status:</b> Issued updated firewall policy in FY 2003.	Complete
Define and pilot secure INTRANET solution that will provide the capability for NRC users to process and protect their sensitive information using the agency's network. <b>Status:</b> S Conducted market survey in FY 2003. S Conduct pilot. S Determine requirements to field secure INTRANET capabilities to all NRC users.	Complete FY 2004 FY 2004
Agencywide Documents Access and Management System (ADAMS) <b>Status:</b> Released ADAMS version 4.0 in FY 2003.	Complete
External WEB Site <b>Status:</b> Completed implementation of Communication Plan in FY 2003. <b>Status:</b> Deployed re-designed external Web site in FY 2003.	Complete
Electronic Information Exchange (EIE) <b>Status:</b> Resolved public comment on the draft final rule in FY 2003. <b>Status:</b> Issued EIE rule in the <u>Federal Register</u> on October 10, 2003. <b>Status:</b> Enabled secured EIE for reactor and material stakeholders in FY 2003.	Complete
Capital Planning and Investment Control (CPIC) <b>Status:</b> Circulated revised draft CPIC Management Directive (MD) 2.2 in FY 2003. <b>Status:</b> Issue revised CPIC MD 2.2. (Started in final concurrence process in FY 2003) <b>Status:</b> Use CPIC lessons learned to improve CPIC process.	Complete FY 2004 Complete
Digital Data Management System (DDMS) <b>Status:</b> Developed DDMS proof-of-concept in FY 2003. <b>Status:</b> Deliver DDMS production system design.	Complete FY 2004
E-Payroll Conversion <b>Status:</b> Convert Payroll and HR processes to Department of Interior/National Business Center (DOI/NBC).	FY 2004



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**CHALLENGE 4:** Administration of all aspects of financial management. (Aspects highlighted by the OIG were limited to financial reporting and effective oversight of the procurement process to eliminate fraud, waste, and abuse.) (GAO identified a comparable challenge.)

<i>Actions/Milestones</i>	<i>Schedule</i>
<p>Continue to refine the pay/personnel time and labor reporting process.  <b>Status:</b> NRC is proceeding with the E-gov initiative to transfer payroll processing to DOI/NBC, one the four designated payroll providers for the Federal government. This transfer is scheduled to be complete early in FY 2004. In <b>FY 2004</b>, NRC will begin a process to determine the best time and labor reporting process systems solution.</p>	Ongoing
<p>Prepare the FY 2002 financial statements and receive an unqualified audit opinion.</p>	Complete
<p>Refine cost accounting system.  <b>Status:</b> In FY 2003, corrective actions on the medium security risks identified in the Cost Accounting Security Test and Evaluation Plan and Report have been completed. This includes the implementation procedures to adequate password security and the reduction of manual processing and validation.</p>	Ongoing
<p>Continue cost management improvement efforts.  <b>Status:</b> In FY 2003, corrective actions on the medium security risks identified in the Cost Accounting Security Test and Evaluation Plan and Report have been completed. This includes the implementation procedures to ensure adequate password security and the reduction of manual processing and validation.</p>	Ongoing
<p>Prepare the FY 2003 financial statements by January 30, 2004, and receive an unqualified audit opinion.</p>	FY 2004
<p>Prepare the FY 2004 financial statements by November 15, 2004, and receive an unqualified audit opinion.</p>	FY 2005
<p>Complete License Fee Billing Replacement Project.</p>	FY 2006

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### CHALLENGE 5: Clear and balanced communication with NRC external stakeholders.

<i>Actions/Milestones</i>	<i>Schedule</i>
<p>Continue to evaluate feedback forms in an effort to target areas for improving communications and track progress in improving public meetings.</p> <p><b>Status:</b> Pilot project completed in April 2002. The latest evaluation of the agency's public meeting feedback forms was issued to staff on August 18, 2003. Analyses continue to be done periodically.</p>	Ongoing
<p><b>NUCLEAR MATERIALS SAFETY AND NUCLEAR WASTE SAFETY ARENAS</b></p> <p>Development of Communication Plans: The public trust and confidence in the NRC's ability to carry out its mission is an important agency goal. The development of communication plans facilitates the implementation of public outreach efforts.</p> <p><b>Status:</b> The Office of Nuclear Material Safety and Safeguards (NMSS) will continue to implement the nuclear materials and waste safety arena communication plans, and update them, as necessary. (See details below.)</p>	Ongoing
<p>Develop Spent Fuel Transportation Communication Plan.</p> <p><b>Status:</b> Completed December 28, 2001.</p>	Complete
<p>Develop and implement site-specific decommissioning communication plans.</p> <p><b>Status:</b> Completed "Site-Specific Communication Plans for SDMP/complex sites, September 2003. Completed site specific communication plans for decommissioning reactors under NMSS.</p>	FY 2002–FY 2005
<p>Conduct public meetings on significant issues in the fuel facility licensing and inspection program.</p> <p><b>Status:</b> In FY 2003, examples of public outreach efforts included a Uranium Recovery Workshop; public meetings on the MOX draft EIS and revised draft safety evaluation report; and, public meetings on the proposed Louisiana Energy Services' (LES) gas centrifuge facility.</p>	Ongoing
<p>Make public participation in the HLW regulatory program more accessible by continuing to conduct public meetings in Nevada on HLW program issues.</p> <p><b>Status:</b> In FY 2003, the NRC continued to respond to specific requests from affected units of local governments to others for public meetings on various aspects of the agency's HLW program. Examples of public outreach efforts in FY 2003 included two public meetings held in California to provide an overview of the NRC's role in the potential licensing of the proposed geologic repository at Yucca Mountain, with specific presentations on associated groundwater, transportation, and security issues.</p>	FY 2002-FY 2004
<p>Hold public workshops and meetings with interested stakeholders, including local, state, and national elected officials, and the general public to discuss the draft test protocols for the Package Performance Study.</p> <p><b>Status:</b> In FY 2003, the staff held a series of four public workshops at NRC's headquarters and regional locations.</p>	Complete

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<i>Actions/Milestones</i>	<i>Schedule</i>
<p>Hold public meetings with local, state, and national government, and international public and industry groups on radioactive materials and transportation issues to respond to concerns and interests.</p> <p><b>Status:</b> In FY 2003, NRC held several such meetings and conducted workshops for interested stakeholders. Examples included: Organization of Agreement States, Part 35 Training and Experience Rule, the Conference of Radiation Control Program Directors, the Advisory Committee on the Medical Use of Isotopes, a workshop on the Control of Solid Materials, a meeting with NEI to discuss the disposition of solid materials, and a workshop related to sealed sources and devices. Additionally in FY 2003, the Spent Fuel Project Office conducted approximately 30 public meetings.</p> <p>In January 2003, NRC held a public meeting to discuss policy issues related to extremity monitoring and dosimetry with the regulated radiopharmaceutical industry. Industry, States, and NRC staff participated.</p>	Ongoing
<p>Post rulemakings, guidance, and meeting summaries on the agency's Web site. Continue efforts to expand and redesign the NMSS Web page.</p>	Ongoing

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**CHALLENGE 6: Intra-agency communication (up, down, and across agency organizational lines).**

<i>Actions/Milestones</i>	<i>Schedule</i>
<p><b>NUCLEAR REACTOR SAFETY ARENA</b></p> <p>Initiate periodic meetings with intra-agency stakeholders to enhance communications and support.</p> <p><b>Status:</b> The staff is currently implementing the EDO’s expectations for internal communications as described in his memorandum dated August 31, 2001, resulting from the Senior Executive Service (SES) Candidate Development Program initiative for internal communications. NRR’s Leadership Team has made substantial progress in becoming a cohesive unit. As a result, the office has developed and improved the prioritization of NRR user needs and improved the interface between the Office of Nuclear Regulatory Research and NRR. Monthly meetings are held to enhance integration and cooperation throughout both offices. Communications with the regions have improved with the establishment of constructive relationships with key regional stakeholders and periodic conference (video teleconferencing) calls and trips. NRR has also implemented an office-level infrastructure improvement to update NRR office procedures, policies, and other guidance documents.</p>	Complete
<p>Complete Phase 3 of Centralized Work Planning in NRR.</p> <p><b>Status:</b> Phase 3 of Centralized Work Planning involved developing a software module for the Time, Resource, and Inventory Management (TRIM) computer program to provide an algorithm for near-term personnel scheduling. In FY 2001, the staff completed the development of TRIM, testing of the communications interface between TRIM and STARFIRE, and partial deployment. The TRIM-STARFIRE interface was deployed in November 2001. The officewide deployment of TRIM was completed on February 11, 2002.</p>	Complete
<p><b>NUCLEAR MATERIALS SAFETY AND NUCLEAR WASTE SAFETY ARENA</b></p> <p>Facilitate effective communication between the Office of Nuclear Material Safety and Safeguards and the Office of Nuclear Security and Incident Response, and enhance integration and cooperation in areas of common concern.</p> <p><b>Status:</b> In FY 2003, the two offices met monthly to discuss issues of mutual interest, and routinely conducted meetings to facilitate information sharing. Interaction between the two offices is ongoing.</p>	Ongoing
<p>Conduct Materials Arena headquarters/regions counterpart meetings.</p> <p><b>Status:</b> Division Directors Counterpart Meetings were held in February and August 2003.</p>	Ongoing
<p>Continue to implement and update the Nuclear Materials and Waste Safety arena communications plans, as necessary (also see Management Challenge 4).</p> <p><b>Status:</b> In FY 2003, staff held a counterpart meeting for Headquarters and regional spent fuel storage and transportation inspectors to discuss inspection problems and lessons learned. In addition, HQ staff supported regional all-hands meetings to discuss status of agency programs. Other communication plan implementing activities and/or training efforts were continued in FY 2003.</p>	Ongoing

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<i>Actions/Milestones</i>	<i>Schedule</i>
<p>Initiate actions within NMSS to improve intra-office communication to better enable staff to do their jobs, encourage teamwork, and foster a sharing of insights across organizations and programs:</p> <ul style="list-style-type: none"> <li>• Conduct NMSS-wide staff meetings several times each year to convey key policy and procedural information in a timely manner.</li> <li>• Support staff rotational and team work group assignments in order to share insights across organizations/strategic arenas, and to increase team-building and arena-based solutions to issues.</li> <li>• Form an Empowerment Task Force to encourage exchange of ideas and communication between staff and management.</li> <li>• Continue efforts to empower managers by clearly communicating and reaching agreement up-front on expectations for emergent and ongoing work.</li> <li>• Continue periodic meetings between NMSS senior management contacts and NMSS members of EEO Advisory Committees to improve communication on EEO and diversity issues.</li> <li>• Conduct regularly scheduled meetings with staff at all levels (division, section, branch, and office-wide) to communicate essential information and ensure open lines of communication up and down the organization.</li> </ul> <p><b>Status:</b> In FY 2003, NMSS conducted an office-wide staff meetings to convey key policy and procedural information; regularly scheduled meetings are conducted at all organizational levels (division, branch, and section) to ensure communication of essential information and ensure open lines of communication; staff rotational and team work group assignments were supported to encourage team-building and sharing of information; efforts continued to empower managers and staff by clearly communicating and reaching agreement on expectations of emerging and ongoing work; periodic meetings were conducted between NMSS senior managers and NMSS members of EEO Advisory Committees to improve communication on EEO and diversity initiatives.</p>	Ongoing
<p>Conduct periodic meetings with managers in NMSS, the Office of State and Tribal Programs, and the Office of Nuclear Security and Incident Response.</p>	Ongoing
<p>Manage and coordinate activities, policies, and efforts with managers from other NRC offices through the biweekly meetings of the High-Level Waste Board, bimonthly NRC/EPA Interface meetings, monthly Decommissioning Management Board meetings, and weekly NMSS and division staff meetings.</p>	Ongoing
<p>Manage and coordinate decommissioning activities, policies, and efforts with managers from other NRC offices through the biweekly meeting of the Decommissioning Management Board.</p>	Ongoing (biweekly)
<p>Hold semi-annual meetings of NMSS and Office of Nuclear Regulatory Research managers to review the status of cooperative efforts and discuss issues or concerns.</p>	Ongoing (semi-annually)

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**CHALLENGE 7:** Regulatory processes that are integrated and continue to meet NRC’s safety mission in a changing external environment.

<i>Actions/Milestones</i>	<i>Schedule</i>
<p><b>NUCLEAR REACTOR SAFETY ARENA</b>            Issue a final Commission paper recommending followup actions.  <b>Status:</b> The staff issued SECY-02-0143 on July 26, 2002.</p>	Complete
<p><b>NUCLEAR MATERIALS SAFETY AND NUCLEAR WASTE SAFETY ARENAS</b>            Interoffice communication on important issues such as the high-level waste management and decommissioning areas is made more effective through the use of Management Boards, which meet biweekly and weekly, respectively to discuss status reports regarding action items and to provide additional direction to these programs, particularly in the area of policy issues.</p>	Ongoing (biweekly and monthly)
<p>The Offices of the General Counsel, Secretary to the Commission, Chief Information Officer, Atomic Safety Licensing Board Panel, and Nuclear Materials Safety and Safeguards continued to work together to prepare for receipt of the HLW repository license application and hearing, which involves getting the systems and process in place to fulfill the 3-year goal for completion.</p>	FY 2002–FY 2004
<p>Hold quarterly meetings of the PRA Steering Committee to ensure that risk-informed activities are integrated across the agency.</p>	Ongoing (quarterly)
<p>Participate on the agency’s Research Effectiveness Review Board to ensure that the research program is effective in meeting the agency’s needs.</p>	FY 2002–FY 2005

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<i>Actions/Milestones</i>	<i>Schedule</i>
<p>Conduct meetings with stakeholders to provide an opportunity for exchange of information so that stakeholder viewpoints can be understood. FY 2003 examples included the following:</p> <ul style="list-style-type: none"> <li>• responded to specific requests from affected units of local governments to others for public meetings on various aspects of the agency’s HLW program, including two public meetings held in California to provide an overview of the NRC’s role in the potential licensing of the proposed geologic repository at Yucca Mountain</li> <li>• held several public meetings associated with environmental reviews conducted under the National Environmental Policy Act, including the environmental review of the decommissioning of the Sequoyah Fuels Corporation facility in Gore, Oklahoma; a scoping meeting on the Generic Environmental Impact Statement (EIS) on Controlling the Disposition of Solid Materials, and a technical exchange with DOE on the adoption of the Yucca Mountain Final EIS; also participated in a scoping meeting for the EIS concerning the decommissioning of the West Valley Demonstration Project in West Valley, NY.</li> <li>• participated in more than 20 workshops, conferences, and town hall meetings with representatives of various Federal, State, and local agencies; international bodies; the nuclear industry; and public interest groups in FY 2003, focused on spent fuel storage and transportation issues. The public meetings concerning the Package Performance Study, held in March 2003, were the most notable of these activities</li> <li>• held public meetings associated with requirements for recognition of specialty board certifications in 10 CFR Part 35, "Medical Use of Byproduct Material"</li> <li>• conducted a stakeholder workshop on control of solid materials</li> <li>• conducted other public outreach efforts including a Uranium Recovery Workshop; public meetings on the MOX draft EIS and revised draft safety evaluation report; public meetings on the proposed Louisiana Energy Services' (LES) gas centrifuge facility</li> </ul>	Ongoing
<p>Review and update the listing of external factors influencing our activities. Also, continue analyzing the external environment and document planning assumptions each year as part of the NRC’s Planning, Budgeting, and Performance Management Process.</p>	Ongoing
<p>A Risk Steering Committee, comprised of managers and staff from the Office of Nuclear Material Safety and Safeguards (NMSS), Nuclear Regulatory Research (RES), and Nuclear Reactor Regulation (NRR) with expertise in risk-informing initiatives, provides guidance and sets expectations for the NMSS Risk Task Group for implementing risk-informed initiatives in the Nuclear Materials and Waste Safety arenas and also provides peer review of risk-informed products.</p>	Ongoing

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<i>Actions/Milestones</i>	<i>Schedule</i>
<p>The Rulemaking Coordinating Committee (RCC) was formed in 1998 to ensure that the NRC rulemaking process remains consistent among NMSS and NRR. The RCC consists of managers from those offices, as well as the Office of Administration, and Office of the General Counsel, who routinely meet to discuss rulemaking-related issues. An initiative of the RCC was the establishment of an interoffice task force to review the current rulemaking process and identify areas with potential for process improvements and/or enhancements.</p> <p><b>Status:</b> The Task Force provided its final report to the RCC in November 2002. It contained 36 recommendations for process improvements. One of the early successes relates to a streamlined process for Certificate of Compliance Rulemakings using more standardized language and a reduced concurrence chain.</p>	Ongoing
<p>Conduct Evaluation of Changes to Decommissioning Program to assess effectiveness of the decommissioning program in achieving performance goals and implementing strategies, and recommend improvements.</p> <p><b>Status:</b> Completed in September 2003.</p>	Complete



**APPENDIX V: MANAGEMENT CHALLENGES**

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**CHALLENGE 8:** Maintenance of a highly competent staff to carry out NRC’s public health and safety mission (i.e., human capital management). (GAO identified a comparable challenge.)

<i>Actions/Milestones</i>	<i>Schedule</i>
Update the inventory of existing staff skills on an annual basis. <b>Status:</b> Task completed in FY 2003. Will continue annually.	FY 2004
Continue to implement strategies to close identified skill gaps. <b>Status:</b> Task completed in FY 2003.	FY 2004
Identify new skills gaps and implement additional gap closure strategies, as necessary. <b>Status:</b> Task completed in FY 2003.	FY 2004
Use the SWP as a system for managers and supervisors to document their workforce skills needs over the near term (0-2 years) and long-term (2-5 years). <b>Status:</b> Task completed in FY 2003.	FY 2004
Continue to improve the capability of NRC’s workforce through training, development, and continuous learning.	FY 2004
Facilitate knowledge transfer.	FY 2004
Continue to offer leadership competency development programs (Senior Executive Service (SES) Candidate Development Program and Leadership Potential Program (LPP)) for succession planning.	FY 2004
Continue to improve the alignment of individual performance plans with agency strategic and performance goals.	FY 2004
Maintain a Nuclear Safety Intern Program to attract and retain entry-level hires in engineering and scientific jobs.	FY 2004

## APPENDIX V: MANAGEMENT CHALLENGES

### CHALLENGE 9: Protection of information.

<i>Actions/Milestones</i>	<i>Schedule</i>
<p>Update the Volume 12 Security Management Directives to clearly define the roles, responsibilities, and authorities of the different NRC officials responsible for the NRC security program. Management Directive 12.6, "NRC Sensitive Unclassified Information Security Program" will be included in this update.</p> <p><b>Status:</b> Revisions are underway and will be completed in FY 2004.</p>	FY 2004
<p>Automated Information Systems (AIS) Security Complete updates and revisions to the NRC's AIS Security Policy</p> <p><b>Status:</b> Issued final draft, revised policy and handbook in FY 2003.</p>	Complete
<p>Enhance the interim information systems security incident response procedures and enhance the vulnerability patch dissemination and tracking process.</p> <p><b>Status:</b> Incorporated revised policies into MD 12.5 in FY 2003.</p>	Complete
<p>Formally specify the NRC Firewall Policy.</p> <p><b>Status:</b> Issued updated firewall policy in FY 2003.</p>	Complete
<p>Define and pilot secure INTRANET solution that will provide the capability for NRC users to process and protect their sensitive information using the agency's network.</p> <p><b>Status:</b></p> <ul style="list-style-type: none"> <li>S Conducted market survey in FY 2003.</li> <li>S Conduct pilot.</li> <li>S Determine requirements to field secure INTRANET capabilities to all NRC users.</li> </ul>	Complete FY 2004 FY 2004
<p>Conduct annual testing and/or Federal Information Security Management Act (FISMA) review of the management, operational, and technical security controls of all NRC major IT systems.</p> <p><b>Status:</b> Task was completed in FY 2003.</p>	FY 2004
<p>Implement a process for system managers and project officers to inform the Division of Contracts when their contract requirements include contractor access to NRC systems of records so that Privacy Act clauses can be included.</p> <p><b>Status:</b> Task was completed in FY 2003.</p>	Complete
<p>Implement measures to enforce established policy regarding system manager and project officer responsibilities to inform NRC's Privacy Program Officer of systems of records and duplicate systems of records.</p> <p><b>Status:</b> Task completed in FY 2003.</p>	Complete
<p>Perform biennial review of NRC offices to determine if all systems of records and duplicate systems of records have been identified.</p> <p><b>Status:</b> Next biennial review will be completed in Fall, 2004.</p>	On-going
<p>Make system managers aware of their responsibilities for maintaining a list of duplicate systems of records under the Privacy Act, including all names, descriptions and office locations of these records.</p> <p><b>Status:</b> Task completed in FY 2003.</p>	Complete
<p>Add additional barriers and warning messages to the ADAMS software to prevent the release of sensitive documents or packages.</p> <p><b>Status:</b> Task completed in FY 2003.</p>	Complete

## APPENDIX V: MANAGEMENT CHALLENGES

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<i>Actions/Milestones</i>	<i>Schedule</i>
Add a sensitivity warning message to the bottom of every page on the agency's internal Web site to serve as a reminder to staff that sensitive information should not be made publicly available. <b>Status:</b> Task completed in FY 2003.	Complete

**APPENDIX VI: PROGRAM LINKS TO PERFORMANCE GOALS**

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**FY 2005 NUCLEAR REACTOR SAFETY  
PROGRAM LINKS TO PERFORMANCE GOALS**

LINKS TO PERFORMANCE GOALS	PERFORMANCE GOALS			
	Maintain Safety	Increase Public Confidence	Make NRC Activities & Decisions More Effective, Efficient, and Realistic	Reduce Unnecessary Regulatory Burden
<b>FY 2005 PROGRAMS (\$435,149K, 2,102 FTE)</b>				
Reactor Licensing (\$100,486K, 569 FTE)	X	X	X	X
Reactor License Renewal (\$29,963K, 135 FTE)	X	X	X	X
Reactor Inspection and Performance Assessment (\$156,775K, 904 FTE)	X	X	X	X
New Reactor Licensing (\$39,699, 147 FTE)	X	X		
Reactor Safety Research (\$72,658K, 189 FTE)	X	X	X	X
Reactor Homeland Security (\$35,568K, 158 FTE)	X	X	X	X

**APPENDIX VI: PROGRAM LINKS TO PERFORMANCE GOALS**

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**FY 2005 NUCLEAR MATERIALS SAFETY  
PROGRAM LINKS TO PERFORMANCE GOALS**

LINKS TO PERFORMANCE GOALS	PERFORMANCE GOALS			
	Maintain Safety and Safeguards	Increase Public Confidence	Make NRC Activities & Decisions More Effective, Efficient, and Realistic	Reduce Unnecessary Regulatory Burden
<b>FY 2005 PROGRAMS (\$100,337K, 518 FTE)</b>				
Fuel Facilities Licensing and Inspection (\$25,624K, 147 FTE)	X	X	X	X
Nuclear Materials Users Licensing and Inspection (\$58,627K, 305 FTE)	X	X	X	X
Materials Homeland Security (\$16,086K, 66 FTE)	X	X	X	X

**APPENDIX VI: PROGRAM LINKS TO PERFORMANCE GOALS**

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**FY 2005 NUCLEAR WASTE SAFETY  
PROGRAM LINKS TO PERFORMANCE GOALS**

LINKS TO PERFORMANCE GOALS	PERFORMANCE GOALS			
	Maintain Safety and Safeguards	Increase Public Confidence	Make NRC Activities & Decisions More Effective, Efficient, and Realistic	Reduce Unnecessary Regulatory Burden
<b>FY 2005 PROGRAMS (\$118,096K, 375 FTE)</b>				
High-Level Waste Regulation (\$69,050K, 151 FTE)	X	X	X	X
Spent Fuel Storage and Transportation Licensing and Inspection (\$21,423K, 99 FTE)	X	X	X	X
Environmental Protection and Low-Level Waste Management (\$4,737K, 20 FTE)	X	X	X	X
Regulation of Decommissioning (\$19,503K, 89 FTE)	X	X	X	X
Waste Homeland Security (\$3,383K, 16 FTE)	X	X	X	X

## **APPENDIX VII: REPORT TO CONGRESS ON DRUG TESTING**

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### **U.S. NUCLEAR REGULATORY COMMISSION REPORT TO CONGRESS ON DRUG TESTING**

The Congress and the Department of Health and Human Services initially approved the NRC's Drug Testing Plan in August 1988, and the agency subsequently updated the Plan in November 1997. The NRC's drug testing requirements for the nuclear industry, as imposed by agency regulations, are separate and distinct from this program and are not covered by this report. The NRC's Drug Testing Program under Executive Order (E.O.) 12564 includes random, applicant, voluntary, followup, reasonable suspicion, and accident-related drug testing. Testing was initiated for non-bargaining unit employees in November 1988 and for bargaining unit employees in December 1990, after an agreement was negotiated with the National Treasury Employees Union.

Under the NRC's Drug Testing Program, employees in certain "testing-designated" positions are subject to random testing. Specifically, these positions include (1) regional and headquarters employees who have unescorted access to vital or protected areas of nuclear plants, Category I fuel facilities, and uranium enrichment facilities; (2) employees who have assigned responsibilities or are on call for regional or headquarters incident response centers; (3) employees who require access to classified information (e.g., national security information or restricted data); and (4) employees who operate motor vehicles and carry passengers.

Approximately 1,680 NRC employees occupy testing-designated positions and are subject to random testing. Potential selectees interviewed for positions in these categories are subject to applicant testing.

The NRC conducted approximately 1,028 tests of all types between October 1, 2002, and September 30, 2003. Since each employee subject to random testing has an equal chance of being selected each time, some NRC employees were randomly tested more than once. All random testing results during this time period have been negative.

The NRC also completed internal quality control reviews during the past year to ensure that the agency's program continues to be administered in a fair, confidential, and effective manner.

The NRC's Drug Testing Program is based on the principles and guidance provided through E.O. 12564, Public Law 100-71, Department of Health and Human Services guidelines, and Commission decisions.

## APPENDIX VIII: REIMBURSABLE WORK AGREEMENTS

<b>U.S. NUCLEAR REGULATORY COMMISSION SUMMARY OF REIMBURSABLE WORK AGREEMENTS<sup>1</sup> (New Budget Authority)</b>			
	<b>FY 2003</b>	<b>FY 2004 (Estimate)</b>	<b>FY 2005 (Estimate)</b>
<b>INTERNATIONAL ASSISTANCE TO FOREIGN GOVERNMENTS AND ORGANIZATIONS</b>			
International Invitational Travel (IAEA & various foreign governments and international organizations)	\$99,000	\$80,000	\$80,000
Material, Protection, Control and Accounting Assistance to Russia/ NIS (DOE)	\$0	\$250,000	\$100,000
Nuclear Safety Initiatives for Central and Eastern Europe (AID)	\$0	\$500,000	\$500,000
Support to GAN - Licensing and Regulatory Review for U.S. Russian Plutonium Disposition (DOE)	\$650,000	\$923,000	\$923,000
Nuclear Safety Initiatives for the New Independent States (AID)	\$2,800,000	\$3,000,000	\$3,000,000
<b>ADMINISTRATIVE AGREEMENTS</b>			
Agreement States Training (State Governments)	\$123,000	\$150,000	\$150,000
Criminal History Program (Licensees)	\$1,509,000	\$1,500,000	\$1,750,000
Material Access Authorization Program (Licensees)	\$155,000	\$300,000	\$325,000
Information Access Authorization Program (Licensees)	\$12,000	\$30,000	\$30,000
Employee Detail (DOE)	\$65,000	\$0	\$0
Witness Travel Expenses (DOJ)	\$1,000	\$0	\$0
<b>OTHER AGREEMENTS</b>			
Fissile Materials Disposition (DOE)	\$0	\$0	\$0
DOE Advanced Gas Reactor Technology (DOE)	\$0	\$250,000	\$250,000
NRC Support for Mars Survey 2003 Lander Programs in the Development of Safety Analysis Report and Safety Evaluation Report (NASA)	\$40,000	\$40,000	\$30,000
Foreign Cooperative Research Agreements (Multiple)	\$1,909,000	\$2,600,000	\$2,000,000

<sup>1</sup> Does not include classified reimbursable work agreements.



**APPENDIX VIII: REIMBURSABLE WORK AGREEMENTS**

	<b>FY 2003</b>	<b>FY 2004 (Estimate)</b>	<b>FY 2005 (Estimate)</b>
Foreign Research Reactor Spent Nuclear Fuel (DOE)	\$150,000	\$233,000	\$233,000
Navy Porting Reviews (U.S. Navy)	\$15,000	\$15,000	\$15,000
VIRGINIA Class Submarine Propulsion Plant Review (DOE)	\$0	\$0	\$0
MARSSIM Assistance with Manual Updates (EPA)	\$17,000	\$0	\$0
DOE Incidental Waste Determinations for INEEL, Handford, SRS, and WVDP (DOE)	\$0	\$1,011,000	\$1,004,000
Closure of High-Level Waste Storage Tanks at the Savannah River Site (DOE)	\$16,000	\$0	\$0
Transport Package for Shipment of Tritium Producing Burnable Absorber Rods (TPBAR) (DOE)	\$0	\$369,000	\$0
Compliance Audit of Selected DOE Science Laboratories (DOE)	\$2,423,000	\$0	\$0
UF6 Cylinder Valve Testing (DOE)	\$37,000	\$0	\$0
MASCA Program (DOE)	\$51,000	\$0	\$0
<b>TOTAL</b>	<b>\$10,072,000</b>	<b>\$11,251,000</b>	<b>\$10,390,000</b>

## **APPENDIX IX: CROSS-CUTTING FUNCTIONS**

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### **CROSS-CUTTING FUNCTIONS WITH OTHER GOVERNMENT AGENCIES**

Several government agencies have missions related to those of NRC, and interaction and coordination efforts with other agencies are important in accomplishing the agency's mission. However, NRC continues to be alert to potential inconsistencies with other agencies regarding its strategic initiatives, and aware of any duplication in cooperative activities. The agency has found no strategies or work efforts that are inconsistent with, or that duplicate, those of other agencies. Where needed, the NRC has, or is developing, memoranda of understanding or other agreements with other agencies to ensure that areas of mutual interest and cooperation are treated in a consistent, coordinated, and complementary way that avoids unnecessary duplication or conflict.

To develop programs in those areas that are critical to the NRC's mission, senior agency management meet with other agency counterparts to establish plans and strategies that address common programs and goals. Interagency committees are established, as necessary, to facilitate consensus on programs and promote consistent approaches in implementation. One such example is the Interagency Steering Committee on Radiation Standards. In other areas of mutual interest, agency staff coordinates with other agencies as appropriate. Commission briefings on the status of programs are held as well, such as the periodic briefings by DOE on the High-Level Waste program.

The review of cross-cutting programs, the coordination of those programs, and the identification of any issues are also an integral part of the NRC's internal technical program review process. From an intra-agency perspective, there is no substantive cross-cutting or overlap between the programs within the NRC.

A table of major cross-cutting functions with other agencies and their relationship to NRC programs is provided below. This is followed by descriptions of the specific NRC areas of mutual interest with other agencies.

**APPENDIX IX: CROSS-CUTTING FUNCTIONS**

<b>Agency</b>	<b>Areas of Mutual Interest</b>	<b>NRC Program/(Strategic Arena)</b>
Department of Energy	High-Level Waste Disposal	High-Level Waste (Nuclear Waste Safety)
	Transportation and Storage of Spent Fuel and Waste	Spent Fuel Storage and Transportation Licensing and Inspection (Nuclear Waste Safety)
	Uranium Mill Tailings Radiation Control Act	Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)
	Low-Level Waste	Regulation of Low-Level Waste (Nuclear Waste Safety)
	Excess Plutonium Disposition Mixed Oxide Fuel Fabrication Regulatory Oversight at Gaseous Diffusion Plants	Fuel Facilities Licensing and Inspection Nuclear Materials Users Licensing and Inspection (Nuclear Materials Safety)
	Mitigation of Threat from Certain Discrete Radioactive Material	Environmental Protection & Low-Level Waste Management (Nuclear Waste Safety)
	Security of Classified National Security Information and Restricted Data Tracking Nuclear Materials	Fuel Facilities Licensing and Inspection Nuclear Materials Users Licensing and Inspection (Nuclear Materials Safety)
	Energy Infrastructure	Reactor Inspection & Performance Assessment (Nuclear Reactor Safety)
	Excess Plutonium Disposition	International Nuclear Safety Support (International Nuclear Safety Support)
	New Reactor Licensing Advanced Gas Reactor Technology and Fuel Evaluations	New Reactor Licensing (Nuclear Reactor Safety)

**APPENDIX IX: CROSS-CUTTING FUNCTIONS**

<b>Agency</b>	<b>Areas of Mutual Interest</b>	<b>NRC Program/(Strategic Arena)</b>
Department of Homeland Security Department of Energy Federal Bureau of Investigation Defense Intelligence Agency Central Intelligence Agency Department of State National Security Council Federal Emergency Management Agency Homeland Security Council Department of Transportation Department of Justice Secret Service/DHS Bureau of Alcohol, Tobacco, and Firearms (DOJ) U.S. Coast Guard Department of Defense Federal Aviation Administration Environmental Protection Agency Immigration and Customs/DHS (ICE) Terrorist Threat Integration Center (TTIC)	Threat Assessment Safeguards (Physical Protection and Material Control and Accounting) Legislation Integrated Response State Outreach Enhanced Weaponry Emergency Response Consequence Management Materials in Transit Licensee Partnering National Response Administrative Policies Impacting NRC Equities	Reactor Licensing Reactor Inspection & Performance Assessment (Nuclear Reactor Safety)  Fuel Facilities Licensing and Inspection Nuclear Materials Users Licensing & Inspection (Nuclear Materials Safety)  Spent Fuel Storage and Transportation Licensing and Inspection  Homeland Security (Nuclear Waste Safety)
Environmental Protection Agency	Groundwater Protection Site Release Standards Review of Grading of Environmental Impact Statements More Efficient Regulation of Mixed Waste, In-Situ Leach Uranium Recovery Facilities, and Low-End Source Material	Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)  Regulation of Decommissioning Environmental Protection & Low-Level Waste Management (Nuclear Waste Safety)
	High-Level Waste Site-Specific Standards	High-Level Waste Regulation (Nuclear Waste Safety)
Council on Environmental Quality	Administers Environmental Policy Under the National Environmental Policy Act	High-Level Waste Regulation Environmental Protection & Low-Level Waste Management (Nuclear Waste Safety) Reactor Licensing Reactor License Renewal New Reactor Licensing (Nuclear Reactor Safety)
Federal Bureau of Investigation	Investigation and/or Response to Suspected Terrorist or  Criminal Initiated Threat	Reactor Inspection & Performance Assessment (Nuclear Reactor Safety)  Nuclear Materials Users Licencing and Inspection Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)

**APPENDIX IX: CROSS-CUTTING FUNCTIONS**

<b>Agency</b>	<b>Areas of Mutual Interest</b>	<b>NRC Program/(Strategic Arena)</b>
Department of Homeland Security	Response to Suspected Terrorist Threat or Incident Involving Licensed Reactor, Material, or Waste Facilities	Reactor Inspection & Performance Assessment (Nuclear Reactor Safety)  Nuclear Materials Users Licensing and Inspection (Nuclear Materials Safety)  Homeland Security Regulation of Decommissioning (Nuclear Waste Safety)
Federal Emergency Management Agency	Offsite Nuclear Power Plant Emergency Planning	Reactor Licensing Reactor Inspection & Performance Assessment (Nuclear Reactor Safety)
	Offsite Fuel Cycle Facility Emergency Planning	Fuel Facilities Licensing and Inspection Nuclear Materials Users Licensing & Inspection (Nuclear Materials Safety)
	National Dam Safety Program	Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)
	Potassium Iodide Supplement Program	Reactor Inspection & Performance Assessment (Nuclear Reactor Safety)
Federal Energy Regulatory Commission	Utility Economic Deregulation, Antitrust and Market Power Issues	Reactor Licensing (Nuclear Reactor Safety)
Department of Transportation	Transportation of Radioactive and Fissile Materials Emergency Transportation	Spent Fuel Storage and Transportation Licensing and Inspection (Nuclear Waste Safety)
Surface Transportation Board	Private Fuel Storage Environmental Impact Statement	Spent Fuel Storage and Transportation Licensing and Inspection (Nuclear Waste Safety)
Food & Drug Administration	Approval of Medical Devices Incorporating Byproduct Materials, Radiopharmaceuticals, and Radioactively Labeled Biologic Materials	Nuclear Materials Users Licensing and Inspection (Nuclear Materials Safety)
Occupational Safety & Health Administration	Worker Health and Safety	Reactor Licensing Reactor Inspection & Performance Assessment (Nuclear Reactor Safety)
		Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)

**APPENDIX IX: CROSS-CUTTING FUNCTIONS**

<b>Agency</b>	<b>Areas of Mutual Interest</b>	<b>NRC Program/(Strategic Arena)</b>
Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry	Public Health and Safety in the Release and Transportation of Ionizing Radiation	Reactor Inspection & Performance Assessment (Nuclear Reactor Safety)  Fuel Facilities Licensing and Inspection Materials Incident Response State and Tribal Programs (Nuclear Materials Safety)  High-Level Waste Regulation (Nuclear Waste Safety)
Department of Interior	Protection of the Environment	Reactor Licensing (Nuclear Reactor Safety)  Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)  Spent Fuel Storage and Transportation Licensing and Inspection Regulation of Decommissioning Environmental Protection & Low-Level Waste Management  (Nuclear Waste Safety)
Department of Labor Department of Justice	Enforcement	Reactor Inspection and Performance Assessment (Nuclear Reactor Safety)  Nuclear Materials Users Licensing & Inspection (Nuclear Materials Safety)
	Investigations	Reactor Inspection and Performance Assessment (Nuclear Reactor Safety)  Nuclear Materials Users Licensing & Inspection (Nuclear Materials Safety)
Department of State Department of Defense Agency for International Development Department of Energy Department of Commerce	Nuclear Safety Assistance to Other Countries	International Nuclear Safety Support (International Nuclear Safety Support)  Environmental Protection & Low-Level Waste Management (Nuclear Waste Safety)
Department of State Department of Defense Department of Energy Department of Commerce	Export of Nuclear and Nuclear Related Materials, Equipment, and Technology	International Nuclear Safety Support (International Nuclear Safety Support)

## APPENDIX IX: CROSS-CUTTING FUNCTIONS

Agency	Areas of Mutual Interest	NRC Program/(Strategic Arena)
National Security Council Department of State Department of Energy	Nuclear Safeguards Assistance to Other Countries	International Nuclear Safety Support (International Nuclear Safety Support)
Department of State Department of Energy Department of Defense Representatives from various intelligence and investigative agencies	Compliance with Nonproliferation and Safeguards Treaties and Agreements	International Nuclear Safety Support (International Nuclear Safety Support)
Department of State Department of Energy Department of Defense Representatives from various intelligence and investigative agencies	Assistance to Strengthen International Atomic Energy Agency Safeguards and activities with the Nuclear Energy Agency for cooperation with countries with advanced nuclear power programs.	International Nuclear Safety Support (International Nuclear Safety Support)

Department of Energy (DOE)--The NRC and DOE have related but separate responsibilities with regard to high-level waste (HLW) disposal. As specified in the Nuclear Waste Policy Act of 1982, as amended, DOE is responsible for characterizing the site and for the design and construction of the repository, and NRC is responsible for regulatory oversight, including licensing the construction and operation of the facility. Our strategy is to provide regulatory guidance to DOE and to prepare a high-level waste repository at a pace consistent with the national program. An agreement is in place with DOE that outlines the procedures for staff consultation and exchange of information. This procedural agreement was updated in 1999 to incorporate changes to the HLW program since 1993.

DOE is responsible for commercial, research, and naval reactor spent nuclear fuel. Due to the nature of the Naval Nuclear Propulsion Program's (NNPP) spent nuclear fuel, NRC communicates directly with NNPP to gather information on issues specific to NNPP.

The NRC also interacts with DOE on a number of activities associated with the transportation and storage of spent nuclear fuel. Further, DOE is required by law to use NRC-certified packaging for certain waste and spent fuel shipments. NRC and DOE have established cost-reimbursable agreements for NRC to provide technical assistance and approval of foreign research reactor spent fuel and other specific transport cask designs.

The NRC and DOE both have responsibilities in carrying out the Uranium Mill Tailings Radiation Control Act Title I Program and in the long-term care of reclaimed uranium mill tailings sites. Although DOE has the responsibility for carrying out remedial action, the NRC must concur in DOE's selection and completion of the remedial action, including groundwater corrective action, and must license the sites for long-term care. The NRC and DOE have a memorandum of understanding (MOU) to minimize or eliminate unnecessary duplication of effort between the two agencies.

## **APPENDIX IX: CROSS-CUTTING FUNCTIONS**

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NRC and DOE are assigned responsibilities for the management of low-level radioactive waste (LLW) under the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments. These responsibilities are different but complementary; thus, an MOU or other type of agreement has not been necessary. NRC and DOE interact on LLW policy, regulatory, and technical issues.

DOE and NRC have established a cost-reimbursable agreement for NRC to provide technical assistance and coordinate with DOE on regulatory issues associated with DOE's disposition of excess plutonium through measures other than mixed oxide (MOX) fuel fabrication/irradiation. Under the agreement, NRC advises DOE on regulatory issues associated with activities such as pit disassembly, conversion, and immobilization.

The FY 1999 Defense Authorization Act (P.L. 105-261) gave NRC statutory licensing authority over any MOX fuel fabrication facility constructed by DOE or its contractors to convert excess weapons plutonium into MOX reactor fuel. The facility will be located at DOE's Savannah River Site. This program depends on a number of factors outside of NRC control, including national policy, DOE funding, and Russian progress on dispositioning excess plutonium.

The NRC and DOE have regulatory oversight of different portions of the Portsmouth and Paducah Gaseous Diffusion Plants. The NRC regulates those portions which are leased by the United States Enrichment Corporation (USEC), while DOE has the regulatory oversight for the remainder of the sites. Regulatory issues occasionally arise which concern both DOE and NRC. An MOU establishes the protocol between the NRC and DOE to address those issues.

The NRC and DOE currently have an agreement that outlines the procedures for NRC's requests for DOE assistance to mitigate threats to the public from certain discrete radioactive material, including material that exceeds Class C waste (10 CFR 61.55) classification. This agreement is being formalized in an MOU.

The NRC and DOE share responsibility for the security of classified National Security information and Restricted Data at certain licensees (principally Naval Nuclear Fuel Facilities) and at USEC. Although DOE has principal responsibility at Naval Nuclear Fuel Facilities under the auspices of its classified contracts with those firms, NRC has responsibility for the personnel security program for access to or control over strategic nuclear material and for information related to the physical protection plans for the protection of the strategic nuclear material. At USEC, NRC has primary responsibility for the protection of classified information and DOE for the personnel security program. The NRC and DOE have several MOUs in place to minimize or eliminate duplication of effort between the two agencies, and are instituting an additional MOU to address the MOX fuel fabrication facility.

The NRC and DOE share responsibility for the Nuclear Materials Management and Safeguards System (NMMSS), which is a computer database that accounts for nuclear materials in the United States.



## **APPENDIX IX: CROSS-CUTTING FUNCTIONS**

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Department of Energy; Federal Bureau of Investigation; Customs Service; Defense Intelligence Agency; Central Intelligence Agency; Department of State; National Security Council; Federal Emergency Management Agency; Department of Homeland Security; Department of Transportation; Department of Justice; Secret Service; Bureau of Alcohol, Tobacco, and Firearms; U.S. Coast Guard; Department of Defense; Federal Aviation Administration; Environmental Protection Agency--The NRC, as part of its mission to protect public health and safety and ensuring the common defense and security, maintains close working relationships with other agencies to ensure the design basis threat for radiological sabotage and theft or diversion are current and accurate and coordinates on the establishment and maintenance of safeguards (physical protection and material control and accounting) measures and responsibilities. For this reason, NRC has established Memoranda of Understanding and Letters of Agreement for the exchange of relevant threat information with most of these organizations, and additional agreements will be developed, as needed. These arrangements also facilitate the timely receipt by NRC of any potential threats to NRC-licensed materials or facilities.

Environmental Protection Agency (EPA)--The NRC and EPA share responsibility for protection of public health and safety and the environment. There are numerous MOUs and interrelated activities between the NRC and EPA. NRC and EPA have been successful in many of these interrelated activities, including the development of the Multi-Agency Radiation Site Survey and Investigation Manual and the Multi-Agency Radiation Laboratory Protocols Manual, support for the National Research Council Committee on the Biological Effects of Ionizing Radiation, development of the Joint NRC/EPA Guidance for Testing Requirements for Mixed Radioactive and Hazardous Waste, development of a Technical Position for Disposition of Cesium-137 Contaminated Emission Control Dust, development of a nationwide survey to analyze for radioactive contamination of sewer sludge and ash at publicly-owned treatment works, and development of modeling scenarios in support of potential rulemakings for recycle/reuse of radioactively contaminated materials. The NRC is currently working with EPA to define roles, responsibilities, and jurisdictions regarding orphan source issues and to develop regulations to facilitate the disposal of mixed wastes. The NRC is also working with EPA and authorized States to determine the extent to which the NRC can rely on EPA programs to protect groundwater at in-situ leach uranium recovery facilities.

Under Section 309 of the Clean Air Act, the Administrator of the EPA is directed to review and publish any comments on the environmental impacts of Federal activities, including actions for which Environmental Impact Statements (EISs) are prepared. Therefore, NRC must file all EISs with the EPA. EPA reviews these EISs, rates them, and publishes the results in the *Federal Register*. EISs found to be unsatisfactory by EPA are referred to the Council on Environmental Quality.

As specified in the Energy Policy Act of 1992, EPA is tasked to develop site-specific HLW standards consistent with the recommendations of the National Academy of Sciences report on the Technical Bases for Yucca Mountain Standards. NRC had one year to develop an implementing rule after issuance of final EPA standards. EPA issued its final standards for Yucca Mountain on June 13, 2001. NRC issued its final HLW regulation on November 2, 2001, consistent with EPA standards.

## **APPENDIX IX: CROSS-CUTTING FUNCTIONS**

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EPA is responsible for developing general radiation standards, which are then reflected in NRC regulations and other requirements. EPA has expressed concerns with certain provisions of NRC's license termination rule. In 2003, NRC and EPA signed a Memorandum of Understanding that outlines the consultation process that the agencies will undertake to reduce dual regulation and regulatory burden for NRC licensees. Top-level NRC and EPA management will continue addressing finality for sites that have complied with the NRC cleanup standards for license termination. NRC also coordinates with EPA on certain environmental reviews conducted under NEPA and on low-level waste disposal rulemakings.

Council on Environmental Quality (CEQ)--The CEQ was established by Title II of the National Environmental Policy Act. The CEQ role is to assist and advise the President on policies and programs of the Federal Government affecting environmental quality. In cases where EISs are found to be unsatisfactory or where there is disagreement between NRC and a consulting agency, the CEQ may be called upon to resolve such disagreement.

Federal Bureau of Investigation--The NRC and the FBI share responsibility (along with the Federal Emergency Management Agency) for a response to a suspected terrorist or criminal initiated threat or incident involving NRC-licensed facilities or material. The FBI has lead responsibility for law enforcement during a threat or incident and the NRC retains the responsibility for radiological matters. The NRC and FBI have an MOU to minimize or eliminate unnecessary duplication of effort between the two agencies.

Department of Homeland Security (DHS)--The NRC coordinates with DHS (along with the Federal Emergency Management Agency, Federal Bureau of Investigation and others) for a response to suspected terrorist threats or incidents involving NRC-licensed facilities or material. The NRC Homeland Security activities support the DHS strategic objectives, which are: Prevent terrorist attacks within the United States; Reduce America's vulnerability to terrorism; and, Minimize the damage and recover from attacks that do occur.

Federal Emergency Management Agency (FEMA)--FEMA has the lead responsibility for offsite nuclear power plant emergency planning and for nuclear materials emergency planning. FEMA also has the lead in assessing the adequacy of offsite emergency plans and preparedness. NRC is responsible for onsite radiological emergency preparedness and for review of FEMA findings and determinations as to whether offsite plans are adequate and can be implemented. NRC also has the responsibility to make radiological health and safety decisions with regard to the overall state of emergency preparedness, such as assurance for continued operation and shutdown of operating reactors. Should an actual peacetime radiological emergency require more than one agency to respond, the Federal Radiological Emergency Response Plan (FRERP) provides for coordination of all Federal response activities. The FRERP is maintained by the Federal Radiological Preparedness Coordinating Committee (FRPCC); NRC is an active member in several FRPCC subcommittees that develop Federal procedures and guidance. In the event of an emergency involving an NRC-regulated entity, NRC is the lead Federal agency and works closely with six agencies: FEMA, DOE, EPA, the

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United States Department of Agriculture (USDA), Health and Human Services, and National Oceanic and Atmospheric Administration. Representatives of these agencies train with, and are integrated into, the NRC response team. Response coordination on a broader scale is provided by the Federal Response Plan for emergencies of all kinds, including responses under the National Contingency Plan (NCP) for emergencies involving chemical and radiological hazards occurring together. NRC is a member of the teams that coordinate actions under the NCP. The NRC and FEMA share responsibility (along with FBI) for a response to a suspected terrorist or criminal initiated threat or incident involving NRC-licensed facilities or material. FEMA has lead responsibility for consequence management during a threat or incident, and the NRC retains the responsibility for radiological matters. The NRC and FEMA have an MOU to minimize or eliminate unnecessary duplication of effort between the two agencies.

FEMA and the NRC share involvement in the National Dam Safety Program. The primary purpose of this program is to bring together the expertise and resources of the Federal and non-Federal communities to achieve national dam hazard reduction. The NRC only has regulatory authority over uranium mill tailings dams and those dams integral to the operation of NRC-licensed facilities, or the possession and use of NRC-licensed material, that pose a radiological hazard if these dams should fail.

Federal Energy Regulatory Commission (FERC)--The NRC and the FERC have ongoing interaction regarding issues of mutual concern, such as: (1) FERC actions with respect to economic deregulation of the electric utility industry and the potential impact of FERC's deregulation activities on the NRC's mandate to protect public health and safety, and (2) the respective roles of the NRC and FERC in evaluating antitrust and market power issues arising from NRC power reactor license applicants or licensees. NRC supports those aspects of the President's electric sector restructuring legislation that pertain to it, in particular, the elimination of NRC's duplicative role in antitrust reviews.

Department of Transportation (DOT)--Under an MOU, the NRC and the DOT share responsibility for developing, establishing, implementing, and enforcing consistent and comprehensive regulations and requirements for the safe transportation of radioactive and fissile materials, often through interagency committees. Generally, the NRC works with DOT to develop regulations for transporting materials, and the NRC adopts DOT requirements into its regulations. In addition, the NRC reviews foreign approved transportation packages to support DOT's approvals of such packages for import/export shipments.

Surface Transportation Board (STB)--The NRC has an MOU with the STB (an independent agency administratively housed under DOT), which has a major Federal action to take with regard to the Private Fuel Storage (PFS) away-from-reactor, independent spent fuel storage installation application. The MOU enables this agency to be a cooperating Federal agency with NRC for the development of the PFS environmental impact statement.

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Food and Drug Administration (FDA)--The NRC and the FDA have an MOU that outlines procedures for sharing information of mutual interest relating to the approval of medical devices, radioactive drugs, and radioactive biologics when these products contain NRC-regulated material. The NRC routinely relies on prior FDA approval of medical devices as an essential component of the NRC's sealed source and device safety evaluations. The MOU also establishes procedures for notification, sharing of information, and coordination of joint inspections of events related to design and manufacturing defects and failures of these devices or of radioactive drugs or radioactive biologics.

Occupational Safety and Health Administration (OSHA)--By an October 1988 OSHA/NRC MOU, NRC and OSHA share responsibility for worker health and safety at NRC-regulated facilities. NRC regulates worker safety concerning radiation and chemical risks resulting from processing radioactive material, and OSHA regulates worker safety concerning non-radiological and other industrial hazards.

Department of Health and Human Services/Public Health Service, Agency for Toxic Substances and Disease Registry (ATSDR)--The NRC coordinates with ATSDR on issues relevant to the agency's mission to prevent exposure and human health effects and diminished quality of life associated with exposure to hazardous substances from waste sites, unplanned releases, and other sources of pollution in the environment. This coordination includes ATSDR's hazardous substances role in public health, including the impact of radioactive releases from power plants on adjacent communities' and Indian reservations' air, water, and food chain and impacts resulting from transportation of nuclear waste.

Department of the Interior (DOI), Fish and Wildlife Service (FWS)--Under the Endangered Species Act, the NRC has responsibility to assure that its actions are protective of endangered species. NRC consults with the FWS in evaluating effects on endangered species of proposed NRC actions. If a proposed NRC action has the potential to affect endangered species, NRC prepares a biological assessment of the effects, and the FWS then renders a biological opinion. This consultation process can be extensive, as in the Atlas uranium mill tailings remediation case.

Department of Interior (DOI), Bureau of Land Management (BLM), and Bureau of Indian Affairs (BIA)--The NRC staff has signed an MOU with the DOI's BLM and BIA each has a major Federal action to take with regard to the PFS ISFSI application. The memoranda will enable these agencies to be cooperating Federal agencies with NRC for the development of the PFS environmental impact statement.

Department of Labor (DOL)/Department of Justice (DOJ)--The NRC monitors discrimination actions filed with the DOL under Section 211 of the Energy Reorganization Act and develops enforcement actions where there are properly supported findings of discrimination, either from NRC's Office of Investigations or from DOL adjudications. Suspected criminal activities concerning NRC licensees, and others within NRC's regulatory jurisdiction, are referred to the DOJ.

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Coordination with DOJ occurs prior to initiating any civil enforcement action for matters under DOJ consideration for criminal prosecution.

Department of State (DOS), Department of Defense (DoD), Agency for International Development (AID), Department of Energy, Department of Commerce (DOC)--The NRC shares responsibility with the DOS, DOE, DoD and the AID in providing nuclear safety and safeguards assistance to other countries. DOS provides foreign policy guidance for U.S. government agencies in carrying out such assistance, while NRC contributes actively to the formulation of this guidance and clears its assistance programs with DOS to ensure they are within U.S. Government policy. The NRC also shares responsibility with DOE for providing nuclear safety and safeguards assistance internationally. The NRC and DOE coordinate their efforts with each other and with other countries providing assistance to ensure they are complementary and to avoid duplication and conflict. The National Security Council provides high-level policy guidance on key issues in the international assistance area and resolves questions that arise in providing such assistance.

The NRC, DOE, DOS, DoD, and DOC have interrelated roles in controlling exports of nuclear and nuclear-related materials, equipment, and technology. The NRC's primary role involves issuing export licenses for nuclear materials and equipment, including reactors. The following issue licenses or authorizations in related areas: DOE for nuclear technology exports and for retransfers or changes in form or content of previously exported nuclear materials and equipment; DOS for munitions made with depleted uranium; and DOC for nuclear reactor balance-of-plant equipment and "dual use" commodities. Each agency is obliged to consult with the others (including, if warranted, DoD) for significant cases.

The NRC, DOE, DOS, DoD, and representatives from various intelligence and investigative agencies have interrelated roles for implementing International Atomic Energy Agency (IAEA) safeguards at U.S. facilities under the U.S.-IAEA Safeguards Agreement and for providing assistance to strengthen IAEA safeguards. NRC has responsibility for facilitating IAEA safeguards at licensee facilities and for providing technical support to IAEA's safeguards-strengthening efforts. DOS has lead responsibility for establishing foreign policy guidance and providing funding for IAEA technical support and inspection activities; DOE has responsibility for implementing IAEA's safeguards at the DOE sites and for coordinating technical support to the IAEA; and DoD and the various intelligence and investigative agencies provide oversight to ensure that national security is not degraded by IAEA safeguards activities. Coordination of U.S. involvements with IAEA safeguards is provided by the IAEA Steering Committee and its subordinate subcommittees and subgroups. NRC is represented in each of these groups.

NRC, DOE and DOS also participate in activities to enhance domestic and global nuclear safety through other multilateral organizations such as the Organization for Economic Co-operation and Development (OECD). The mission of the OECD Nuclear Energy Agency (NEA) is to assist its Member countries in maintaining and further developing, through international cooperation, the scientific, technological and legal bases required for a safe, environmentally friendly and economical

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use of nuclear energy for peaceful purposes, as well as to provide authoritative assessments and to forge common understandings on key issues, as input to government decisions on nuclear energy policy and to broader OECD policy analyses in areas such as energy and sustainable development. The NEA is NRC's primary multilateral organ for cooperation with countries with advanced nuclear power programs. Specific areas of competence of the NEA, include safety and regulation of nuclear activities, radioactive waste management, radiological protection, nuclear science, economic and technical analyses of the nuclear fuel cycle, nuclear law and liability, and public information. NRC senior staff participate and provide leadership in NEA technical committees addressing reactor safety inspection, research activities, and waste. In the area of advanced reactor design research, DOE provides leadership through various workshops and meetings with close cooperation of the NRC. Additionally, DOE provides leadership in radiological protection and public health activities in coordination with NRC. DOS serves as the primary international coordinator of nuclear activities and policy formulation executed primary through NEA Steering Committee meetings.

DOE and NRC established a cost-reimbursable agreement for NRC to provide Material Protection, Control, and Accounting Support to the regulatory agencies of Russia, Ukraine, and Kazakhstan through the development of regulations and the development of the licensing, inspection, and enforcement programs.

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**3 NUCLEAR REACTOR SAFETY**

**4 NUCLEAR MATERIALS SAFETY**

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