

# FY 2012 CONGRESSIONAL BUDGET JUSTIFICATION



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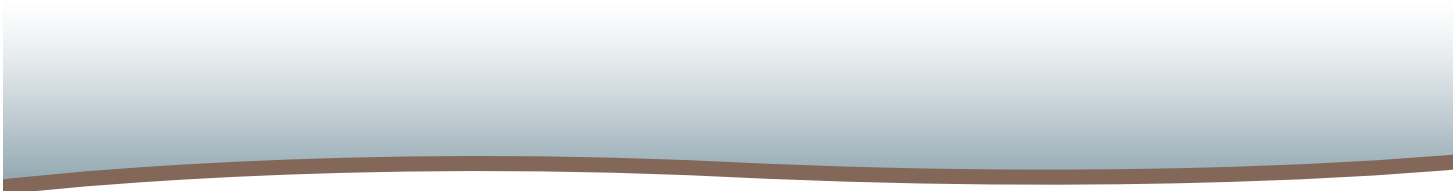
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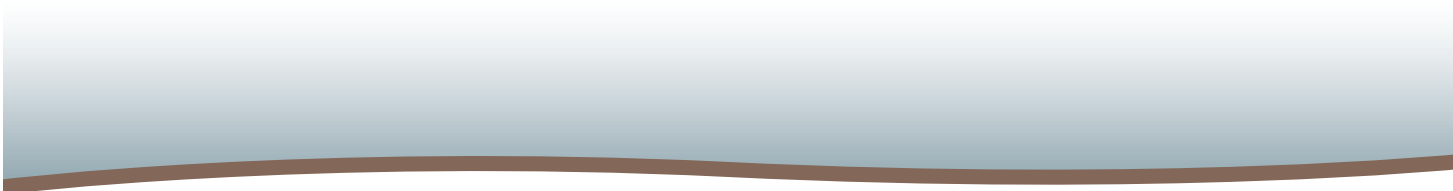




# EXECUTIVE SUMMARY



119	5,385,824	4,902
1,626,549	5,463,538	8,554,013
1,902	5,494	93,100
8,554,013	900	19,968
93,100	31,119	110,251
19,968	1,881,730	
110,251	1,706,600	
9,040	2,108,658	
1,881,730	5,386,824	
1,706,600	5,463,538	
2,108,658	5,494	
5,386,824	1,902	
5,463,538	900	
5,494	31,119	
1,902	1,626,549	
900	8,554,013	
31,119	1,902	
1,626,549	1,902	
1,902	8,554,013	
8,554,013	93,100	
93,100	19,968	
19,968		



# Executive Summary

The U.S. Nuclear Regulatory Commission (NRC) is an independent Federal agency established to license and regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment. The NRC has formulated its Fiscal Year (FY) 2012 Performance Budget to support the agency's Safety and Security strategic goals and objectives.

The NRC's Safety goal is to ensure adequate protection of public health and safety and the environment. The agency's safety program objective is to prevent the occurrence of any nuclear reactor accidents, inadvertent criticality events, acute radiation exposures resulting in fatalities, or significant releases of radioactive materials. The Security goal is to ensure adequate protection in the secure use and management of radioactive materials. The security program objective is to prevent any instances in which licensed radioactive materials are used in a hostile manner in the United States.

The NRC continues to perform the critical functions to ensure the safe and secure use of byproduct, source, and special nuclear materials in the United States and to protect both the public and workers from radiation hazards that could result from the use of radioactive materials. The NRC's principal regulatory functions are to establish regulatory requirements; issue licenses to facility owners, possessors, and users of nuclear materials; inspect these licensees to ensure that they are in compliance with NRC rules and regulations and operate in accordance with their license; and take appropriate enforcement action for violations of regulatory requirements.

The NRC's scope of responsibility includes regulation of commercial nuclear power plants; research, test, and training reactors; nuclear fuel facilities; medical, academic, and industrial uses of radioactive materials, and the transport, storage, and disposal of radioactive materials and waste.

Since October 2007, the NRC has received 18 combined applications and an application for Watts Bar Unit 2 to construct and operate new nuclear power reactors. Five different reactor designs are referenced in these applications; the NRC is currently reviewing the design applications for certification. These design certifications will reduce the time required to approve a power reactor license application when a previously certified reactor design is used. If and when new power reactors are brought

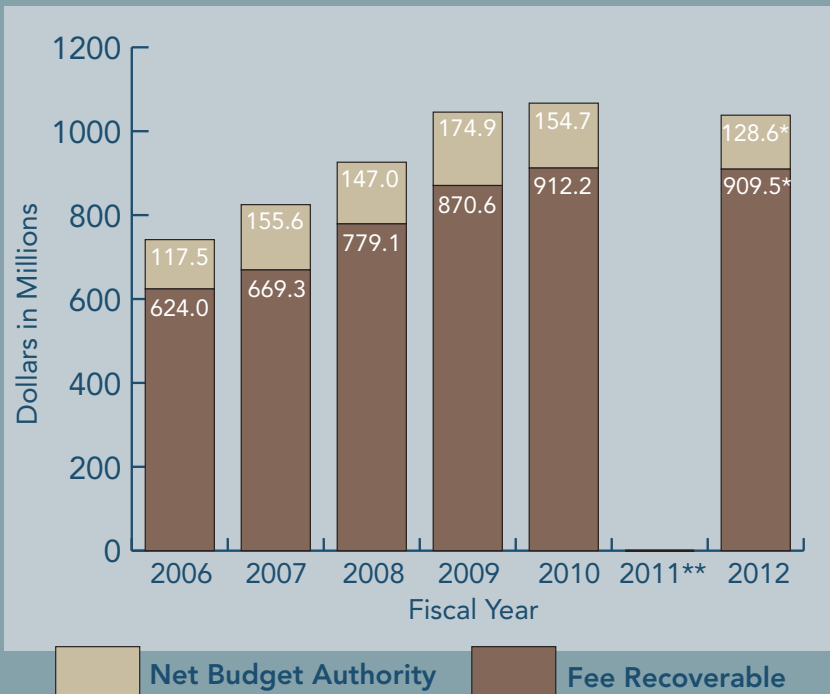
## *THE MISSION OF THE U.S. NUCLEAR REGULATORY COMMISSION*

*License and regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment.*



*The Commission (left to right): Commissioner William D. Magwood, IV, Commissioner Kristine L. Svinicki, Chairman Gregory B. Jaczko, Commissioner George Apostolakis, Commissioner William C. Ostendorff.*

Figure 1. Net Budget Authority



\*FY 2012 projected numbers  
 \*\*FY 2011 numbers TBD

on line, they will substantially increase U.S. electrical generating capacity. The resurgence of interest in construction of new nuclear power plants has also resulted in applications to construct and operate facilities for the manufacturing of nuclear fuel (e.g., uranium milling, conversion, enrichment, and fabrication). The NRC will perform safety, security, and environmental reviews of facility applications, a uranium deconversion facility application, and applications for new uranium recovery facilities.

The NRC ensures safety and security by licensing and overseeing nuclear waste and spent fuel storage facilities, certifying storage and transportation containers, and responding to events, as well as through decontamination and decommissioning activities. Additionally, security plans, emergency preparedness, and testing are a major part of the licensing, oversight, and other regulatory activities that provide for the safety and security of

**TOTAL NRC BUDGET AUTHORITY BY APPROPRIATION  
 (DOLLARS IN MILLIONS)**

NRC Appropriations	FY 2010 Enacted	FY 2012	
		Request	Changes from FY 2010
<b>Salaries and Expenses (S&amp;E)</b>			
Budget Authority	1,056.0	1,027.2	(28.8)
Offsetting Fees	902.4	899.7	(2.7)
<b>Net Appropriated S&amp;E</b>	<b>\$153.6</b>	<b>\$127.5</b>	<b>(\$26.2)</b>
<b>Office of the Inspector General (OIG)</b>			
Budget Authority	10.9	10.9	0.0
Offsetting Fees	9.8	9.8	0.0
<b>Net Appropriated OIG</b>	<b>\$1.1</b>	<b>\$1.1</b>	<b>\$0.0</b>
<b>Total NRC</b>			
Budget Authority	1,066.9	1,038.1	(28.7)
Offsetting Fees	912.2	909.5	(2.7)
<b>Total Net Appropriated</b>	<b>\$154.7</b>	<b>\$128.6</b>	<b>(\$26.1)</b>

Numbers may not add due to rounding.

nuclear facilities and materials. The NRC further enhances its regulatory program through coordination and cooperation with other Federal agencies, States, and international organizations and governments.

## OVERVIEW OF THE FY 2012 NRC CONGRESSIONAL BUDGET JUSTIFICATION

The NRC's FY 2012 Congressional Budget Justification provides the necessary resources for the Nuclear Reactor Safety and Nuclear Materials and Waste Safety Programs to carry out the agency's mission and achieve the stated goals and desired outcomes for the American public. The NRC's proposed FY 2012 budget is \$1,038.1 million, including

3,981.0 full-time equivalents (FTE), which represents a decrease of \$28.7 million, including an increase of 0.8 FTE, when compared to the FY 2010 funding levels.

The Office of the Inspector General's (OIG's) FY 2012 proposed budget of \$10.9 million includes resources to carry out the Inspector General's mission to independently and objectively conduct audits and investigations to ensure the efficiency and integrity of NRC programs and operations and to promote cost-effective management.

Pursuant to the provisions of the Energy Policy Act of 2005, the NRC's FY 2012 budget provides for 90 percent fee recovery, less (1) appropriations from the Nuclear Waste Fund, (2) appropriations to implement Section 3166 of the Ronald W. Reagan National Defense

### BUDGET AUTHORITY AND FULL-TIME EQUIVALENTS (DOLLARS IN MILLIONS)

Major Programs	FY 2010 Enacted		FY 2011 Annualized Continuing Resolution		FY 2012 Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE	\$M	FTE
Operating Reactors	541.8	2,090.7			521.3	2,064.4	(20.5)	(26.3)
New Reactors	267.0	893.8			279.5	968.6	12.5	74.8
<b>Nuclear Reactor Safety Subtotal</b>	<b>\$808.8</b>	<b>2,984.5</b>			<b>\$800.8</b>	<b>3,032.9</b>	<b>(\$8.0)</b>	<b>48.4</b>
Fuel Facilities	54.6	208.3			55.2	226.5	0.6	18.2
Nuclear Materials Users	91.6	338.0			92.1	347.1	0.4	9.1
Spent Fuel Storage and Transportation	33.8	122.7			41.2	152.4	7.4	29.7
Decommissioning and Low-Level Waste	38.2	150.2			37.9	142.6	(0.3)	(7.6)
High-Level Waste Repository	29.0	99.0			0.0	0.0	(29.0)	(99.0)
<b>Nuclear Materials and Waste Safety Subtotal</b>	<b>\$247.2</b>	<b>918.1</b>			<b>\$226.5</b>	<b>868.5</b>	<b>(\$20.7)</b>	<b>(49.6)</b>
Inspector General	10.9	58.0			10.9	58.0	0.0	0.0
<b>Subtotal</b>	<b>\$10.9</b>	<b>58.0</b>	<b>\$10.9</b>	<b>58.0</b>	<b>\$10.9</b>	<b>58.0</b>	<b>0.0</b>	<b>0.0</b>
Reimbursable FTE		20.4		19.6		21.6		2.0
<b>Total</b>	<b>\$1,066.9</b>	<b>3,981.0</b>	<b>\$1,066.9</b>	<b>3,980.2</b>	<b>\$1,038.1</b>	<b>3,981.0</b>	<b>(\$28.7)</b>	<b>0.8</b>

Numbers may not add due to rounding.

## U.S. NUCLEAR REGULATORY COMMISSION STRATEGIC GOALS

*Safety—ensure adequate protection of public health and safety and the environment.*

*Security—ensure adequate protection in the secure use and management of radioactive materials.*

Authorization Act for Fiscal Year 2005, and (3) appropriations to conduct generic homeland security activities.

Accordingly, \$909.5 million of the FY 2012 budget will be recovered from fees assessed to NRC licensees and applicants. This will result in a net appropriation of \$128.6 million, which is a decrease of \$26.1 million in net appropriations when compared to the FY 2010 funding levels. In accordance with the requirements defined in Section 51.2 of Office of Management and Budget (OMB) Circular A-11, “Requirements for Program Justification,” the NRC is providing the full cost of its programs.

The Nuclear Reactor Safety Program decreases by \$8.0 million, including an increase of 48.4 FTE, and the Nuclear Materials and Waste Safety Program decreases by \$20.7 million, including 49.6 FTE, when the FY 2012 request is compared to the FY 2010 Enacted. This represents an overall funding decrease of \$28.7 million, including an increase of 0.8 FTE, when compared with FY 2010 funding levels.

## NUCLEAR REACTOR SAFETY

The Nuclear Reactor Safety Program encompasses NRC efforts to license, regulate, and oversee civilian nuclear power, research, and test reactors in a manner that adequately protects public health and safety and the environment. This program also provides high assurance of the physical security of facilities and protection against radiological sabotage. This program contributes

to the NRC’s Safety and Security goals through the activities of the Operating Reactors and New Reactors Business Lines, which regulate existing and new nuclear reactors to ensure their safe operation and physical security.

Overall resources requested in the FY 2012 budget for the Nuclear Reactor Safety Program are \$800.8 million, including 3,032.9 FTE. This funding level represents an overall funding decrease of \$8.0 million, including an increase of 48.4 FTE, when compared with FY 2010 funding levels.

### *Operating Reactors*

The Operating Reactors Business Line supports the licensing, oversight, rulemaking, research, international activities, generic homeland security, and event response associated with the safe and secure operation of 104 civilian nuclear power reactors and 31 research and test reactors. The FY 2012 budget request for operating reactors is \$521.3 million, including 2,064.4 FTE. This represents an overall funding decrease of \$20.5 million, including 26.3 FTE, when compared with FY 2010 funding levels. Some of the major activities that the requested resources will support are the following:

- ▶ conduct technical review for 950 licensing actions, including complex actions such as license amendment requests from power reactor licensees adopting the requirements of National Fire Protection Association (NFPA) 805, “Performance Standard for Fire Protection for Light Water Reactor Electric Generating Plants”

## NUCLEAR REACTOR SAFETY (DOLLARS IN MILLIONS)

Business Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Operating Reactors	541.8	2,090.7	521.3	2,064.4	(20.5)	(26.3)
New Reactors	267.0	893.8	279.5	968.6	12.5	74.8
<b>Total</b>	<b>\$808.8</b>	<b>2,984.5</b>	<b>\$800.8</b>	<b>3,032.9</b>	<b>(\$8.0)</b>	<b>48.4</b>

Numbers may not add due to rounding.

- ▶ review extended power uprate requests for increasing electric generating capacity and one improved standard technical specification conversion
- ▶ conduct 13 active, high- and medium-priority rulemaking activities and resolve an estimated 11 active petitions for rulemaking, including issuing five petitions for rulemaking closure packages
- ▶ conduct critical research and test reactor project management functions pertaining to license renewal application efforts, and applications to produce medical isotopes
- ▶ continue reviews of 12 license renewal applications
- ▶ conduct inspection activities for the 104 operating nuclear power reactors, including the component design-basis inspections, fire protection inspections, and generic issues inspections (approximately 100 per year)
- ▶ continue the Resident Inspector Pipeline Initiative to maintain an experienced and stable onsite inspection presence of qualified

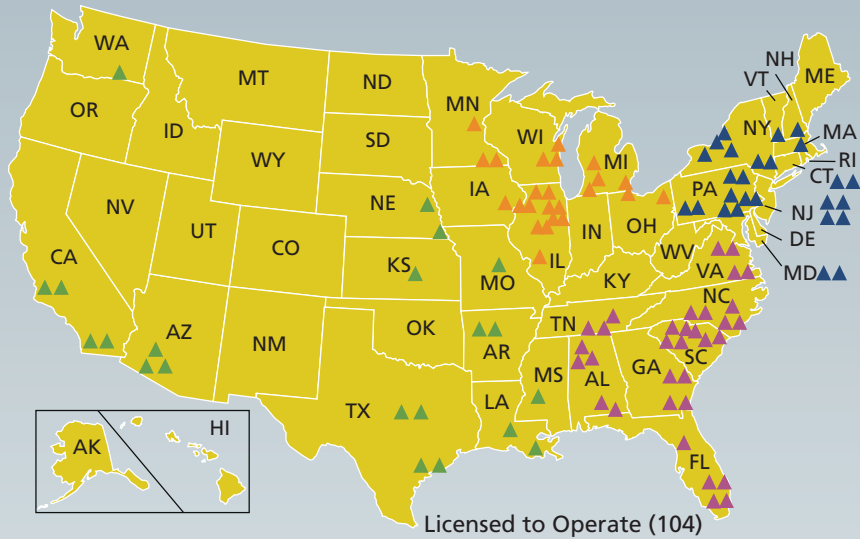
resident inspectors at the 104 nuclear power reactors

- ▶ conduct domestic and international security reviews and support for screening approximately 3,000 national and international operational events, with detailed evaluation of approximately 200 of those events
- ▶ carry out cyber security evaluations, as well as 24 force-on-force security inspections to complete a 3-year cycle for inspecting power reactors
- ▶ evaluate licensee emergency preparedness during biennial exercises that include assessment of offsite response activities by the Federal Emergency Management Agency

### Changes from FY 2010 Enacted

The Operating Reactors Business Line resources decrease in license renewal activities because of schedule changes and the number of applications that will be under review, as well as in research activities. The NRC reallocated resources in FY 2012 to support the Resident Inspector Pipeline Initiative, to provide Multiple Integrated Laser Engagement System support for the force-on-force

**Figure 2. U.S. Operating Commercial Nuclear Power Reactors**



Licensed to Operate (104)

**REGION I**

- CONNECTICUT**
- ▲ Millstone 2 and 3
- MARYLAND**
- ▲ Calvert Cliffs 1 and 2
- MASSACHUSETTS**
- ▲ Pilgrim
- NEW HAMPSHIRE**
- ▲ Seabrook
- NEW JERSEY**
- ▲ Hope Creek
- ▲ Oyster Creek
- ▲ Salem 1 and 2
- NEW YORK**
- ▲ FitzPatrick
- ▲ Ginna
- ▲ Indian Point 2 and 3
- ▲ Nine Mile Point 1 and 2
- PENNSYLVANIA**
- ▲ Beaver Valley 1 and 2
- ▲ Limerick 1 and 2
- ▲ Peach Bottom 2 and 3
- ▲ Susquehanna 1 and 2
- ▲ Three Mile Island 1
- VERMONT**
- ▲ Vermont Yankee

**REGION II**

- ALABAMA**
- ▲ Browns Ferry 1, 2, and 3
- ▲ Farley 1 and 2
- FLORIDA**
- ▲ Crystal River 3
- ▲ St. Lucie 1 and 2
- ▲ Turkey Point 3 and 4
- GEORGIA**
- ▲ Edwin I. Hatch 1 and 2
- ▲ Vogtle 1 and 2
- NORTH CAROLINA**
- ▲ Brunswick 1 and 2
- ▲ McGuire 1 and 2
- ▲ Harris 1
- SOUTH CAROLINA**
- ▲ Catawba 1 and 2
- ▲ Oconee 1, 2, and 3
- ▲ Robinson 2
- ▲ Summer
- TENNESSEE**
- ▲ Sequoyah 1 and 2
- ▲ Watts Bar 1
- VIRGINIA**
- ▲ North Anna 1 and 2
- ▲ Surry 1 and 2

**REGION III**

- ILLINOIS**
- ▲ Braidwood 1 and 2
- ▲ Byron 1 and 2
- ▲ Clinton
- ▲ Dresden 2 and 3
- ▲ LaSalle 1 and 2
- ▲ Quad Cities 1 and 2
- IOWA**
- ▲ Duane Arnold
- MICHIGAN**
- ▲ Cook 1 and 2
- ▲ Fermi 2
- ▲ Palisades
- MINNESOTA**
- ▲ Monticello
- ▲ Prairie Island 1 and 2
- OHIO**
- ▲ Davis-Besse
- ▲ Perry
- WISCONSIN**
- ▲ Kewaunee
- ▲ Point Beach 1 and 2

**REGION IV**

- ARKANSAS**
- ▲ Arkansas Nuclear 1 and 2
- ARIZONA**
- ▲ Palo Verde 1, 2, and 3
- CALIFORNIA**
- ▲ Diablo Canyon 1 and 2
- ▲ San Onofre 2 and 3
- KANSAS**
- ▲ Wolf Creek 1
- LOUISIANA**
- ▲ River Bend 1
- ▲ Waterford 3
- MISSISSIPPI**
- ▲ Grand Gulf
- MISSOURI**
- ▲ Callaway
- NEBRASKA**
- ▲ Cooper
- ▲ Fort Calhoun
- TEXAS**
- ▲ Comanche Peak 1 and 2
- ▲ South Texas Project 1 and 2
- WASHINGTON**
- ▲ Columbia

Note: NRC-abbreviated reactor names listed.  
Source: U.S. Nuclear Regulatory Commission

inspection program, and to review licensing amendments associated with the remotely operated weapons systems installation. Funding is also provided to replenish expiring potassium iodide tablet stockpiles.

*New Reactors*

The New Reactors Business Line supports the licensing, oversight, rulemaking, research, international activities, and generic homeland security associated with the safe and secure development of new power reactors from design, site approval, and construction to operational status. The FY 2012 budget request for new reactors is \$279.5 million, including 968.6 FTE. This represents an overall funding increase of \$12.5 million, including 74.8 FTE, when compared with FY 2010 funding levels. Some of the major activities that the requested resources will support are the following:

- ▶ perform licensing and hearing support for 15 combined licenses, including two new combined license applications during FY 2012
- ▶ certify one design certification amendment, continue licensing reviews, rulemaking, or both on five applications and begin preapplication review on a new design
- ▶ review two early site permit applications and begin review of one new application expected in FY 2012
- ▶ develop and implement the construction inspection program
- ▶ oversee the four reactors expected to be under construction



- ▶ continue licensing and oversight activities for the construction of Watts Bar Unit 2, under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, “Domestic Licensing of Production and Utilization Facilities”
- ▶ conduct 15 domestic and international vendor inspections of component manufacturing quality
- ▶ conduct preapplication activities (e.g., topical report reviews, technical meetings) for two small modular reactor designs
- ▶ perform an acceptance review and initiate a design certification review for one small modular reactor
- ▶ continue the implementation of the Next Generation Nuclear Plant licensing strategy, which was developed in accordance with the Energy Policy Act of 2005
- ▶ continue to develop the regulatory framework that integrates the use of risk insights into the review process and support the resolution of key policy and safety issues associated with small modular reactors

### Changes from FY 2010 Enacted

The New Reactors Business Line shows an increase primarily driven by construction oversight of two new potential reactors under construction (for a total of five) and by development of the workforce to support inspection of up to an additional six reactors in future years. In addition, resources increase to support the review of new advanced reactor applications, increased preapplication interactions with prospective applicants,

and funding for the one-time build-out of a new Headquarters office building.

## NUCLEAR MATERIALS AND WASTE SAFETY

The Nuclear Materials and Waste Safety Program encompasses the NRC’s effort to license, regulate, and oversee nuclear materials and waste in a manner that adequately protects public health and safety and the environment. This program ensures safety and security of materials and waste and protection against radiological sabotage, theft, or diversion of nuclear materials. Through this program, the NRC regulates uranium processing and fuel facilities; research and pilot facilities; nuclear materials users (medical, industrial, research, and academic); spent fuel storage; spent fuel storage casks and transportation packaging; decontamination and decommissioning of facilities; and low-level and high-level radioactive waste. The program contributes to the NRC’s Safety and Security goals through the activities of the Fuel Facilities, Nuclear Materials Users, Spent Fuel Storage and Transportation, and Decommissioning and Low-Level Waste Business Lines regulating byproduct, source, and special nuclear materials.

Overall resources requested in the FY 2012 budget for the Nuclear Materials and Waste Safety Program are \$226.5 million, including 868.5 FTE. This funding level represents an overall funding decrease of \$20.7 million, including 49.6 FTE, when compared with FY 2010 funding levels.

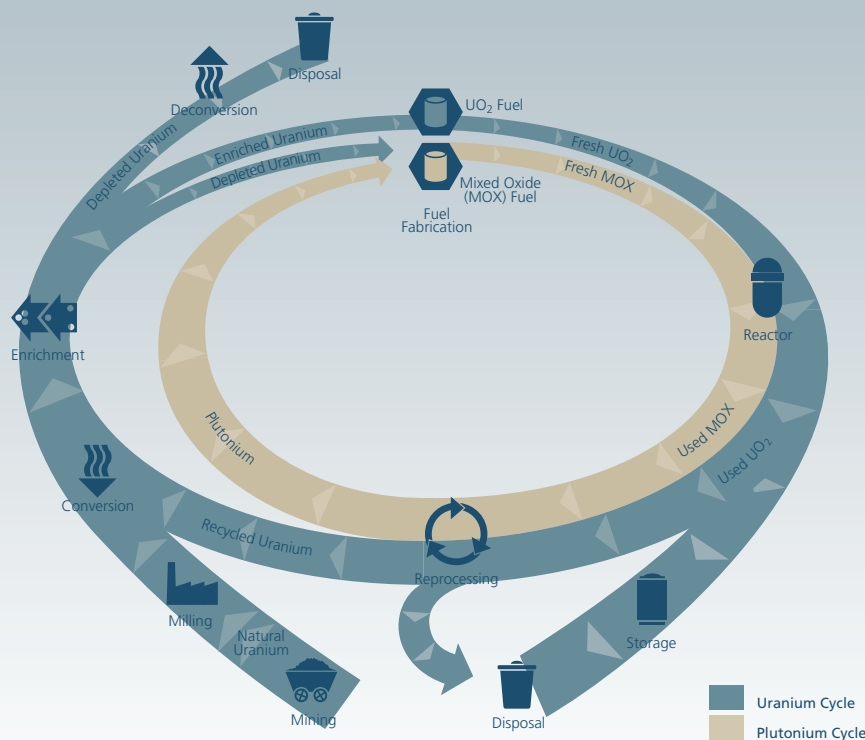
### *Fuel Facilities*

**NUCLEAR MATERIALS AND WASTE SAFETY  
(DOLLARS IN MILLIONS)**

Business Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Fuel Facilities	54.6	208.3	55.2	226.5	0.6	18.2
Nuclear Materials Users	91.6	338.0	92.1	347.1	0.4	9.1
Spent Fuel Storage and Transportation	33.8	122.7	41.2	152.4	7.4	29.7
Decommissioning and Low-Level Waste	38.2	150.2	37.9	142.6	(0.3)	(7.6)
High-Level Waste Repository	29.0	99.0	0.0	0.0	(29.0)	(99.0)
<b>Total</b>	<b>\$247.2</b>	<b>918.1</b>	<b>\$226.5</b>	<b>868.5</b>	<b>(\$20.7)</b>	<b>(49.6)</b>

Numbers may not add due to rounding.

**Figure 3. The Nuclear Fuel Cycle**



The Fuel Facilities Business Line supports licensing, oversight, rulemaking, research, international activities, generic homeland security, and event response associated with the safe and secure operation of various fuel facilities, such as conversion, enrichment, and fuel fabrication facilities, and nuclear fuel research and pilot facilities. The FY 2012 budget request for fuel facilities is \$55.2 million, including 226.5 FTE. This represents an overall funding increase of \$0.6 million, including 18.2 FTE, when compared with FY 2010 funding levels. Some of the major activities that the requested resources will support are the following:

- ▶ licensing and oversight activities associated with fuel facilities and licensees with greater than critical mass quantities of special nuclear material
- ▶ operation and maintenance

of the Nuclear Material Management and Safeguards System database and the Nuclear Materials Information Program

- ▶ emergency preparedness, security, and licensee performance reviews
- ▶ licensing, certification, inspection, oversight, environmental reviews, research, adjudicatory, enforcement, allegation, and other regulatory activities associated with new and operating fuel facilities, including uranium conversion and enrichment and fuel fabrication
- ▶ completion of mandatory hearings for the license applications for the AREVA centrifuge and General Electric-Hitachi laser enrichment facilities
- ▶ licensing review of the International Isotopes depleted uranium deconversion facility
- ▶ significant oversight of construction activities at the Mixed Oxide (MOX) Fuel Fabrication Facility and commencement of construction of the AREVA, General Electric-Hitachi, and International Isotopes facilities

### Changes from FY 2010 Enacted

The Fuel Facilities Business Line resources increase to account for the significant construction activities planned at the MOX facility and commencement of construction at the AREVA centrifuge and General Electric-Hitachi laser enrichment facilities and the International Isotopes depleted uranium deconversion facility and to reflect staffing required at resident inspector offices and historical

data on supplemental and reactive inspections. Resources also increase to support reprocessing rule development activities. These increases are offset by the completion of the licensing and environmental reviews of the AREVA and General Electric-Hitachi license applications, as well as the completion of the licensing and environmental reviews for the International Isotopes depleted uranium deconversion facility application.

### *Nuclear Materials Users*

The Nuclear Materials Users Business Line supports the licensing, oversight, rulemaking, research, international activities, generic homeland security, event response, and State, Tribal, and Federal program activities associated with the safe and secure possession, processing, handling, and use of nuclear materials for the many and diverse uses of these materials. Resources also support the National Materials Program and the Agreement State activities. The FY 2012 budget request for nuclear materials users is \$92.1 million, including 347.1 FTE. This represents an overall funding increase of \$0.4 million, including 9.1 FTE, when compared with FY 2010 funding levels. Some of the major activities that the requested resources will support are the following:

- ▶ completion of 2,500 materials licensing actions and 1,000 routine health and safety inspections, including naturally occurring and accelerator-produced radioactive material and security inspections
- ▶ event evaluation, research, incident response, allegation, enforcement and investigations, and rulemaking activities to maintain the regulatory safety and security infrastructure

needed to process and handle nuclear materials

- ▶ materials activities related to State, Tribal, and Federal programs, including oversight, technical assistance, regulatory development, and cooperative efforts
- ▶ operation of the National Source Tracking System, a secure, Web-based, nationalized central registry designed to enhance the accountability for radioactive sources
- ▶ develop the Integrated Source Management Portfolio, which consists of the National Source Tracking System, the Web-Based Licensing System, and the License Verification System
- ▶ conduct 135–180 import/export of nuclear equipment and material license reviews
- ▶ conduct 45–55 materials-related wrongdoing investigations

## Changes from FY 2010 Enacted

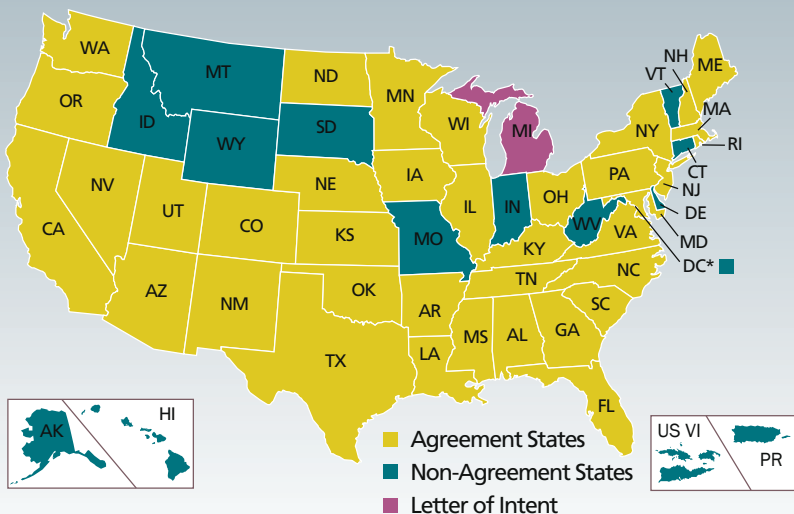
The Nuclear Materials Users Business Line resources increase slightly because of adjustments made within the business line to cover emergent activities. Overall, a slight increase resulted to address the workload associated with the implementation of the Integrated Source Management Portfolio major information technology system, which consists of the National Source Tracking System, the Web-Based Licensing System, and the License Verification System.

## *Spent Fuel Storage and Transportation*

The Spent Fuel Storage and Transportation Business Line supports the licensing, oversight, rulemaking, research, event response, and international activities associated with the safe and secure storage of spent nuclear fuel and safe and secure transportation of radioactive materials. The FY 2012 budget request for spent fuel storage and transportation is \$41.2 million, including 152.4 FTE. This represents an overall funding increase of \$7.4 million, including 29.7 FTE, when compared with FY 2010 funding levels. Some of the major activities that the requested resources will support are the following:

- ▶ review of license requests for site-specific independent spent fuel storage installations (ISFSIs), dual-purpose (storage and transport) casks, transportation security plans, and route approvals to support safe and secure domestic and international transportation of radioactive materials, regulatory requirements for full-core offload

**Figure 4. Agreement States**



\* Includes all major U.S. Territories, such as Guam.

capability at operating reactor sites, and transfer of spent fuel to ISFSIs to support reactor decommissioning

- ▶ regulatory improvements to the proficiency and effectiveness of the licensing, inspection, and enforcement programs associated with storage and transportation of spent nuclear fuel
- ▶ inspection of storage cask and transportation package vendors, fabricators, and designers to ensure safety
- ▶ resolution of technical issues associated with allowance of burnup credit for transportation and storage casks and the transportation and storage of high burnup fuels (greater than 45 gigawatt-days/metric tons of uranium)
- ▶ interaction with the International Atomic Energy Agency and other international regulators to inform the development of the regulatory framework for transportation of radioactive materials, long-term spent fuel and high-level waste storage, deferred transportation, and ultimate geologic disposal

## Changes from FY 2010 Enacted

The Spent Fuel Storage and Transportation Business Line resources are increasing to develop the information necessary to evaluate extended long-term storage of radioactive material. Resources are provided for a risk-informing gap study to identify methods, data, decision criteria, and regulatory actions that are needed to implement a regulatory framework for very long-term (more than 120 years) dry spent fuel storage that is enhanced by risk

insights. Resources will also support a scoping study for a generic environmental impact statement for ensuring protection of the environment from very long-term (more than 120 years) dry spent fuel storage. Resources will also be provided to conduct research on technical issues associated with very long-term dry spent fuel storage and to coordinate with international partners on options for harmonizing international standards for certification of transport packages and licensing of storage cask designs.

In addition, resources will also support regional security inspection oversight of spent nuclear fuel transportation, and wet and dry ISFSI operations. Further, resources will support spent nuclear fuel inspection program development, maintenance, and update, and route surveys. Increases will support rulemaking on security for transportation of radioactive material in quantities of concern, safeguard shipment of spent fuel (Nevada Petition), and security at ISFSIs, which will provide consistent regulation for the various types and locations of ISFSIs.

## *Decommissioning and Low-Level Waste*

The Decommissioning and Low-Level Waste Business Line supports the licensing, oversight, rulemaking, research, and international activities associated with the safe and secure removal of a nuclear facility from service and reduction of residual radioactivity to a level that permits release of the property and termination of the NRC license and the disposition of low-level radioactive waste from all civilian sources. The FY 2012 budget request for

decommissioning and low-level waste is \$37.9 million, including 142.6 FTE. This represents an overall funding decrease of \$0.3 million, including 7.6 FTE, when compared with FY 2010 funding levels. Some of the major activities that the requested resources will support are the following:

- ▶ project management and technical reviews for decommissioning activities for 10 power reactors, 10 decommissioning research and test reactors, 24 decommissioning materials facilities, 21 inactive Title I decommissioning, 11 Title II decommissioning, uranium recovery facilities, and five sites that are under general license with the U.S. Department of Energy (DOE)
- ▶ interfaces with licensees, applicants, Federal and State agencies, the public, other stakeholders, and Native American Tribal governments
- ▶ 8 environmental reviews and 11 safety reviews (hearings included) in support of licensing and oversight of uranium recovery facilities
- ▶ oversight of certain DOE waste determination activities and plans for waste incidental to reprocessing consistent with the NRC's responsibilities in the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005

## Changes from FY 2010 Enacted

The Decommissioning and Low-Level Waste Business Line resources decrease reflect a refocusing of long-term waste research activities and adjustments made to the contract, travel, and training needs and other carryover balances for waste incidental to reprocessing work.

### *High-Level Waste Repository*

The High-Level Waste Repository Business Line supports activities associated with DOE's Yucca Mountain geologic repository application. This activity terminates in FY 2011. No resources are requested in FY 2012 for this business line. This represents an overall funding decrease of \$29.0 million, including 99.0 FTE, when compared with FY 2010 funding levels.

## BUDGET STRUCTURE

In the FY 2012 budget structure, the New Fuel Facilities and Operating Fuel Facilities Business Lines were merged into the Fuel Facilities Business Line.

## OIG BUDGET AUTHORITY AND FULL-TIME EQUIVALENTS BY PROGRAM (DOLLARS IN MILLIONS)

Business Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Audits	7.142	37.0	7.206	37.0	0.034	0.0
Investigations	3.718	21.0	3.654	21.0	(0.034)	0.0
<b>Total</b>	<b>\$10.860</b>	<b>58.0</b>	<b>\$10.860</b>	<b>58.0</b>	<b>\$0.0</b>	<b>0.0</b>

Numbers may not add due to rounding.

## OFFICE OF THE INSPECTOR GENERAL

In accordance with the Inspector General Act of 1978, as amended, 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. OIG carries out its mission through its Audits and Investigations Programs. The NRC OIG Strategic Plan for FY 2008–2013 provides the framework for the work that OIG will undertake over the planning period. The OIG Strategic Plan features three goals, which guide the activities of its Audits and Investigations Programs and generally align with the agency's mission.

### OIG Strategic Goals

- ▶ Strengthen the NRC's efforts to protect public health and safety and the environment.
- ▶ Enhance the NRC's efforts to increase security in response to an evolving threat environment.

- ▶ Increase the economy, efficiency, and effectiveness with which the NRC manages and exercises stewardship over its resources.

OIG's proposed FY 2012 budget is \$10.86 million, including 58.0 FTE. In accordance with OMB requirements, OIG is providing the full cost of its programs in that the budget identifies OIG's management and operational support costs and distributes these costs proportionately to the Audits and Investigations Programs.

### Audits Program

With these resources, the Audits Program will conduct approximately 25 audits and evaluations. For FY 2012, the Audits Program will focus on agency programs involving the major management challenges and risk areas facing the NRC, to include those agency programs concerning new reactors and spent fuel storage and transportation. Areas for OIG audit emphasis in FY 2012 include the following:

- ▶ NRC oversight of the existing fleet of commercial nuclear reactors and the construction of new reactor plants

- ▶ NRC oversight of the security and safety of nuclear materials
- ▶ NRC actions to adequately secure sensitive information, technology, and databases
- ▶ NRC regulatory activities involving the interim storage of high-level waste and spent fuel both at and away from the reactor facilities

OIG will also conduct other performance audits to review the NRC's administrative and program operations and evaluate the effectiveness and efficiency with which management responsibilities are carried out and whether the programs achieve intended results. Financial audits will also be conducted to evaluate the agency's financial programs. OIG will also conduct forensic audits as an outgrowth of its continuous monitoring program.

### *Investigations Program*

The Investigations Program will initiate approximately 60 investigations and Event Inquiries. Areas for OIG investigative emphasis in FY 2012 include the following:

- ▶ Monitor NRC activities and gather stakeholder information to identify potential gaps in the NRC Reactor Oversight Process
- ▶ Review NRC and licensee reports and engage interested stakeholders to identify issues of concern in NRC oversight of nuclear material held by NRC licensees
- ▶ Examine efforts made by the NRC to address stakeholders' concerns regarding low-level and high-level waste storage issues

- ▶ Address the NRC's efforts in providing oversight of licensee responsibilities in effectively securing licensed facilities and nuclear materials
- ▶ Conduct investigations into internal and external cyber breaches of the NRC's information technology infrastructure
- ▶ Examine allegations of misuse of the NRC's corporate management resources to include personnel, procurement, financial, and information technology

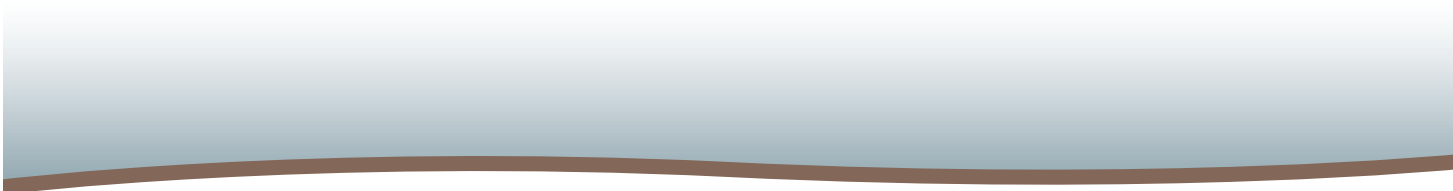
Proactive investigations are also conducted when indications are raised concerning potentially systematic violations such as theft of Government property or contract fraud. In addition, OIG periodically conducts Event Inquiries that identify staff actions that may have contributed to the occurrence of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



# PROPOSED FISCAL YEAR 2012 APPROPRIATIONS LEGISLATION



119	5,385,824	1,902
1,626,549	5,463,538	8,554,013
1,902	5,494	93,100
8,554,013	900	19,968
93,100	31,119	110,251
19,968	1,881,730	9,040
110,251	1,706,600	1,881,730
9,040	2,108,658	1,706,600
1,881,730	5,386,824	2,108,658
1,706,600	5,463,538	5,386,824
2,108,658	5,494	5,463,538
5,386,824	1,902	5,494
5,463,538	900	1,902
5,494	31,119	900
900	1,626,549	31,119
31,119	8,554,013	1,626,549
1,626,549	1,902	8,554,013
1,902	8,554,013	1,902
8,554,013	93,100	8,554,013
93,100	19,968	93,100
19,968	110,251	19,968



# Proposed Fiscal Year 2012 Appropriations Legislation

## 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 \$25,000), \$1,027,240,000 to remain available until expended: Provided, That revenues from licensing fees, inspection services, and other services and collections estimated at \$899,726,000 in fiscal year (FY) 2012 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 FY 2012 so as to result in a final FY 2012 appropriation estimated at not more than \$127,514,000. Note.—A full-year 2011 appropriation for this account was not enacted at the time the budget was prepared; therefore, this account is operating under a continuing resolution (PL 111-242, as amended). The amounts included for 2011 reflect the annualized level provided by the continuing resolution.

## 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, \$10,860,000, to remain available until expended: Provided, That the sum herein appropriated shall be reduced by the amount of revenues from licensing fees, inspection services, and

other services and collections received during FY 2012 so as to result in a final FY 2012 appropriation estimated at not more than \$1,086,000. Note.—A full-year 2011 appropriation for this account was not enacted at the time the budget was prepared; therefore, this account is operating under a continuing resolution (PL 111-242, as amended). The amounts included for 2011 reflect the annualized level provided by the continuing resolution.

## ANALYSIS OF PROPOSED FY 2012 APPROPRIATIONS LEGISLATION

The analysis of the U.S. Nuclear Regulatory Commission's (NRC's) proposed appropriations legislation for FY 2012 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 for such purpose. Congress has appropriated funds for official representation expenses to the NRC and its predecessor, the AEC, each year since FY 1950.

## 3. 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.

## 4. 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.

Pursuant to 42 U.S.C. 2214, 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. Section 237 of the Energy Policy Act of 2005 provided the NRC with authority to collect 90 percent of its budget authority in fees. In addition, Section 237 took off the fee base amounts appropriated to the Commission for the fiscal year for implementation of Section 3116 of the Ronald W. Reagan National Defense Authorization Act and amounts provided to the Commission for homeland security activities of the Commission.

Section 3116 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, Public Law (P.L.) 108-375, assigns new responsibilities to the NRC for waste determinations and monitoring of waste disposal actions for

material stored at the U.S. Department of Energy (DOE) sites in South Carolina and Idaho. Section 3116(b)(4) requires that, beginning with the FY 2006 budget, the Commission include in its budget justification materials submitted to Congress the amounts required, not offset by revenues, for performance of its responsibilities under Section 3116. The \$798,000 requested to implement Section 3116 is excluded from the NRC's fee recovery requirements.

Section 637 of the Energy Policy Act of 2005, P.L. 109-58, modifies the NRC's user fee legislation in 42 U.S.C. 2214 to exclude from license fee recovery the amounts appropriated to the Commission for homeland security activities, except for reimbursable costs of fingerprinting and background checks and the costs of conducting security inspections. The \$26,721,000 requested for generic homeland security activities is excluded from the NRC's fee recovery requirements.

The aggregate amount of license fees and annual charges to be collected for FY 2012 approximates 90 percent of the Commission's budget authority, less the amount requested to be derived from the amount requested to implement Section 3116 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, and amounts requested for generic homeland security activities pursuant to Section 637 of P.L. 109-58.

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.

## 5. The Sum Herein Appropriated Shall Be Reduced By The Amount Of Revenues Received:

Pursuant to 42 U.S.C. 2214, 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. Section 237 of the Energy Policy Act of 2005 provided the NRC with authority to collect 90 percent of its budget authority in fees. In addition, Section 237 took off the fee base amounts appropriated to the Commission for the fiscal year for implementation of Section 3116 of the Ronald W. Reagan National Defense Authorization Act and amounts provided to the Commission for homeland security activities of the Commission.

## *Office of the Inspector General*

### 6. For Necessary Expenses Of The Office Of The Inspector General In Carrying Out The Provisions Of The Inspector General Act Of 1978, As Amended:

P.L. 95-452, 5 U.S.C. app., as amended by P.L. 100-504

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

## 7. 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.

## 8. Revenues From Licensing Fees, Inspection Services, And Other Services And Collections Shall Be Retained And Be Available Until Expended For Necessary Salaries And Expenses In This Account, Notwithstanding 31 U.S.C. 3302:

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.

Pursuant to 42 U.S.C. 2214, 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. Section 237 of the Energy Policy Act of 2005 provided the NRC with authority to collect 90 percent of its budget authority in fees. In addition, Section 237 took off the fee base amounts appropriated to the Commission for the fiscal year for implementation of Section 3116 of the Ronald W. Reagan

National Defense Authorization Act and amounts provided to the Commission for homeland security activities of the Commission.

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.

## 9. The Sum Herein Appropriated Shall Be Reduced By The Amount Of Revenues Received:

Pursuant to 42 U.S.C. 2214, 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. Section 237 of the Energy Policy Act of 2005 provided the NRC with authority to collect 90 percent of its budget authority in fees. In addition, Section 237 took off the fee base amounts appropriated to the Commission for the fiscal year for implementation of Section 3116 of the Ronald W. Reagan National Defense Authorization Act and amounts provided to the Commission for homeland security activities of the Commission.

# NUCLEAR REACTOR SAFETY



119	5,386,824	1,902
1,626,549	5,463,538	8,554,013
1,902	5,494	93,100
8,554,013	900	93,100
93,100	900	93,100
19,968	31,119	19,968
110,251	1,626,549	19,968
9,040	1,902	110,251
1,881,730	31,119	110,251
1,706,600	8,554,013	110,251
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1,902	8,554,013	110,251
8,554,013	1,902	110,251
93,100	1,902	110,251
19,968	1,902	110,251





# Nuclear Reactor Safety

## NUCLEAR REACTOR SAFETY (DOLLARS IN MILLIONS)

Business Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Operating Reactors	541.8	2,090.7	521.3	2,064.4	(20.5)	(26.3)
New Reactors	267.0	893.8	279.5	968.6	12.5	74.8
<b>Total</b>	<b>\$808.8</b>	<b>2,984.5</b>	<b>\$800.8</b>	<b>3,032.9</b>	<b>(\$8.0)</b>	<b>48.4</b>

Numbers may not add due to rounding.

The Nuclear Reactor Safety Program encompasses U.S. Nuclear Regulatory Commission (NRC) efforts to ensure that civilian nuclear power and research and test reactors are licensed and operated in a manner that adequately protects public health and safety, protects the environment, and provides high assurance of the physical security of reactor facilities. This program contributes to the NRC's Safety and Security goals through activities of the Operating Reactors and New Reactors Business Lines that license and regulate existing and new nuclear reactors to ensure their safe operation and physical security. The Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended, are the foundations for the NRC's regulation of the Nation's civilian nuclear power industry.

Nuclear security is a high priority for the NRC. For the last several decades, effective NRC regulation and strong partnerships with a variety of Federal, State, and local authorities have ensured security at civilian nuclear reactors across the country, especially power reactors. The NRC recognizes the need for continuous improvement to ensure the safety and security of nuclear power plants. In recent years, the NRC has undertaken compre-

hensive enhancements to bolster the security of our Nation's nuclear facilities and radioactive materials.

### PROGRAM RESOURCE SUMMARY

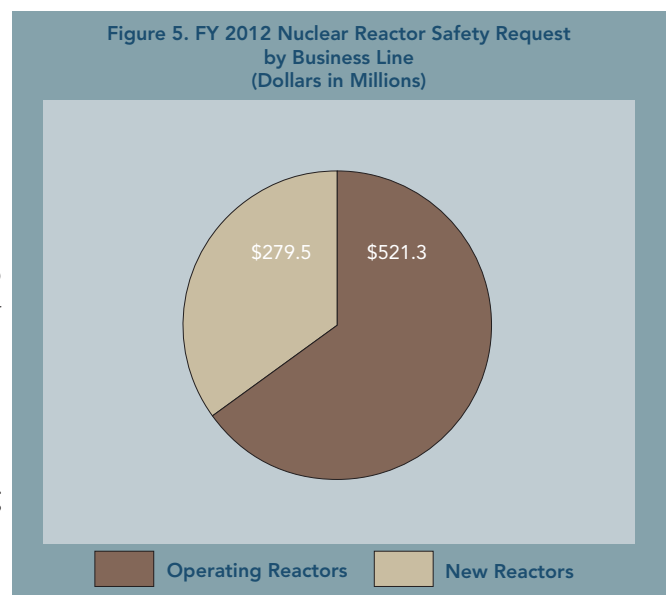
The fiscal year (FY) 2012 proposed budget request for the Nuclear Reactor Safety Program is \$800.8 million, which includes \$341.9 million in contract support and travel and \$458.9 million in salaries and benefits to support 3,032.9 full-time equivalents (FTE). This funds activities in the Operating Reactors and New Reactors Business Lines. This represents a decrease of \$8.0 million, including an increase of 48.4 FTE, when compared with FY 2010 funding levels, primarily to support regulatory activities associated with locating, licensing, and overseeing new and operating nuclear power plants.

### NUCLEAR REACTOR SAFETY STRATEGIC GOALS

*Safety—ensure adequate protection of public health and safety and the environment.*

*Security—ensure adequate protection in the secure use and management of radioactive materials.*

Figure 5. FY 2012 Nuclear Reactor Safety Request by Business Line (Dollars in Millions)



**OPERATING REACTORS BY PRODUCT LINE  
(DOLLARS IN MILLIONS)**

Product Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Licensing	96.2	483.7	85.0	457.4	(11.2)	(26.4)
Oversight	150.2	878.8	155.0	892.5	4.8	13.7
Rulemaking	14.3	52.7	13.0	49.7	(1.4)	(3.0)
Research	72.7	175.1	70.4	176.5	(2.3)	1.4
International Activities	2.2	13.5	2.3	13.7	0.1	0.3
Generic Homeland Security	7.1	26.5	6.5	25.3	(0.7)	(1.1)
Event Response	13.4	56.1	14.6	57.4	1.1	1.3
<b>Subtotal</b>	<b>\$356.2</b>	<b>1,686.4</b>	<b>\$346.7</b>	<b>1,672.5</b>	<b>(\$9.5)</b>	<b>(13.9)</b>
Corporate Support	185.5	404.3	174.6	391.9	(11.0)	(12.4)
<b>Total</b>	<b>\$541.8</b>	<b>2,090.7</b>	<b>\$521.3</b>	<b>2,064.4</b>	<b>(\$20.5)</b>	<b>(26.3)</b>

Numbers may not add due to rounding.

## OPERATING REACTORS

The Operating Reactors Business Line encompasses the regulation of 104 civilian nuclear power reactors and 31 research and test reactors (RTRs) in a manner that adequately protects the health and safety of the public, protects the environment, and provides high assurance of physical security. Under the regulatory oversight of the NRC, the safe and clean electrical power generated from the 104 domestic nuclear power plants now contributes approximately 20 percent of the Nation's electrical production. For more than 40 years, the NRC's continued regulation of these reactors has led to outstanding national Safety and Security goals and all associated performance measures and outcomes.

The NRC establishes regulatory requirements for the design, construction, operation, and security of nuclear power plants and RTRs in accordance with the provisions of the Atomic Energy Act of 1954, as amended. Through Operating

Reactors Business Line activities, the NRC ensures the fundamental tenets of its Safety and Security goals in protecting both the public and workers from the radiation hazards of nuclear reactors. To ensure plants are operating safely within these requirements, the NRC licenses the plants to operate, licenses the personnel who operate the plants, and establishes technical specifications for the operation of each plant. The Operating Reactors Business Line establishes nuclear safety policy through rulemaking and research efforts, enforcement, and international activities. The NRC provides continuing oversight of civilian nuclear reactors and verification of operator adherence to the NRC's rules and regulations.

The NRC has undertaken comprehensive enhancements to bolster the security of our Nation's nuclear facilities. Nuclear power plants must be able to defend successfully against a set of hypothetical threats that the agency refers to as the design-basis threat (DBT).

These hypothetical threats challenge a plant's physical security, personnel security, and cyber security. The agency continuously evaluates this set of hypothetical threats against real-world intelligence to ensure that the agency remains current and prepared.

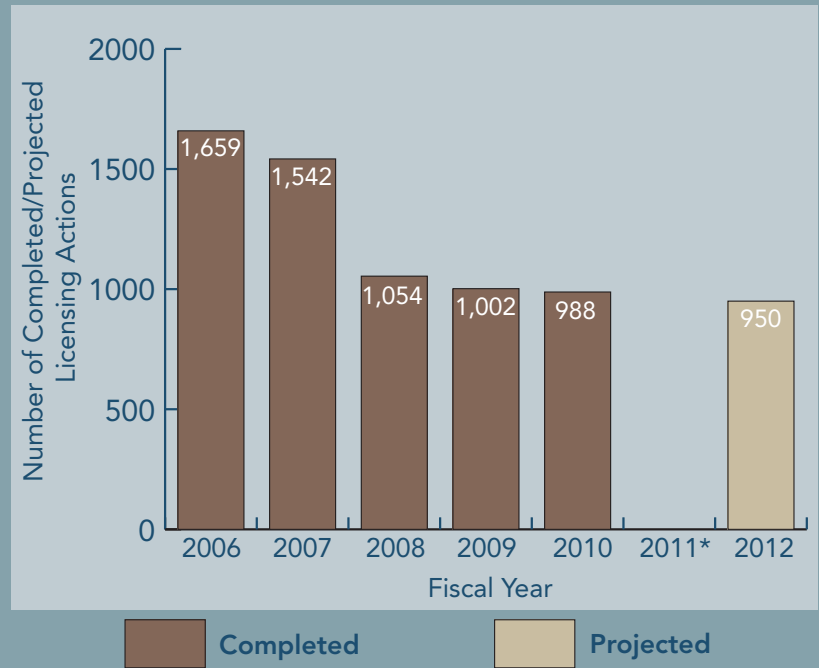
The budgetary resources will enable the NRC to continue licensing and regulatory activities to ensure the safe and secure operation of these civilian nuclear reactors. The NRC has organized Operating Reactors Business Line activities into product lines that best support safety and security strategies that impact strategic outcomes as they relate to existing civilian reactors. The resources requested support the Operating Reactors Business Line within the following seven product lines: Licensing, Oversight, Rulemaking, Research, International Activities, Generic Homeland Security, and Event Response. The outputs of these product line activities contribute to the scoring of the NRC Safety and Security goal performance measures and their contribution to achievement of the desired strategic outcomes.

### Licensing

For FY 2012, the NRC requests \$85.0 million, including 457.4 FTE, to provide for licensing activities. This represents a funding decrease of \$11.2 million, including 26.4 FTE, when compared with FY 2010 funding levels.

The Licensing Product Line supports licensing activities, which are the methods the NRC employs to confirm that nuclear reactor licensee requests for license renewals and other changes

Figure 6. Licensing Actions Completed and Projected



\*FY 2011 numbers TBD

provide an adequate margin of safety and security consistent with the NRC's rules and regulations.

The NRC also licenses civilian nuclear power reactors and RTRs to ensure that they are operated in a manner that adequately protects the health and safety of the public, protects the environment, and provides high assurance of physical security.

In FY 2012, the NRC continues licensing activities for 104 power reactors. The NRC anticipates that the licensing workload will include 950 licensing actions, including the review of approximately 12 power uprates and approximately 15 reviews for 22 reactors that will be transitioning to National Fire Protection Association (NFPA) 805, "Performance Standard for Fire

**STRATEGIC GOAL**  
**STRATEGIES**  
**SUPPORTED BY**  
**LICENSING**

*Safety—develop, maintain, and implement licensing and regulatory programs for reactors.*

*Security—review security plans and changes for consistency with security requirements.*

Protection for Light Water Reactor Electric Generating Plants.”

Reviews will continue for 12 license renewal applications for operating reactors. The NRC expects to review one new application, as well as provide support for two expected Federal court appeals of license renewal decisions. The resources will support the development, maintenance, and implementation of the license renewal infrastructure, process assessments, improvements, and activities related to developing infrastructure for potential applications for license renewals.

The NRC will continue conducting licensing reviews, issuing license amendments, and performing project management activities for the existing 31 licensed operating RTRs and ensuring that operators are qualified and licensed to perform their duties. The NRC will monitor new fuel design and qualification testing and high-enriched uranium and low-enriched uranium license amendment applications for three RTRs. Funded RTR activities also include RTR infrastructure and licensing activities, long-term planning for potential license renewal, digital instrumentation and control (I&C) guidance development, and project management and oversight activities.

The NRC will complete 600 other licensing tasks and related activities, including assistance to the regions, interactions with vendor and owner’s groups, and 20 technical topical report reviews that resolve generic issues. In addition, the NRC expects to complete approximately 55 operator licensing examination sessions and four generic tests for reactor operators.

Resources also support licensing activities such as review of licensing amendments

associated with the remotely operated weapons systems installations, security plan changes, cyber security, emergency preparedness reviews, and license renewal activities and associated adjudication, legal advice, and representation. The NRC will continue Federal interactions with the American Society of Mechanical Engineers (ASME) in Boiler and Pressure Vessel Code meetings, as well as representation at ASME Operation and Maintenance Code meetings, meetings and collaboration relating to coating guidance and grid stability, digital I&C, and Institute of Electrical and Electronics Engineers meetings.

### *Oversight*

For FY 2012, the NRC requests \$155.0 million, including 892.5 FTE, to provide for oversight activities. This represents a funding increase of \$4.8 million, including 13.7 FTE, when compared with FY 2010 funding levels.

The Oversight Product Line supports oversight activities, which are methods the NRC employs to oversee the safe and secure operation of existing nuclear reactors, better identify significant performance issues, and ensure that licensees take appropriate actions to maintain acceptable operating performance to ensure the adequate protection of public health and safety and the environment. The NRC has full authority to take action to protect public health and safety and can demand immediate licensee action, up to and including a plant shutdown.

The NRC performs continuous oversight activities to verify that the 104 currently licensed operating nuclear power reactors

and 31 RTRs are operated safely and securely in accordance with the NRC's rules and regulations. For power reactors, the NRC uses its Reactor Oversight Process (ROP). The ROP uses both inspection findings and performance indicators to assess the performance of each plant within a regulatory framework of seven cornerstones of safety (i.e., frequency of potential accident-initiating events; availability, reliability, and capability of mitigating systems; integrity of radiation barriers, such as fuel cladding, reactor coolant system, and containment boundaries; emergency preparedness; protection of the public from radiation releases; occupational radiation safety; and physical protection against the DBT of radiological sabotage, theft, or diversion of special nuclear materials). The ROP recognizes that not all issues are of equal safety significance. For events that are more safety significant, the ROP has a structure to cause more NRC engagement and oversight. For events of very low safety significance, plants are expected to address these issues through their corrective action programs. In this way, the oversight workload directly supports the Safety and Security goals and related strategic measures and outcomes.

As a condition of their license, operators of nuclear power plants develop and maintain effective emergency preparedness plans to protect the public. The NRC inspects plants to ensure that they are meeting the requirements for emergencies and evaluates the implementation of those plans. In addition, the agency monitors certain performance indicators related to emergency preparedness.

Generally, the NRC performs two types of inspections: baseline and plant specific. The FY 2012 budget request includes

resources for planned baseline and anticipated plant-specific inspections.

Historically, the resources required for these inspections have been fairly constant. A portion of the baseline inspection program is conducted on a 3-year cycle, including approximately 22 fire protection and 22 component design-basis inspections per year. Baseline inspections focus on plant activities, especially those that are not adequately measured by performance indicators.

Resources support plant-specific inspections that typically include 20 reactive inspections, 75 inspections related to performance or specific changes (e.g., inspections done at independent spent fuel storage installations, digital control room inspections), and approximately 100 generic issue inspections that address areas of emerging concern (e.g., cyber security or areas with recurring problems).

The ROP also includes the Industry Trends Program through which the NRC collects, analyzes, displays, and trends industrywide reactor performance data in order to determine whether the data show statistically significant adverse industry trends in reactor safety performance.

Security resources support the NRC's security inspection and assessment program with a number of key elements. These include baseline, force-on-force (FOF), and special inspections; Multiple Integrated Laser Engagement System support for the FOF inspection program; and development of the annual report to Congress. This also includes foreign ownership, control, or influence reviews and the development and implementation

### **STRATEGIC GOAL STRATEGIES SUPPORTED BY OVERSIGHT**

*Safety—continue to oversee the safe operation of existing plants; oversee licensee safety performance through inspections, investigations, enforcement, and performance assessment activities.*

*Security—evaluate licensee security and emergency preparedness programs; use force-on-force inspections to test security.*

of a cyber security inspection program, including the Federal Energy Regulatory Commission/North American Electric Reliability Council interactions and cyber assessment team activities. Current plans are to conduct several pilot cyber security inspections and workshops in FY 2012. This will support final development of the training program for inspectors, the inspection procedure, and the enforcement policy for operating reactor cyber security inspections.

Workload resources support assessment of licensee performance and evaluation of input data (i.e., performance indicators, significance determination process, and determination of any necessary followup actions resulting from enforcement processing related casework and project/contract management oversight over the Alternative Dispute Resolution (ADR) Program for the licensees). The NRC conducts performance-based evaluations of licensee security and emergency preparedness programs and assesses the effectiveness of such programs. In FY 2012, the NRC will conduct approximately 24 FOF inspections to ensure that FOF inspections are completed at all power reactors within a 3-year cycle. The NRC will also evaluate licensee emergency preparedness during

biennial exercises that include assessment of offsite response activities by the Federal Emergency Management Agency (FEMA).

Resources also support legal review, communications to internal and external stakeholders, and audits associated with the ROP, license renewal inspections, investigations and early ADR Program activities, security issues, performance assessments, and the development of enforcement guidance.

Resources will support the maintenance and operation of the reactor programs system, which is used for planning and scheduling of inspection activities and capturing and reporting of inspection findings. The resources will also support simulator hardware and software maintenance for reactor technology training and Web development. The reactor programs system is critical to supporting the oversight and inspection of the 104 nuclear power reactors and 31 RTRs. It also supports 47 uranium recovery sites and 9 major fuel cycle facilities.

Resources will support event evaluation, generic communications, and the review of industry operating experience (screening of approximately 3,000 national and international operational events per year). Approximately 150 to 200 issues per year receive additional detailed evaluations. Resources support independent evaluation and trending of operational events and funding of human factor event evaluations.

The Resident Inspector Pipeline Initiative provides resources for recruitment, training, and development to ensure that sufficient numbers of qualified inspectors are available to meet changing needs. Each NRC regional office needs a reserve of qualified resident inspectors to maintain an experienced and stable onsite inspection presence.



*The Commission attends a briefing with senior agency officials.*

Resources also support enforcement, allegation activities, and investigations of alleged wrongdoing. Enforcement is used to deter noncompliance with NRC requirements and to encourage prompt identification and correction of violations.

The ROP includes an assessment process, which integrates inspection findings with other objective measures of performance that are submitted quarterly by licensees for each power reactor site. Results from this assessment process are used as feedback to determine appropriate NRC actions for the reactor sites.

### *Rulemaking*

For FY 2012, the NRC requests \$13.0 million, including 49.7 FTE, to provide for rulemaking activities. This represents a funding decrease of \$1.4 million, including 3.0 FTE, when compared with FY 2010 funding levels.

The Rulemaking Product Line includes the development and update of rules, regulatory guidance, and standard review plans that promote licensee compliance with underlying safety principles and security requirements.

The regulatory framework guides the safety activities of the agency and its licensees. The NRC's rules and regulations contribute to the Safety and Security goals and related strategic measures and outcomes because they guide the safety and security activities of the agency. NRC regulations are contained in Title 10 of the *Code of Federal Regulations* (10 CFR), "Energy."

The FY 2012 workload includes 13 rulemaking activities. Resources provide support for work on approxi-

mately 11 active petitions for rulemaking and issuance of five closure packages. Resources will also support legal advice for rulemakings, petitions, and regulatory basis development for medical isotope production facilities and RTR relicensing rulemakings.

Resources provide for rulemaking support to continue the maintenance of rulemaking guidance documents based on lessons learned and process improvements, including work on three regulatory guides. Support for other rulemaking activities includes technical basis, which supports the preparation and promulgation of new or amended regulations, assessment and regulatory basis development efforts, development of regulatory guides, and updating and implementing guidance documents (e.g., NUREGs). Specifically, resources are used in support of structural integrity assessment procedures for reactor coolant pressure boundary components; evaluation of nondestructive examination techniques used for vessels and piping; incorporation of regulatory guides related to code cases; and international radiation protection recommendations to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operation To Meet the Criterion 'As Low as Is Reasonably Achievable' for Radioactive Material in Light Water-Cooled Nuclear Power Reactor Effluents."

### *Research*

For FY 2012, the NRC requests \$70.4 million, including 176.5 FTE, to provide for research activities in support of nuclear reactor regulation.

### **STRATEGIC GOAL STRATEGIES SUPPORTED BY RULEMAKING**

*Safety—use sound science and state-of-the-art methods to establish, where appropriate, risk-informed and performance-based regulations.*

*Security—use a framework of rules and regulations to guide the security activities of the agency.*

**STRATEGIC GOAL  
STRATEGIES  
SUPPORTED BY  
RESEARCH**

*Safety—improve the NRC’s regulatory programs and apply safety-focused research to anticipate and resolve safety issues.*

*Security—use research to inform the security activities of the agency.*

This represents a funding decrease of \$2.3 million, including an increase of 1.4 FTE, when compared with FY 2010 funding levels.

The Research Product Line supports the NRC’s regulatory mission by providing technical advice, tools, and information to identify and resolve safety issues and make regulatory decisions.

This includes conducting confirmatory experiments and analyses and preparing the agency for the future by evaluating the safety aspects of new technologies for nuclear reactors, materials, waste, and security. The NRC faces challenges as the industry matures, including potential new safety issues, the availability of new technologies, and knowledge management.

In FY 2012, research work includes fire safety research to support the transition to a risk-informed, performance-based set of requirements per NFPA 805 and the current licensing basis for plants. This includes cable fire testing, spurious circuit actuation testing, fire risk assessment training, and fire modeling protections.

Research work also includes utilizing the expertise of the National Academy of Sciences to perform the study, “Analysis of Cancer Risk in Population Near Nuclear Facilities,” which updates and expands the 1990 U.S. National Institutes of Health report, “Cancer in Populations Living Near Nuclear Facilities.” In the new study, the NRC has requested the National Academy of Sciences evaluate cancer diagnosis rates, in addition to mortality risk, for populations living near NRC-licensed nuclear facilities. These reports are used by the NRC to communicate with the public about cancer risk in counties that contain or are adjacent to nuclear power facilities.

The NRC Digital System Research Plan includes the review of current and future applications of digital I&C, failure mode and reliability assessment, aging assessment of components and equipment, and security aspects of digital systems. Additional support includes electrical research in the areas of equipment qualification for life beyond 60 years, aging assessment of electrical insulation materials, battery performance, and the impact of smart grids on nuclear power plants.

Research is being performed to further understand and manage potential degradation associated with reactor pressure boundary components (including steam generator tubes and dissimilar metal butt welds), vessel internals, containment liners, and neutron-absorbing materials used in spent fuel pools. This research includes assessing the effectiveness and reliability of various inservice inspection techniques, performing residual stress and nondestructive examination studies on retired components, evaluating the behavior of various components under severe accident conditions, developing a probabilistic code for assessing piping integrity, and studying the embrittlement of reactor vessel pressure boundary materials.

Research is also being performed in the areas of material engineering to support plant life extension beyond 60 years. Research activities also include fuels, human factors and reliability, radiation protection, reactor safety codes and analysis, probabilistic codes, models, analyses, and seismic and structural research. Research supports the NRC Operations Center, the Generic Safety Issue Program, the significance determi-



nation process, the ROP, and coordination of the Risk-Informed Performance-Based Plan.

Research includes the development of plant-specific standardized plant analysis risk models and maintenance of System Analysis Programs for Hands-on Integrated Reliability Evaluation (SAPHIRE); additional plant analyses for the State-of-the-Art-Reactor Consequence Analysis; and development of improved methods, tools, and data for calculating risk to support risk-informed regulatory decisionmaking.

### *International Activities*

For FY 2012, the NRC requests \$2.3 million, including 13.7 FTE, to provide for international activities. This represents a funding net increase of \$0.1 million, including 0.3 FTE, when compared with FY 2010 funding levels.

The International Activities Product Line supports the NRC's international work, which assists decisionmaking, awareness and responses to emerging technical issues, and promoting best practices in realizing the Safety and Security goals and related strategic measures and outcomes. Additionally, the NRC participates in the development and evaluation of international standards to ensure that they are soundly based and should be implemented domestically. The NRC also must perform certain legislatively mandated international duties. These include licensing the import and export of nuclear materials and equipment and participating in activities supporting U.S. compliance with international treaties and agreement obligations. The NRC has bilateral programs of assistance

or cooperation with 36 countries and Taiwan. The NRC has also supported U.S. nuclear safety initiatives with countries such as India, Pakistan, Georgia, and Azerbaijan. In addition, the NRC actively cooperates with multinational organizations, such as the International Atomic Energy Agency (IAEA) and the Nuclear Energy Agency (NEA), a part of the Organisation for Economic Co-operation and Development.

The International Activities Product Line workload includes periodic exchanges of information critical to the safe operation of nuclear power plants, visits to operating domestic nuclear power plants, assistance to foreign regulatory bodies through the NRC Foreign Assignee Program, and review of and decisions on applications for the export and import of nuclear equipment (15–20 import/export authorizations per year). The NRC assists IAEA and individual countries and participates in bilateral and multilateral activities with other nations and IAEA's Integrated Regulatory Review Service mission.

The NRC participates in international cooperative research programs that provide access to operating experience from foreign reactors to augment NRC programs in areas such as plant aging and materials degradation, fire risk, and pressurized thermal shock. Analysis of this experience contributes to the NRC's knowledge base, improves assessments of plant risk, and improves the development of risk-informed approaches to regulation.

The NRC works with international counterparts to exchange information, expertise, and operating experiences; to participate in ongoing research to recognize and respond to emerging

### **STRATEGIC GOAL STRATEGIES SUPPORTED BY INTERNATIONAL ACTIVITIES**

*Safety—use domestic and international operating experience to inform decisionmaking.*

*Security—work with international counterparts to exchange information.*

**STRATEGIC GOAL  
STRATEGIES  
SUPPORTED  
BY GENERIC  
HOMELAND  
SECURITY**

*Safety—effectively respond to events at NRC-licensed facilities and other events of national interest, including maintaining and enhancing the NRC’s critical incident response and communication capabilities.*

*Security—support Federal response plans that employ an approach to the security of nuclear facilities and radioactive material that integrates the efforts of licensees and Federal, State, local, and Tribal authorities.*

technical issues; and to promote best safety and security practices. The NRC also participates in the development of international standards to ensure that they are soundly based and determine whether substantial safety improvements can be identified and incorporated domestically. This international cooperation contributes to Safety and Security goals and promotes nuclear safety and security worldwide.

### *Generic Homeland Security*

For FY 2012, the NRC requests \$6.5 million, including 25.3 FTE, to provide for generic homeland security activities. This represents a funding decrease of \$0.7 million, including 1.1 FTE, when compared with FY 2010 funding levels.

The Generic Homeland Security Product Line supports security activities that are related to intergovernmental coordination and communication regarding intelligence, threat demographic data, and information security activities that are not related to information technology. It also includes coordination and exchange of information between local, State, and Federal agencies on security-related matters, as well as security-related international activities.

In FY 2012, the Generic Homeland Security Product Line workload includes the entire scope of threat assessment activities (intelligence information assessment, internal and external communications, and information assessment team activities), intergovernmental coordination on national homeland security priorities, integrated response planning and coordination, emerging technology

analysis and evaluation, and international security-related activities (IAEA and multilateral and bilateral cooperation). The workload also includes developing and enhancing risk-informed analytical capability for accident progression and radiological releases to the environment in response to accidents and malevolent attacks.

Resources provide legal advice to the NRC staff and the Commission with respect to all matters related to nuclear reactors, including homeland security and emergency preparedness for commercial nuclear facilities. This product line also supports research work related to digital I&C and cyber security such as secure network design techniques, security of digital platforms, and wireless network security. The workload supports international cooperative research agreements in the areas of pressurized-water reactor spent fuel pool heatup and propagation phenomena experiments.

### *Event Response*

For FY 2012, the NRC requests \$14.6 million, including 57.4 FTE, to provide for event response activities. This represents a funding increase of \$1.1 million, including 1.3 FTE, when compared with FY 2010 funding levels.

The Event Response Product Line supports the NRC’s event response and emergency preparedness activities to ensure that the agency can respond effectively to events at its licensees’ sites and adequate protective measures can be taken to mitigate plant damage and minimize possible radiation exposure of members of the public. Emergency preparedness ensures that nuclear power

plant operators can protect public health and safety in the event of an emergency.

The NRC participates in emergency preparedness exercises, some of which include security and terrorism scenarios. As part of these exercises, the NRC works with licensees, Federal agencies, State and local officials, and first responders to form a coordinated system of emergency preparedness and response. This system includes public information, preparations for evacuation, instruction for sheltering, and other actions to protect residents.

Sharing information quickly among the NRC, other Federal agencies, and the nuclear industry is critical to preventing a terrorist attack. The NRC supports several important Federal antiterrorism centers for integrated assessments of security-related information.

The NRC Operations Center is staffed around the clock to disseminate information and coordinate responses. To ensure the timely distribution of threat information, the NRC continuously reviews intelligence and assesses suspicious activity. As described in the National Response Framework, the NRC is the coordinating agency for events occurring at NRC-licensed facilities and those involving radioactive materials licensed either by the NRC or by an Agreement State.

In FY 2012, the workload includes drill and exercise preparations, event readiness activities, incident response communications, security coordination, and strategies for integrated response, emergency preparedness-related interfaces, secure communications and information management, and materials event evaluation and response.

Resources also support the replenishment of potassium iodide tablet supplies that will expire in FY 2012 for States with a population within the 10-mile emergency planning zone of operating nuclear reactors.

Resources support the Emergency Response Data System and the Operations Center Information Management System, which is the primary infrastructure to support the NRC's 24/7 capability to respond to radiological, nuclear materials, and national security events. It is an integrated information management system comprising data, display, and voice subsystems. Funding also provides for emergency telecommunications systems, Incident Response System modernization, responder satellite phones, and e-Library. Event response resources include secure communications and information activities for the continuity of operations/continuity of Government and the Defense Red Switch Network.

### *Significant Accomplishments*

In FY 2010, the Nation's nuclear power plants were operated within NRC safety and security requirements. The Safety goal performance measures for all operating plants were met. In addition, the safety indicators for nuclear plants showed no adverse trends. More than 99 percent of plant safety indicators were rated green in FY 2010, which is the highest safety rating.

The NRC engaged in multiple emergency exercises with its licensees and Federal partners in FY 2010. NRC emergency responders participated in 20 exercises with licensee sites across the country,

### *STRATEGIC GOAL STRATEGIES SUPPORTED BY EVENT RESPONSE*

*Safety—effectively respond to events at NRC-licensed facilities and other events of national interest, including maintaining and enhancing the NRC's critical incident response and communication capabilities.*

*Security—support Federal response plans that employ an approach to the security of nuclear facilities and radioactive material that integrates the efforts of licensees and Federal, State, local, and Tribal authorities.*

four of which involved the NRC Headquarters Response Team. These exercises focused on the implementation of onsite and offsite radiological emergency plans, by the licensee as well as State and local responders. The NRC also used exercises to train its response organization and practice coordination activities with Federal partners, including the U.S. Department of Homeland Security.

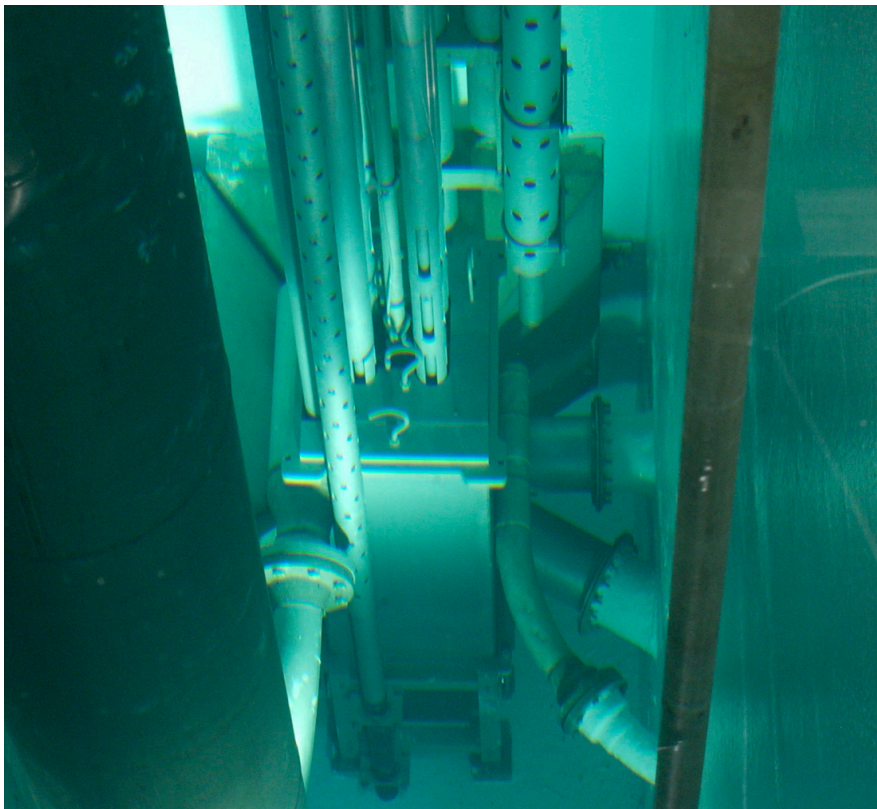
The NRC participated in one hostile-action-based emergency preparedness drill, conducted voluntarily at the River Bend Station, and coordinated with FEMA to observe numerous hostile-action-based drills, to gain a better understanding of the unique challenges hostile action events pose, and to identify significant good practices and lessons learned.

In FY 2010, the NRC successfully maintained vigilant oversight of security

in the nuclear industry and implemented the agency's security procedures. This was accomplished by the NRC's implementation of its baseline security inspection program. This inspection effort resides within the security cornerstone of the agency's ROP. The security cornerstone focuses on the following five key licensee performance attributes: access authorization, access control, physical protection systems, material control and accounting, and response to contingency events. Through the results obtained from all oversight activities, including baseline security inspections and performance indicators, the NRC determines whether licensees comply with requirements and can provide high assurance of adequate protection against the DBT for radiological sabotage.

In March 2009, the NRC issued

"Power Reactor Security Requirements," which revised or created several security regulations. The full compliance date for 10 CFR Part 73, "Physical Protection of Plants and Materials," was March 31, 2010. Forty licensees submitted requests for exemption in accordance with 10 CFR Part 73.5, "Specific Exemptions." The requests were for an exemption from the compliance date for specific parts of the regulation with the intention of meeting all other requirements by the full implementation date (there are over 280 areas for compliance). The exemption requests varied significantly in the amount of



*A research and test reactor.*

time needed to be in full compliance with the new regulation(s), based on individual licensee security upgrades. The NRC processed all 40 requests in a timely manner.

During FY 2010, the NRC research program continued to address key areas that support the agency's safety mission. Some of the more important issues addressed included verification and validation of fire safety models; material degradation of reactor system and pressure boundary components, especially as it related to license renewal periods; research associated with the evaluation of digital systems for cyber vulnerabilities; seismic hazard issues; development of advanced tools for probabilistic risk assessment activities that support risk-informed regulatory decisionmaking; and severe reactor accident consequence analyses.

## Operating Reactors Output Measures

### Licensing

#### LICENSING ACTIONS COMPLETED PER YEAR

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Complete 1,500 licensing actions.	Complete 1,465 licensing actions.	Complete 1,150 licensing actions.	Complete 950 licensing actions.	TBD	Complete 950 licensing actions.*
Actual:	1,542 completed.	1,054 completed.	1,002 completed.	988 completed.		

\*As limited by the number of licensing action requests submitted/accepted the previous FY.

#### AGE OF THE OTHER LICENSING TASK INVENTORY\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New Measure in FY 2008	90% ≤ 1 yr 100% ≤ 2 yr	90% ≤ 1 yr 100% ≤ 2 yr	90% ≤ 1 yr 100% ≤ 2 yr	TBD	90% ≤ 1 yr 100% ≤ 2 yr*
Actual:		96.6% ≤ 1 yr 100% ≤ 2 yr	90% ≤ 1 yr 100% ≤ 2 yr	94% ≤ 1 yr 100% ≤ 2 yr		

\*Excludes multiplant actions. Excludes other licensing tasks that are unusually complex.

#### AGE OF LICENSING ACTION INVENTORY\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	96% ≤ 1 yr 100% ≤ 2 yr	96% ≤ 1 yr 100% ≤ 2 yr	93% ≤ 1 yr 100% ≤ 2 yr	90%** ≤ 1 yr 100% ≤ 2 yr	TBD	95% ≤ 1 yr 100% ≤ 2 yr
Actual:	96.9% ≤ 1 yr 100% ≤ 2 yr	94.6% ≤ 1 yr 100% ≤ 2 yr	94% ≤ 1 yr 100% ≤ 2 yr	93% ≤ 1 yr 100% ≤ 2 yr		

\* Excludes license renewal and improved standard technical specifications conversions. Also excludes license amendment requests that are unusually complex.

\*\* Target mistakenly reported to be 93 percent in the 2011 Congressional Budget Justification.

#### OTHER LICENSING TASKS COMPLETED PER YEAR

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Complete 500 other licensing tasks.	Complete 600 other licensing tasks.	Complete 600 other licensing tasks.	Complete 600 other licensing tasks.	TBD	Complete 600 other licensing tasks.*
Actual:	1,045 other licensing tasks completed.	678 other licensing tasks completed.	541 other licensing tasks completed.	625 other licensing tasks completed.		

\*As limited by the number of other licensing task requests submitted/accepted the previous FY.

### NUMBER OF OPERATOR LICENSING EXAMINATIONS ADMINISTERED

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Meet licensee demand estimated at 50 initial operator licensing examination sessions and 4 generic fundamentals examination sessions.	Meet licensee demand estimated at 50 initial operator licensing examination sessions and 4 generic fundamentals examination sessions.	Meet licensee demand estimated at 55 initial operator licensing examination sessions and 4 generic fundamentals examination sessions.	Meet licensee demand estimated at 55 initial operator licensing examination sessions and 4 generic fundamentals examination sessions.	TBD	Meet licensee demand estimated at 55 initial operator licensing examination sessions and 4 generic fundamentals examination sessions.
Actual:	Met licensee demand estimated at 51 initial operator licensing examination sessions and 4 generic fundamentals examination sessions.	Met licensee demand estimated at 50 initial operator licensing examination sessions and 4 generic fundamentals examination sessions.	Met licensee demand estimated at 59 initial operator licensing examination sessions and 4 generic fundamentals examination sessions.	Met licensee demand estimated at 54 initial operator licensing examination sessions and 4 generic fundamentals examination sessions.		

### COMPLETION OF LICENSE RENEWAL APPLICATION REVIEWS

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Complete major milestones for 3 applications.	Complete major milestones for 3 applications.	Complete major milestones for 4 applications.	Complete major milestones for 3 applications.	TBD	Make final decision on license renewal for one reactor unit.
Actual:	Milestones completed for 3 applications.	Issued 2 renewed licenses. Completed SER and SEIS for 2 plants.	Issued 4 renewed licenses.	Issued 5 renewed licenses. Completed SER for 3 applications and SEIS for 2 applications.		

## Oversight

### NUMBER OF PLANTS FOR WHICH THE BASELINE INSPECTION PROGRAM WAS COMPLETED DURING THE MOST RECENTLY ENDED INSPECTION CYCLE\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	All required baseline inspection procedures are completed at 103 operating reactors.*	All required baseline inspection procedures are completed at 104 operating reactors.	All required baseline inspection procedures are completed at 104 operating reactors.	All required baseline inspection procedures are completed at 104 operating reactors.	TBD	All required baseline inspection procedures are completed at 104 operating reactors.
Actual:	Completed all reactors.	Completed all reactors.	Completed all reactors.	Results not available until mid-February 2011.		

\*The ROP inspection program is implemented on a calendar-year basis; therefore, the baseline inspection program was not fully implemented in calendar year 2007 for Browns Ferry 1 as it was restarted that year after an extended shutdown. The baseline inspection program metric includes 104 operating reactors, including Browns Ferry 1 starting in calendar year 2008.

### PERCENTAGE OF FINAL SIGNIFICANCE DETERMINATION PROCESS DETERMINATIONS MADE WITHIN 90 DAYS FOR ALL POTENTIALLY GREATER THAN GREEN FINDINGS

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	90%	90%	90%	90%	TBD*	90%
Actual:	100%	100%	100%	93%		

\* Target mistakenly reported to be 100% in 2011 Congressional Budget Justification.

### TIME TO COMPLETE REVIEWS OF TECHNICAL ALLEGATIONS\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	70% of technical allegations closed within 150 days, 90% within 180 days, and 100% within 360 days.	80% of technical allegations closed within 150 days, 90% within 180 days, and 100% within 360 days.	90% of technical allegations closed within 150 days, 95% within 180 days, and 100% within 360 days.	90% of technical allegations closed within 150 days, 95% within 180 days, and 100% within 360 days.	TBD	90% of technical allegations closed within 150 days, 95% within 180 days, and 100% within 360 days.
Actual:	93% closed within 150 days, 97% within 180 days, and 99% within 360 days.	93% closed within 150 days, 98% within 180 days, and 99% within 360 days.	93% closed within 150 days, 98% within 180 days, and 99% within 360 days.	95% closed within 150 days, 98% within 180 days, and 100% within 360 days.		

\*A few allegations exceeded the target due to complicated technical review or extended review at another Federal agency.



### TIMELINESS IN COMPLETING ENFORCEMENT ACTIONS\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Investigation cases: 100% completed within 360 days of OE processing time. Noninvestigation cases: 100% completed within 180 days of OE processing time.	Investigation cases: 100% completed within 360 days of OE processing time. Noninvestigation cases: 100% completed within 180 days of OE processing time.	Investigation cases: 100% completed within 360 days of OE processing time. Noninvestigation cases: 100% completed within 180 days of OE processing time.	Investigation cases: 100% completed within 360 days of OE processing time. Noninvestigation cases: 100% completed within 180 days of OE processing time.	TBD	Investigation cases: 100% completed within 330 days of OE processing time. Noninvestigation cases: 100% completed within 160 days of OE processing time. Completed milestones for 2 ESP reviews.
Actual:	Investigation: None $\geq$ 360 days. Noninvestigation: none $\geq$ 180 days.	Investigation: None $\geq$ 360 days. Noninvestigation: none $\geq$ 180 days.	Investigation: None $\geq$ 360 days. Noninvestigation: none $\geq$ 180 days.	Investigation: None $\geq$ 360 days. Noninvestigation: none $\geq$ 180 days.		

\*Cases involving investigations normally involve wrongdoing, including discrimination, and by their nature are more resource intensive and time consuming. Accordingly, the performance measure for cases involving investigations provides for more staff time. OE processing time is defined as the time from the date the case is opened or the licensee is briefed on the concern (exit) 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 the U.S. Department of Labor, the U.S. Department of Justice, or other Government entity or when the licensee or anyone outside the enforcement process causes a lengthy deferment, and (2) any time the NRC could not act due to processing Freedom of Information Act requests.

### TIMELINESS IN COMPLETING INVESTIGATIONS—TARGET 1

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	80% of investigations which developed sufficient information to reach a conclusion regarding wrongdoing will be completed in 10 months or less.	80% of investigations which developed sufficient information to reach a conclusion regarding wrongdoing will be completed in 10 months or less.	80% of investigations which developed sufficient information to reach a conclusion regarding wrongdoing will be completed in 10 months or less.	80% of investigations which developed sufficient information to reach a conclusion regarding wrongdoing will be completed in 10 months or less.	TBD	80% of investigations which developed sufficient information to reach a conclusion regarding wrongdoing will be completed in 10 months or less.
Actual:	Completed 70 investigations. 95.7% (67) of investigations were completed in 10 months or less.	Completed 77 investigations. 92.2% (67) of investigations were completed in 10 months or less.	Completed 106 investigations. 98.1% (104) of investigations were completed in 10 months or less.	Completed 40 investigations. 98% (39) of investigations were completed in 9 months or less.		

### TIMELINESS IN COMPLETING INVESTIGATIONS—TARGET 2

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Close 100% of OI investigations in time to initiate civil and/or criminal enforcement action.	Close 100% of OI investigations in time to initiate civil and/or criminal enforcement action.	Close 100% of OI investigations in time to initiate civil and/or criminal enforcement action.	Close 100% of OI investigations in time to initiate civil and/or criminal enforcement action.	TBD	Close 100% of OI investigations in time to initiate civil and/or criminal enforcement action.
Actual:	Closed 100% of OI investigations in time to initiate civil and/or criminal enforcement action.	Closed 100% of OI investigations in time to initiate civil and/or criminal enforcement action.	Closed 100% of OI investigations in time to initiate civil and/or criminal enforcement action.	Closed 100% of OI investigations in time to initiate civil and/or criminal enforcement action.		

### Research

### TIMELINESS IN COMPLETING ACTIONS ON CRITICAL RESEARCH PROGRAMS\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	85% of major milestones met on or before their due date.	90% of major milestones met on or before their due date.	90% of major milestones met on or before their due date.	90% of major milestones met on or before their due date.	TBD	90% of major milestones met on or before their due date.
Actual:	100% across programs.	100% across programs.	100% across programs.	100% across programs.		

\*Critical research programs typically respond to high-priority needs from the Commission and the NRC's licensing organizations. Critical research programs will be the highest priority needs identified at the beginning of each FY.

### ACCEPTABLE TECHNICAL QUALITY OF AGENCY RESEARCH TECHNICAL PRODUCTS\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Combined score $\geq 3.0$	Combined score $\geq 3.0$	Combined score $\geq 3.5$	Combined score $\geq 3.5$	TBD	Combined score $\geq 3.5$
Actual:	4	4	4	4.6		

\*The NRC has developed a process to measure the quality of research products using surveys of end users to determine the usability and value-added of the products. As appropriate, other mechanisms will be developed and added to this process to measure the quality of research products.

## Event Response

### EMERGENCY RESPONSE PERFORMANCE INDEX\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	99%	100%	100%	100%	TBD	100%
Actual:	100%	100%	100%	100%		

\*This performance index provides a single overall performance measure of the agency's readiness to respond to a nuclear or terrorist emergency situation or other events of national interest. The index measures several activities within the Incident Response Program that are critical to support the agency's preparedness and response ability.

## Efficiency

### TRANSITIONING FROM HARD-COPY DISTRIBUTION OF OUTGOING LICENSEE CORRESPONDENCE TO ELECTRONIC DISTRIBUTION

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New Measure in FY 2011				TBD	Measure discontinued
Actual:						

### REVISE INSPECTION PROCESS\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012**
Target:	New Measure in FY 2011				TBD	Measure discontinued
Actual:						

\*The staff conducted a review of inspection findings and the significance of the findings, resources used, and the effectiveness of the procedure per Inspection Manual Chapter 0307, "Reactor Oversight Process Self-Assessment Program." Biennial review of baseline procedure effectiveness is being used to realign inspection resources to ensure the most effective overall application of inspection resources.

\*\*A one-time reduction will be made in 2011, and the budget will stay constant at the reduced 2011 level from that point forward.

### MINIMIZE NECESSARY COMMUNICATION SYSTEMS DEVICES FOR SENIOR MANAGER USE

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New Measure in FY 2012					(\$410,000)
Actual:						

**NEW REACTORS BY PRODUCT LINE  
(DOLLARS IN MILLIONS)**

Product Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Licensing	124.0	489.0	131.8	492.5	7.8	3.5
Oversight	32.1	155.9	36.9	203.5	4.8	47.6
Rulemaking	1.3	7.3	1.9	9.0	0.6	1.7
Research	23.2	56.9	13.7	50.3	(9.5)	(6.6)
International Activities	5.8	9.6	9.6	19.6	3.8	10.0
Generic Homeland Security	0.2	0.3	0.8	3.6	0.6	3.4
<b>Subtotal</b>	<b>\$186.6</b>	<b>718.9</b>	<b>\$194.8</b>	<b>778.4</b>	<b>\$8.1</b>	<b>59.5</b>
Corporate Support	80.3	174.9	84.7	190.2	4.4	15.3
<b>Total</b>	<b>\$267.0</b>	<b>893.8</b>	<b>\$279.5</b>	<b>968.6</b>	<b>\$12.5</b>	<b>74.8</b>

Numbers may not add due to rounding.

## NEW REACTORS

The work of the New Reactors Business Line responds to industry's interest in building new commercial nuclear power plants to meet the Nation's future electric power generation needs. As indicated previously, all civilian nuclear power reactors must be licensed by the NRC and adhere to NRC regulations in order to operate in the United States. Renewed demand and national policy initiatives, such as the U.S. Department of Energy's Nuclear Power 2010 program and the Energy Policy Act of 2005, have stimulated a nuclear resurgence. The New Reactors Business Line is responsible for the regulatory activities associated with locating, licensing, and overseeing construction of new nuclear power reactors. The NRC reviews new nuclear power reactor design certification (DC), combined license (COL), and early site permit (ESP) applications consistent with 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," and industry's projected

plans and schedules. New reactor activities ensure that the development of new civilian nuclear power reactor facilities is done in a manner that protects the health and safety of the public, protects the environment, and provides high assurance of security.

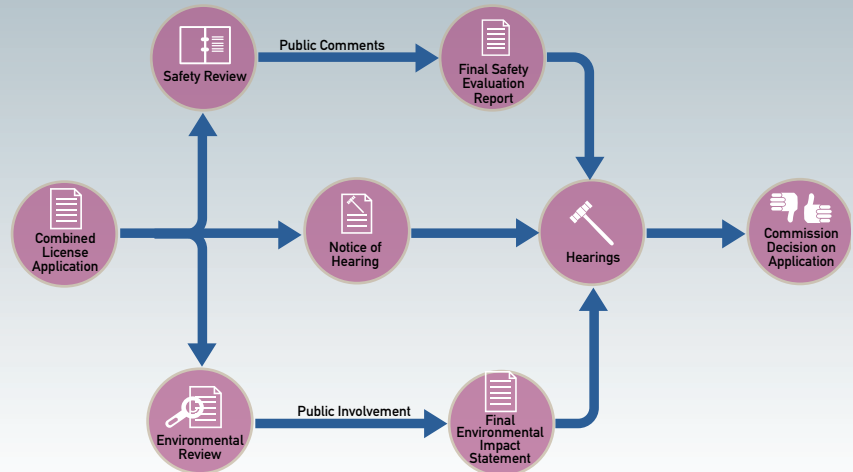
The NRC has streamlined the application process for new reactors under 10 CFR Part 52, including publishing a major revision in FY 2007. By issuing a COL, the NRC authorizes the licensee to construct and (with specified conditions) operate a nuclear power plant at a specific site. The application process prescribed under 10 CFR Part 50, which was implemented for all current operating reactors, involves separate applications for the issuance of a construction permit and an operating license.

The NRC continues to interact with vendors and utilities regarding prospective new reactor applications and licensing activities. Because the infrastructure to support the review of large light-water reactor applications

is essentially complete, the NRC has transitioned its focus from infrastructure development to the detailed review of submitted design certification and combined license applications. The NRC is also focusing on the future activities necessary to implement construction inspection activities and infrastructure needs to support the emerging area of small modular reactors (SMRs). The NRC will continue the development and implementation of the construction inspection program, provide oversight of the completion of Watts Bar Unit 2, and continue conducting vendor inspections. Oversight activities will increase to support inspection efforts consistent with industry construction schedules. These activities include supporting inspections of key international nuclear equipment and component suppliers and continuing license examiner training. Advanced reactor activities will increase to prepare for the review of new technologies.

The NRC has organized new reactor activities into product lines that best support safety and security strategies and impact strategic outcomes as they relate to new civilian reactors. The resources requested support all direct aspects of new reactors within the following six product lines: Licensing, Oversight, Rulemaking, Research, International Activities, and Generic Homeland Security. The outputs of these product lines contribute to the scoring of the NRC Safety and Security goal performance measures and their contribution to the achievement of the strategic outcomes.

**Figure 7. New Reactor Licensing Process**



## Licensing

For FY 2012, the NRC requests \$131.8 million, including 492.5 FTE, to provide for licensing activities. This represents an overall funding increase of \$7.8 million, including 3.5 FTE, when compared with FY 2010 funding levels.

The Licensing Product Line supports the licensing process—the NRC’s determination that applicants’ plans for the development, construction, and operation of new nuclear power plants provide an adequate margin of safety and security to ensure protection of public health and safety and the environment, consistent with the NRC’s rules and regulations. Licensing includes the review and certification of new and advanced reactor designs and development of a regulatory framework, including the supporting technical basis, to license advanced reactor designs.

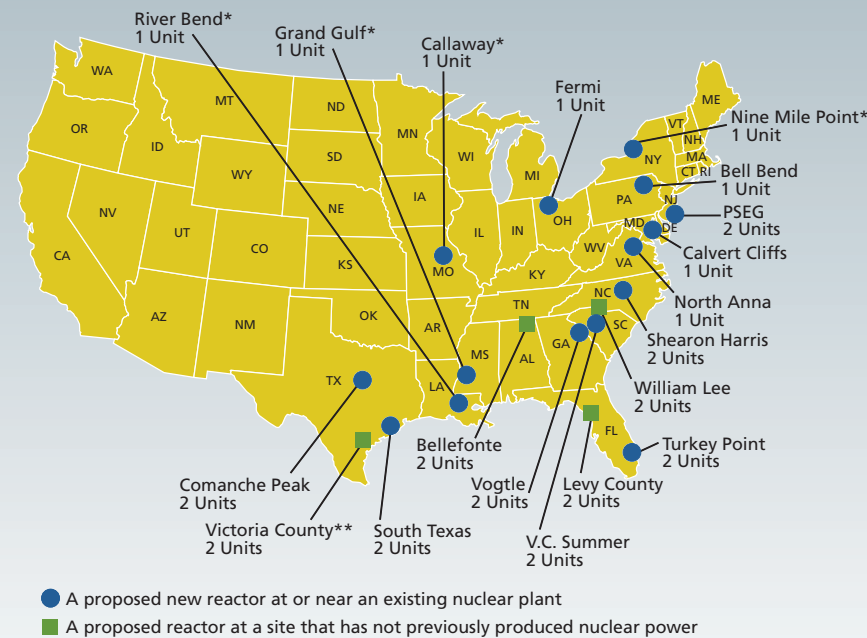
Licensing workload includes the review of COL applications. The COL, issued by the NRC, authorizes the licensee to construct and (with specified conditions)

### STRATEGIC GOAL STRATEGIES SUPPORTED BY LICENSING

*Safety—develop, maintain, and implement licensing and regulatory programs for reactors.*

*Security—review security plans for consistency with security requirements.*

**Figure 8. Location of Applied-for New Nuclear Power Reactors**



\*Review suspended.

\*\*COL application converted by applicant to an ESP on March 25, 2010.

Note: Data as of July 30, 2010.

operate a nuclear power plant at a specific site. As of June 2010, the NRC had received 18 COL applications from the nuclear power industry and a request to resume construction of Watts Bar Unit 2. The NRC expects to receive two new COL applications during FY 2012. The FY 2012 budget request includes resources for the review of all active applications consistent with industry's projected plans and schedules.

Resources will fund environmental reviews; safety reviews, which include emergency preparedness technical reviews, security plan technical reviews, and security-related assessments; and financial analysis of COL applicants. Licensing also provides the resources to

support licensing-related legal representation, independent advice, and adjudicatory reviews; information technology support for licensing activities; and an operator licensing system, scheduler support, and the regulatory infrastructure for licensing activities.

The NRC issues a DC to certify a standard nuclear plant design independent of a specific site. This DC is valid for 15 years. Budgetary resources for licensing will support the completion of Westinghouse's AP1000 DC amendment and continuation of licensing for the U.S. Evolutionary Pressurized-Water Reactor (U.S.-EPR), U.S. Advanced Pressurized-Water Reactor (U.S.-APWR), Economic Simplified Boiling-Water Reactor (U.S.-ESBWR), and one Advanced Boiling-Water Reactor (U.S.-ABWR) DC renewal and amendment. These resources will also fund preapplication activities of and limited review activities for the proposed Korea Electric Power Corporation (KEPCO) APR-1400 application.

Licensing resources support the review of two ESP applications received in FY 2010 and initiation of a review of a new application expected in FY 2012. Resources also support licensing amendment reviews of emergent issues during construction for post-COL licenses. Complex amendments are expected for critical design changes associated with resolving first-of-a-kind construction issues. Licensing resources also support lessons learned from the completion of the initial COL application reviews with the goal of applying these lessons learned to make the licensing process more efficient.

Licensing resources support work on advanced reactors to provide the funding necessary to conduct preapplication

activities for two SMR designs. Licensing resources also provide the funding necessary to perform an acceptance review and initiate a DC review for one SMR. The focus of the NRC's Advanced Reactor Program will be to develop the regulatory framework that integrates the use of risk insights into the review process and supports the resolution of key policy and safety issues associated with SMRs.

An amount of \$21 million of FY 2012 one-time New Reactor costs was included in the New Reactor Program. These one-time costs include design and construction of a new Headquarters office building, office and systems furniture, audiovisual and copier equipment, x-ray machines, metal detectors, and card readers for security.

### *Oversight*

For FY 2012, the NRC requests \$36.9 million, including 203.5 FTE, to provide for Oversight activities. This represents a funding increase of \$4.8 million, including 47.6 FTE, when compared with FY 2010 funding levels.

The Oversight Product Line provides resources to support construction inspection activities. During FY 2012, the NRC will develop and implement reactor inspection activities for an additional two new reactors (for a total of four) expected to be under construction. Oversight includes resources needed for increased enforcement-related casework, construction and vendor allegations, and investigations of wrongdoing. The NRC will continue construction activities for Watts Bar Unit 2 to support operation in FY 2012. Budgetary resources include

conducting 15 vendor inspections to support component manufacturing oversight, including international inspections.

Oversight seeks to verify that the new reactor construction process, which will result in operating power reactors, ensures the adequate protection of public health and safety, protects the environment, and provides high assurance of the security of facilities.

In FY 2012, resources are needed to continue the 2-year process to certify 10 licensing examiners needed by 2013 to support operator licensing for 10 units. In addition, resources support reactor simulators at the Technical Training Center and provide additional support to the operator licensing system.

### *Rulemaking*

For FY 2012, the NRC requests \$1.9 million, including 9.0 FTE, to provide for rulemaking activities. This represents a funding increase of \$0.6 million, including 1.7 FTE, when compared with FY 2010 funding levels.

The Rulemaking Product Line supports activities to maintain the safety and security framework of rules, regulatory guidance, and standard review plans. This framework promotes licensee compliance with underlying safety principles and security requirements. In FY 2012, the workload will focus on nine rulemakings. The resources support six high-priority rulemakings: four are directly related to DC activities (for the U.S.-EPR, U.S.-APWR, U.S.-ESBWR, and U.S.-ABWR DC amendment), one is an access authorization for construction

### **STRATEGIC GOAL STRATEGIES SUPPORTED BY OVERSIGHT**

*Safety—oversee the development and construction of new nuclear power reactors.*

*Security—evaluate license applicants' security plans.*

### **STRATEGIC GOAL STRATEGIES SUPPORTED BY RULEMAKING**

*Safety—use sound science and state-of-the-art methods to establish, where appropriate, risk-informed and performance-based regulations.*

*Security—use a framework of rules and regulations to guide the security activities of the agency.*

**STRATEGIC GOAL  
STRATEGIES  
SUPPORTED BY  
RESEARCH**

*Safety—improve the NRC’s regulatory programs and apply safety-focused research to anticipate and resolve safety issues.*

*Security—use research to inform the security activities of the agency.*

**STRATEGIC GOAL  
STRATEGIES  
SUPPORTED BY  
INTERNATIONAL  
ACTIVITIES**

*Safety—use domestic and international operating experience to inform decisionmaking.*

*Security—work with international counterparts to exchange information.*

rulemaking, and one is 10 CFR Part 50, Appendix I. In addition, rulemakings will support inspections, tests, analyses, and acceptance criteria (ITAAC) maintenance, 10 CFR Part 52 supplemental, and 10 CFR Part 21, “Reporting of Defects and Noncompliance,” restructuring.

**Research**

For FY 2012, the NRC requests \$13.7 million, including 50.3 FTE, to provide for Research activities. This represents an overall funding decrease of \$9.5 million, including 6.6 FTE, when compared with FY 2010 funding levels.

The Research Product Line supports the means to identify, lead, and/or sponsor reviews that aid the resolution of ongoing and future safety issues, including providing tools and expertise needed to support the NRC’s independent decisionmaking process. Research funding includes technical development activities for certification reviews, updating regulatory guides for new reactor licensing, and supporting advances in earthquake engineering.

Research resources also include the development of new reactor plant models and homeland security activities, such as aircraft impact analyses studies. Resources also support the advanced reactors program, including the development of expertise, tools, and data in areas such as thermal-hydraulics, severe accidents, nuclear analysis, probabilistic risk assessment, human factors, materials, and seismic/structural analysis.

**International Activities**

For FY 2012, the NRC requests \$9.6 million, including 19.6 FTE, to

provide for International Activities. This represents an overall funding increase of \$3.8 million, including 10.0 FTE, when compared with FY 2010 funding levels.

The International Product Line supports the NRC’s interface with international counterparts to exchange information, expertise, operating experience, and research results. These activities help the NRC recognize and respond to emerging technical issues and promote best safety and security practices. For example, the NRC participates in the Multinational Design Evaluation Program, in which several nations share information regarding the review of new reactor designs. These next-generation designs require detailed evaluation of their vulnerability to accidents and attacks, as well as development of ITAAC.

A portion of the resources funds work with IAEA, NEA, and other international partners to develop an effective mechanism for responding to the projection that by 2020 as many as 20 to 25 countries that currently do not have nuclear power programs will have embarked upon developing such a program. The rapid development of this international framework is of significance to the NRC because this framework will allow the agency to more effectively utilize new reactor domestic licensing-related resources at a time when it is responding to a significant increase in new reactor domestic licensing applications.

**Generic Homeland Security**

For FY 2012, the NRC requests \$0.8 million, including 3.6 FTE, to provide



for Generic Homeland Security activities. This represents a funding increase of \$0.6 million, including 3.4 FTE, when compared with FY 2010 funding levels.

The Generic Homeland Security Product Line resources will be used to develop standard review plans for SMRs to facilitate the security-related review of any new designs, update licensing-related documents to keep pace with emerging technology and approaches proposed by applicants or licensees in the security arena, provide support and resolve issues associated with oversight and licensing activities related to cyber security as licensees install cyber systems to satisfy regulatory requirements, finalize rulemaking related to access authorization at new construction sites and develop associated regulatory guidance, and provide support for international activities related to security as they relate to new reactor licensing application reviews.

### *Significant Accomplishments*

In FY 2010, the NRC continued the technical and safety reviews of 13 COLs, 3 DC applications, and 2 DC amendments. The NRC also completed the Victoria ESP application acceptance review on schedule and issued three license amendments and associated environmental assessments and findings of no significant impact for the Vogtle ESP and limited work authorization. The NRC finalized six staff guidance documents. In addition, the NRC issued the final supplemental environmental impact statement (EIS) for the North Anna COL application and the draft EIS for the following COL applications: South Texas, V.C. Summer, Calvert Cliffs, Levy, and Comanche Peak.

### **STRATEGIC GOAL STRATEGIES SUPPORTED BY GENERIC HOMELAND SECURITY**

*Safety—effectively respond to events at NRC-licensed facilities and other events of national interest, including maintaining and enhancing the NRC's critical incident response and communication capabilities.*

*Security—support Federal response plans that employ an approach to the security of nuclear facilities and radioactive material that integrates the efforts of licensees and Federal, State, local, and Tribal authorities.*

## New Reactors Output Measures

### Licensing

#### REVIEW EARLY SITE PERMIT APPLICATIONS ON THE SCHEDULES NEGOTIATED WITH THE APPLICANTS

	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Target:</b>	Complete milestones for Vogtle ESP application. Begin review of 1 ESP application.	Complete 1 ESP review (North Anna). Continue review of 1 existing ESP application (Vogtle).	Complete 1 ESP review (Vogtle).	No ESPs planned for FY 2010.	TBD	Review Victoria and PSE&G applications. Begin review of one new ESP application.
<b>Actual:</b>	Issued draft SER and draft EIS for Vogtle ESP application. (Note: Amarillo ESP application was not submitted.)	Issued ESPs for North Anna and Vogtle. ESP review on schedule.	Issued Vogtle ESP review on schedule.	Completed milestones for 2 ESP reviews (Vogtle and PSE&G).		

## REVIEW DESIGN CERTIFICATION APPLICATIONS ON THE SCHEDULES NEGOTIATED WITH THE APPLICANTS

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Complete milestones necessary to complete U.S.-ESBWR design certification. Issue the draft SER for U.S.-ESBWR.	Complete milestones to support U.S.-ESBWR and AP1000 design certification. Begin review of U.S.-EPR and U.S.-APWR design certification application review.	Complete milestones necessary to support U.S.-ESBWR, U.S.-EPR and U.S.-APWR design certification reviews. Complete review of AP1000 design certification application.	Complete review of U.S.-ESBWR design certification application (rulemaking) and AP1000 amended application (rulemaking) and continue review of U.S.-EPR and U.S.-APWR design certification applications.	TBD	Certify AP1000 amendment design. Complete licensing review of U.S.-EPR and U.S.-APWR designs and continue rulemaking. Complete milestones necessary to support one U.S.-ABWR design certification renewal. Continue rulemaking activities for U.S.-ESBWR and U.S.-ABWR amendment. Begin preapplication review on KEPCO APR-1400 application.
Actual:	Completed milestones necessary to support U.S.-ESBWR design certification. Applicant proposed process adjustment in elimination of draft SER for U.S.-ESBWR. Began AP1000 amendment design certification application review.	Completed milestones to support U.S.-ESBWR, U.S.-EPR, and AP1000 design certification, and the U.S.-EPR and U.S.-APWR design certification application review.	Completed milestones necessary to support the U.S.-ESBWR, U.S.-EPR, and U.S.-APWR design certifications. Completed milestones associated with U.S.-ABWR design certification application.	Completed milestones to support U.S.-ESBWR, U.S.-EPR, AP1000 amendment, U.S.-APWR design, and U.S.-ABWR amendment reviews.		

## REVIEW COL APPLICATIONS ON THE SCHEDULES NEGOTIATED WITH THE APPLICANTS

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Continue pre-COL application interactions with prospective COL applicants.	Complete milestones associated with conducting 14 COL application reviews.	Complete milestones associated with conducting 20 COL application reviews.	Complete milestones associated with conducting 20 COL application reviews.	TBD	Complete milestones associated with conducting 13 continuing COL application reviews. Begin review of 2 new COLs.*
Actual:	Staff engaged in preapplication activities with prospective COL applicants.	Completed milestones associated with conducting 14 COL application reviews.	Completed milestones associated with conducting 18 COL application reviews.	Completed milestones associated with conducting 13 COL application reviews.		

\*Excludes Watts Bar Unit 2.

## Oversight

### COMPLETE ALL VENDOR INSPECTIONS AS SCHEDULED AND RESOURCED

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New Measure in FY 2010			Complete 10 domestic and international vendor inspections.	TBD	Complete 15 domestic and international vendor inspections.
Actual:				Completed 11 vendor inspections, 6 quality assurance implementation inspections, and 3 aircraft impact assessment inspections.		

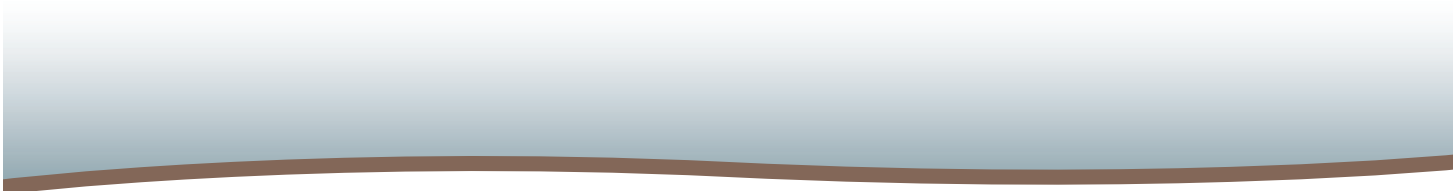
## Efficiency

### TRANSITION SUBSEQUENT COL REVIEWS FROM A 6-PHASE TO A 4-PHASE APPROACH\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New Measure in FY 2011				TBD	Level of effort savings is 6 FTE.

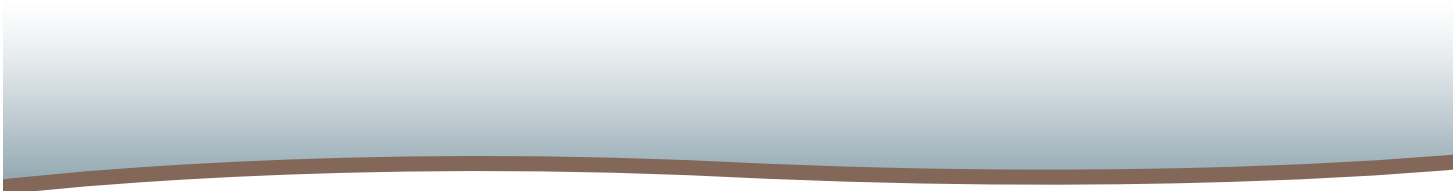
**Actual:**

\*The projected 6 FTE cost avoidance was factored into the FY 2010 budget. Savings are calculated for a 30-month review period and will allow for process improvements at a rate of 2 FTE per subsequent COL (SCOL) (averaging 1 FTE per year per SCOL). Nine SCOLs are projected to be reviewed on a 4-phase schedule during FY 2010. This efficiency over the 30-month review period will result in an 18 FTE reduction in budget requests over the 3-year period.



# NUCLEAR MATERIALS AND WASTE SAFETY







# Nuclear Materials and Waste Safety

The Nuclear Materials and Waste Safety Program encompasses U.S. Nuclear Regulatory Commission (NRC) efforts to ensure that nuclear materials and waste are managed in a manner that adequately protects the health and safety of the public, protects the environment, and promotes the common defense and security. Through this program, the NRC regulates uranium processing and fuel facilities; nuclear materials users (medical, industrial, research, and academic); spent fuel storage; spent fuel storage cask designs and transportation packaging designs; decontamination and decommissioning of facilities; and low-level and high-level radioactive waste. This program contributes to the NRC's Safety and Security goals through activities of the Fuel Facilities, Nuclear Materials Users, Spent Fuel Storage and Transportation, Decommissioning and Low-Level Waste, and High-Level Waste Repository Business Lines. The Atomic Energy Act of 1954, as amended (AEA), the Energy Reorganization Act of 1974, as amended, and the Energy Policy Act of 2005 are the foundations of the NRC's regulatory authority.

The nuclear fuel cycle process includes extraction of uranium from the ore, conversion of the uranium into a form suitable for enrichment, enrichment of the uranium to a level and type suitable for nuclear fuel, and then use of the enriched uranium in fabricating fuel assemblies for use in nuclear reactors. The NRC licenses, oversees, and regulates the facilities involved in the process. Nuclear materials have many industrial, medical, and academic uses. The NRC licenses, oversees, and regulates large and small users of nuclear materials such as radiographers, hospitals, private physicians, nuclear gauge

users, irradiators, and universities. The NRC also licenses facilities to possess plutonium and enriched uranium. These special nuclear materials (SNM) licensees verify and document their inventories in the Nuclear Materials Management and Safeguards System (NMMSS) database. The database tracks material transfers and inventories.

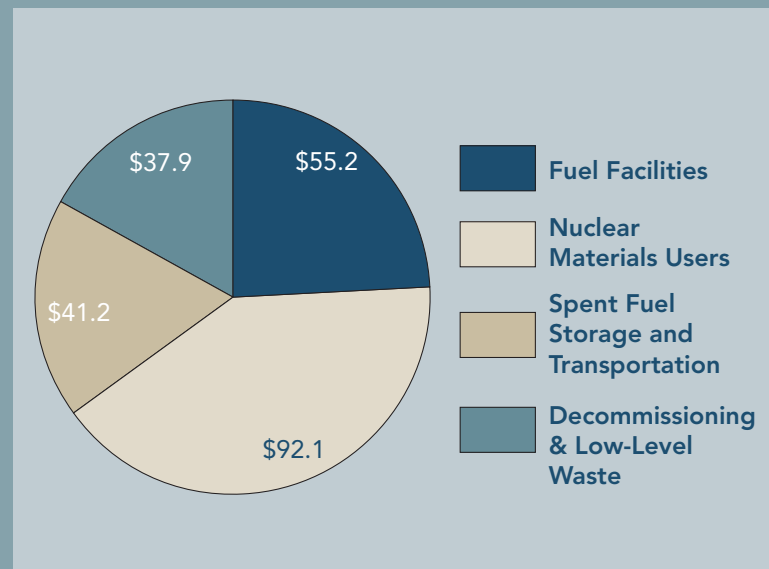
In addition, both the NRC and the Agreement States carry out their respective radiation safety regulatory programs under the framework of the National Materials Program (NMP). This covers activities carried out by the NRC and 37 Agreement State programs, such as licensing, inspection, response to incidents, staffing and training, and enforcement and investigation. The focus of the NMP is the program activities shared between the NRC and Agreement States. The scope of the NMP covers materials, which are currently regulated by the NRC and Agreement States.

## ***NUCLEAR MATERIALS AND WASTE SAFETY STRATEGIC GOALS***

*Safety—ensure adequate protection of public health and safety and the environment.*

*Security—ensure adequate protection in the secure use and management of radioactive materials.*

**Figure 9. FY 2012 Nuclear Materials and Waste Safety Request by Business Line (Dollars in Millions)**



The NMP scope has been expanded to cover accelerator-produced material and discrete sources of radium-226 due to the implementation of the Energy Policy Act of 2005.

About 3 million packages of radioactive materials are shipped each year in the United States by road, rail, air, or water. Regulating the safety of commercial radioactive material shipments is the joint responsibility of the NRC and the U.S. Department of Transportation (DOT). The NRC ensures transportation safety by reviewing and certifying shipping packages for the commercial transport of large quantities of radioactive materials. In addition, the NRC reviews and certifies shipping package designs for the U.S. Department of Energy's (DOE's) noncommercial transuranic waste shipments.

The NRC ensures safety and security in the management and disposition of radioactive waste. Nuclear waste is categorized as either low-level radioactive waste (LLW) or high-level radioactive waste (HLW). LLW is items

that have become contaminated with radioactive material or have become radioactive through exposure. The NRC and the Agreement States regulate the management and disposition of LLW. The NRC or Agreement States license, oversee, and regulate commercial LLW disposal facilities.

The majority of HLW is the fuel from the core of commercial nuclear power reactors. The NRC licenses, oversees, and regulates the management and disposition of HLW from commercial nuclear power plants. HLW is initially stored in pools at reactor sites, then after an appropriate time period, it is moved to dry storage. Dry storage is done in dry casks, or canisters, certified by the NRC for such use. These casks are stored at independent spent fuel storage installations (ISFSIs) licensed and regulated by the NRC.

Decommissioning is the safe removal of a nuclear facility from service and reduction of residual radioactivity to a level that permits release of the property and termination of the NRC license. The NRC

### NUCLEAR MATERIALS AND WASTE SAFETY (DOLLARS IN MILLIONS)

Business Line	FY 2010 Enacted		FY 2012			
			Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Fuel Facilities	54.6	208.3	55.2	226.5	0.6	18.2
Nuclear Materials Users	91.6	338.0	92.1	347.1	0.4	9.1
Spent Fuel Storage and Transportation	33.8	122.7	41.2	152.4	7.4	29.7
Decommissioning and Low-Level Waste	38.2	150.2	37.9	142.6	(0.3)	(7.6)
High-Level Waste Repository	29.0	99.0	0.0	0.0	(29.0)	(99.0)
<b>Total</b>	<b>\$247.2</b>	<b>918.1</b>	<b>\$226.5</b>	<b>868.5</b>	<b>(\$20.7)</b>	<b>(49.6)</b>

Numbers may not add due to rounding.

rules for decommissioning establish site release criteria and provide for unrestricted and, under certain conditions, restricted release of a site. The NRC and Agreement States regulate the decontamination and decommissioning of uranium recovery facilities, materials and fuel cycle facilities, nuclear power plants, and research and test reactors.

Security efforts in this program include safeguards and security reviews and inspections, force-on-force (FOF) exercises, regulatory improvements, and implementation of a national registry (i.e., the National Source Tracking System (NSTS)) of radioactive sources of concern. The NRC will continue to maintain a high state of incident response readiness and coordination with other Federal, State, and local agencies.

## PROGRAM RESOURCE SUMMARY

The fiscal year (FY) 2012 proposed budget request for nuclear materials and waste safety is \$226.5 million, which includes \$95.1 million in contract support and travel and \$131.4 million in salaries and benefits to support 868.5 full-time equivalents (FTE). This would fund activities in the Fuel Facilities, Nuclear Materials Users, Spent Fuel Storage and Transportation, Decommissioning and LLW, and HLW Business Lines. This funding level represents a decrease of \$20.7 million, including 49.6 FTE, compared to FY 2010 funding levels.

**FUEL FACILITIES BY PRODUCT LINE  
(DOLLARS IN MILLIONS)**

Product Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Licensing	16.0	71.2	10.9	55.5	(5.1)	(15.7)
Oversight	12.7	74.9	16.4	97.7	3.7	22.8
Rulemaking	1.7	4.6	3.7	13.7	2.0	9.1
Research	0.3	1.4	0.6	1.4	0.3	0.0
International Activities	1.0	5.3	1.1	5.2	0.1	0.0
Generic Homeland Security	4.0	9.9	2.6	6.1	(1.4)	(3.7)
Event Response	0.0	0.0	0.6	3.5	0.6	3.5
<b>Subtotal</b>	<b>\$35.7</b>	<b>167.3</b>	<b>\$35.9</b>	<b>183.2</b>	<b>\$0.2</b>	<b>15.9</b>
Corporate Support	18.8	41.0	19.3	43.3	0.5	2.3
<b>Total</b>	<b>\$54.6</b>	<b>208.3</b>	<b>\$55.2</b>	<b>226.5</b>	<b>\$0.6</b>	<b>18.2</b>

Numbers may not add due to rounding.

## FUEL FACILITIES

The Fuel Facilities Business Line activities ensure that fuel cycle facilities are licensed and operated in a manner that adequately protects the health and safety of the public, protects the environment, and promotes the common defense and security. Once uranium ore has been mined and milled (extraction of uranium from the ore), it moves on to conversion, enrichment, and fuel fabrication facilities. Conversion of the uranium changes it into a form suitable for enrichment, enrichment processes the uranium so that it is suitable for nuclear fuel, and fabrication uses the enriched uranium to make fuel assemblies to fuel nuclear reactors. The NRC licenses, oversees, and regulates the fuel cycle facilities involved in the process, such as conversion, enrichment, and fuel fabrication facilities, as well as research and pilot facilities. There are four uranium enrichment facilities and seven

licensed major fuel fabrication and production facilities in the United States.

The NRC will perform safety, security, and environmental reviews of the proposed AREVA centrifuge and General Electric-Hitachi (GE-Hitachi) laser enrichment facility applications, the International Isotopes depleted uranium deconversion facility application, the Mixed Oxide (MOX) Fuel Fabrication Facility, and participate in associated hearings.

Some of these facilities possess SNM, such as plutonium and enriched uranium. These SNM licensees verify and document their inventories in the NMMSS database. In addition to tracking inventories, the database tracks material transfers. The NRC has licensed approximately 180 facilities to possess SNM in quantities ranging from a single kilogram to multiple tons.

Fuel facilities activities include the Nuclear Materials Information Program (NMIP) and the interagency

agreement with DOE for certification and accreditation of classified computer systems at enrichment facilities. Other activities include environmental, emergency preparedness, and licensee performance reviews; legal advice and representation; adjudicatory hearing-related activities; independent review and advice; security support for licensing activities; inspection oversight; allegations and enforcement activities; rulemaking; international cooperation and assistance; International Atomic Energy Agency (IAEA) missions; export and import licensing; and treaties, agreements, and conventions.

The NRC has organized fuel facilities activities into product lines that best support safety and security strategies and significantly impact strategic outcomes as they relate to fuel cycle facilities. The resources requested support all direct aspects of fuel facilities activities within the following seven product lines—Licensing, Oversight, Rulemaking, Research, International Activities, Generic Homeland Security, and Event Response. The outputs of these product lines contribute to the management of the NRC safety and security performance measures and contribute to achievement of the strategic outcomes.

## *Licensing*

For FY 2012, the NRC requests \$10.9 million, including 55.5 FTE, to provide for licensing activities. This represents a funding decrease of \$5.1 million, including 15.7 FTE, when compared with FY 2010 funding levels.

The Licensing Product Line supports licensing fuel cycle facilities (such

as conversion, enrichment, and fuel fabrication) and research and pilot facilities.

The workload includes performing reviews of licensing actions, adjudicatory hearing-related activities, independent review and advice, and legal advice and representation for the Mixed Oxide (MOX) Fuel Fabrication Facility. Funding supports completion of a review of a medical isotope production facility license application. Funding also supports the review of the International Isotopes depleted uranium deconversion facility license application and the decommissioning plan and financial assurance reviews for International Isotopes, AREVA-Idaho, GE-Hitachi, AREVA-Lynchburg, Nuclear Fuel Services, U.S. Enrichment Corporation (USEC), Louisiana Energy Services (LES), and the National Institute of Standards and Technology. Funding is included for environmental aspects of the mandatory hearing for GE-Hitachi, as well as for environmental assessments (EAs) of other licensing actions. Funding also supports the performance of emergency preparedness licensing reviews, security-related licensing activities and technical assistance requests to review new fuel cycle aspects of reactor environmental reports, and associated environmental impact statements (EISs).

Licensing activities are the methods that the NRC employs to confirm that requests for new facilities and existing licensee requests for license renewals and amendments are consistent with the NRC's rules and regulations to ensure the adequate protection of public health and safety, protect the environment, and promote the common defense and security.

### **STRATEGIC GOAL STRATEGIES SUPPORTED BY LICENSING**

*Safety—develop, maintain, and implement licensing and regulatory programs for fuel facilities, materials, spent fuel management, waste management, uranium recovery, and decommissioning.*

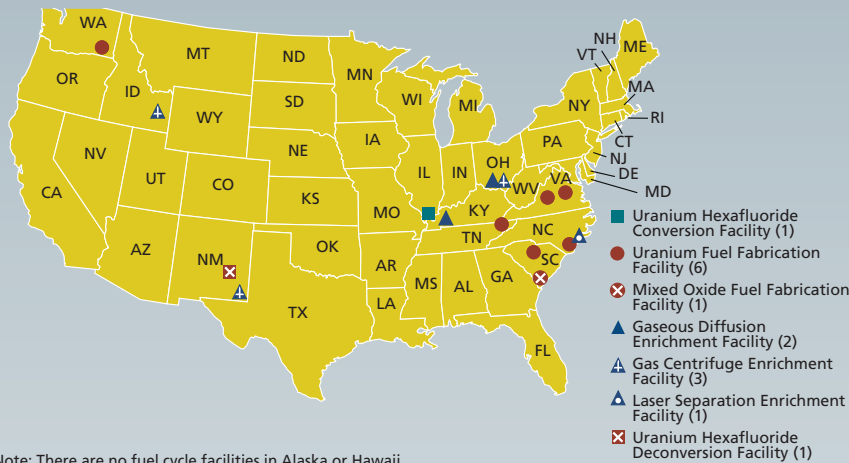
*Security—review security plans and changes for consistency with security requirements.*

### **STRATEGIC GOAL STRATEGIES SUPPORTED BY OVERSIGHT**

*Safety—oversee licensee safety performance through inspections, investigations, enforcement, and performance assessment activities.*

*Security—oversee licensee security performance through inspections and force-on-force exercises.*

**Figure 10. Locations of Major U.S. Fuel Cycle Facility Sites**



Licensee	Location	Status
<b>Uranium Hexafluoride Conversion Facility</b>		
Honeywell International, Inc.	Metropolis, IL	active
<b>Uranium Fuel Fabrication Facilities</b>		
Global Nuclear Fuels-Americas, LLC	Wilmington, NC	active
Westinghouse Electric Company, LLC Columbia Fuel Fabrication Facility	Columbia, SC	active
Nuclear Fuel Services, Inc.	Erwin, TN	active
AREVA NP, Inc. Mt. Athos Road Facility	Lynchburg, VA	active
B&W Nuclear Operations Group	Lynchburg, VA	active
AREVA NP, Inc.	Richland, WA	active
<b>Mixed Oxide Fuel Fabrication Facilities</b>		
Shaw AREVA MOX Services, LLC	Aiken, SC	in construction, operating license under review
<b>Gaseous Diffusion Uranium Enrichment Facilities</b>		
USEC Inc.	Paducah, KY	active
USEC Inc.	Piketon, OH*	in cold standby
<b>Gas Centrifuge Uranium Enrichment Facilities</b>		
USEC Inc.	Piketon, OH	in construction
Louisiana Energy Services	Eunice, NM	active**
AREVA Enrichment Services	Idaho Falls, ID	under review
<b>Laser Separation Enrichment Facility</b>		
GE-Hitachi	Wilmington, NC	under review
<b>Uranium Hexafluoride Deconversion Facility</b>		
International Isotopes	Hobbes, NM	under review

\* Currently in cold shutdown and not used for enrichment.

\*\* Partially operating and producing enriched uranium while undergoing further phases of construction.

Note: The NRC regulates nine other facilities that possess significant quantities of SNM (other than reactors) or process source material (other than uranium recovery facilities). Data as of July 2010.

## Oversight

For FY 2012, the NRC requests \$16.4 million, including 97.7 FTE, to provide for oversight activities. This represents a funding increase of \$3.7 million, including 22.8 FTE, when compared with FY 2010 funding levels.

The Oversight Product Line supports baseline and reactive inspections at fuel cycle facilities and the conduct of oversight activities with technical and licensing expertise; allegations, investigations, and enforcement activities; licensee performance reviews; and associated FOF activities. The workload includes construction oversight for the MOX fuel cycle facility with increased effort on principal structures, systems, and components and initiation of safety-related construction for AREVA, GE-Hitachi, and International Isotopes. LES continues to request a new cascade every 6 to 8 weeks with associated readiness reviews. LES and USEC/American Centrifuge Plant (ACP) construction and operational readiness review inspections continue. The workload also includes CAT I security baseline and FOF inspections, and follow up.

Oversight continuously oversees the safe and secure operation of currently licensed fuel cycle facilities to identify significant performance issues. The oversight process ensures that licensees take appropriate actions to maintain acceptable safety and security operating performance to ensure the adequate protection of public health and safety, protect the environment, and promote the common defense and security. The oversight process also ensures that facilities under construction are built in accordance with the requirements of

the NRC-approved license. Oversight includes activities associated with the development of counterintelligence programs.

## Rulemaking

For FY 2012, the NRC requests \$3.7 million, including 13.7 FTE, to provide for rulemaking activities. This represents a funding increase of \$2.0 million, including 9.1 FTE, when compared with FY 2010 funding levels.

The Rulemaking Product Line provides support for the high-priority and medium-priority rulemakings in FY 2012.

The workload includes the final rule development activities for Title 10 of the *Code of Federal Regulations* (10 CFR) Part 74, “Material Control and Accounting of Special Nuclear Material” (the final rule will be sent to the Commission for approval in April 2012). Funding also supports the development of the reprocessing regulatory framework and rulemaking in security-related areas for enhanced security at fuel cycle facilities (CAT I, II, III, GDP), material categorization, 10 CFR Part 26, “Fitness for Duty Programs,” and fingerprinting for Safeguards Information access, which will update security regulations to be consistent with orders and licensing commitments at fuel cycle facilities.

Rulemaking maintains the NRC’s safety and security framework of rules, regulatory guidance, and standard review plans that promote licensee compliance with underlying safety principles and security requirements.

## Research

For FY 2012, the NRC requests \$0.6 million, including 1.4 FTE, to provide for research activities. This represents a funding increase of \$0.3 million and no change in FTE level as compared with FY 2010 funding levels.

The Research Product Line supports the NRC’s regulatory mission by providing technical advice, tools, and information to identify and resolve safety issues and make regulatory decisions. This includes conducting confirmatory experiments and analyses and preparing the agency for the future by evaluating the safety aspects of new technologies.

The workload includes support for the review of gas centrifuge, laser enrichment, and MOX Fuel Fabrication Facility license applications, including the GE-Hitachi laser enrichment, AREVA gas centrifuge, and International Isotopes deconversion facility license applications, including geologic, seismic, structural, external events, instrumentation and control, and human factors aspects of the applications.

## International Activities

For FY 2012, the NRC requests \$1.1 million, including 5.2 FTE, to provide for international activities. This represents a slight funding increase of \$0.1 million and no change in FTE level when compared with FY 2010 funding levels.

The International Activities Product Line supports NRC work with international counterparts to exchange information, expertise, operating experiences, and ongoing research to recognize and respond to emerging technical issues and promote

### STRATEGIC GOAL STRATEGIES SUPPORTED BY RULEMAKING

*Safety—maintain a framework of rules, regulatory guidance, and standard review plans that promote licensee compliance with underlying safety principles.*

*Security—use a risk-informed approach to implement appropriate regulatory controls for the possession, handling, import, export, and transshipment of radioactive materials.*

### STRATEGIC GOAL STRATEGIES SUPPORTED BY RESEARCH

*Safety—improve the NRC’s regulatory programs and apply safety-focused research to anticipate and resolve safety issues.*

*Security—use research to inform the security activities of the agency.*

**STRATEGIC GOAL  
STRATEGIES  
SUPPORTED BY  
INTERNATIONAL  
ACTIVITIES**

*Safety—use international collaboration and coordination to inform decisionmaking.*

*Security—promote U.S. national security interests and nuclear proliferation policy objectives for NRC-licensed imports and exports of source and special nuclear materials and nuclear equipment.*

**STRATEGIC GOAL  
STRATEGIES  
SUPPORTED BY  
GENERIC HOMELAND  
SECURITY**

*Safety—conduct NRC safety, security, and emergency preparedness programs in an integrated manner.*

*Security—support Federal response plans that employ an approach to the security of nuclear facilities and radioactive material that integrates the efforts of licensees and Federal, State, local and Tribal authorities.*

best safety and security practices. The NRC also participates in the development of international standards to ensure that they are soundly based and determine whether substantial safety improvements can be identified and incorporated domestically. In FY 2012, the international activities work includes multilateral cooperation and assistance; support for IAEA missions; export and import licensing; and international treaties, agreements, and conventions.

**Generic Homeland Security**

In FY 2012, the NRC requests \$2.6 million, including 6.1 FTE, to provide for generic homeland security activities. This represents a decrease of \$1.4 million, including 3.7 FTE, when compared to FY 2010 funding levels.

The Generic Homeland Security Product Line supports security activities related to intergovernmental coordination and communication. It supports homeland security activities that are not licensee specific.

The workload includes support for NMMSS database operations, the Defense Tracking Technical System, and the NMIP. Funding supports new safeguards technologies, intergovernmental coordination and communication of homeland security matters, and international security-related activities. Funding also supports homeland security travel-related activities for intergovernmental coordination, cooperation, and communication of homeland security matters.

**Event Response**

In FY 2012, the NRC requests \$0.6 million, including 3.5 FTE, to provide for event response activities. This represents an increase of \$0.6 million, including 3.5 FTE, when compared to FY 2010 funding levels.

The Event Response Product Line supports efforts to enhance the fuel cycle facilities program, plans, and procedures.

The workload includes support for one full-participation emergency preparedness exercise with an operating fuel cycle facility. Funding also supports development and maintenance of the response capability associated with fuel cycle facility-related incidents (i.e., emergency response coordinators, a training and qualification program, procedures, intraagency and interagency coordination, and outreach). Funding also supports regional incident response actions for fuel cycle facility licensees, including the maintenance of a response capability for fuel cycle facility-related incidents.



## *Significant Accomplishments*

In 2010, the NRC issued draft EISs on the uranium enrichment license applications for AREVA and GE-Hitachi. Public meetings were conducted in the vicinity of the proposed sites, and local groups and officials were consulted as part of the process of obtaining comments on the draft EISs. The NRC also completed the safety and safeguards review of the AREVA Enrichment Services license application for a gas centrifuge uranium enrichment facility and issued the safety evaluation report.

The NRC authorized initial uranium enrichment operations at the LES facility in Eunice, NM. Over 40 inspections were conducted and several license amendments approved before the agency determined that the facility was built in accordance with the license and had effective programs, procedures, and training in place to ensure safe operation.

The agency inspected the root causes and corrective actions for a toxic chemical release that caused a temporary evacuation of a process area at the Nuclear Fuel Services fuel fabrication facility in Erwin, TN. The inspections prevented operation of all process lines until more comprehensive actions were taken by the licensee to prevent recurrence. After further inspection of licensee corrective actions, three of four process lines were restored to operation.

### **STRATEGIC GOAL STRATEGIES SUPPORTED BY EVENT RESPONSE**

*Safety—effectively respond to events at NRC-licensed facilities and other events of national interest, including maintaining and enhancing the NRC’s critical incident response and communication capabilities.*

*Security—support Federal response plans that employ an approach to the security of nuclear facilities and radioactive material that integrates the efforts of licensees and Federal, State, local, and Tribal authorities.*

## Fuel Facilities Output Measures

### Licensing

#### TIMELINESS OF COMPLETING "COMPLEX" FUEL CYCLE LICENSING ACTIONS, FROM THE DATE OF ACCEPTANCE, EXCLUDING REQUEST FOR ADDITIONAL INFORMATION WITH AN ASSUMPTION OF 30-DAY RESPONSE TO A REQUEST FOR ADDITIONAL INFORMATION

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New measure to begin in FY 2010			100% ≤ 1.5 yr	TBD	100% ≤ 1.5 yr
Actual:				100% ≤ 1.5 yr		

#### TIMELINESS OF COMPLETING "NONCOMPLEX" FUEL CYCLE LICENSING ACTIONS (E.G., AMENDMENTS AND REVIEWS) FROM THE DATE OF ACCEPTANCE, INCLUDING A 30-DAY RESPONSE FOR A REQUEST FOR ADDITIONAL INFORMATION

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New measure to begin in FY 2010			85% ≤ 150 days 100% < 1 year	TBD	85% ≤ 150 days 100% < 1 year
Actual:				92% ≤ 150 days 100% < 1 year		

### Oversight

#### SAFETY AND SAFEGUARDS INSPECTION MODULES. COMPLETE ALL CORE AND REACTIVE INSPECTION MODULES AS SCHEDULED IN FUEL CYCLE MASTER INSPECTION PLAN

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Complete 218 inspection modules.	Complete 266 inspection modules.	Complete 286 inspection modules.	Complete 286 inspection modules.	TBD*	Complete 307 inspection modules.
Actual:	Completed 306 inspection modules.	Completed 269 inspection modules.	Completed 286 inspection modules.	Completed 289 inspection modules.		

\*USEC/ACP commenced enrichment operations during FY 2010. LES is not expected to commence operations until after FY 2012.

**TIMELINESS OF SAFETY AND SAFEGUARDS INSPECTION MODULES. COMPLETE CORE INSPECTION MODULES AS SCHEDULED IN FUEL CYCLE MASTER INSPECTION PLAN**

	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Target:</b>	> 93% completed on time.	> 97% completed on time.	> 97% completed on time.	> 97% completed on time.	TBD	> 99% completed on time.
<b>Actual:</b>	100% completed on time.	100% completed on time.	100% completed on time.	100% completed on time.		

**TIMELINESS IN COMPLETING REVIEWS FOR TECHNICAL ALLEGATIONS**

	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Target:</b>	70% ≤ 150 days 90% ≤ 180 days 100% ≤ 360 days	80% ≤ 150 days 90% ≤ 180 days 100% ≤ 360 days	90% ≤ 150 days 95% ≤ 180 days 100% ≤ 360 days	90% ≤ 150 days 95% ≤ 180 days 100% ≤ 360 days	TBD	90% ≤ 150 days 95% ≤ 180 days 100% ≤ 360 days
<b>Actual:</b>	100% ≤ 150 days 100% ≤ 180 days 100% ≤ 360 days	100% ≤ 150 days 100% ≤ 180 days 100% ≤ 360 days	100% ≤ 150 days 100% ≤ 180 days 100% ≤ 360 days	81% ≤ 150 days* 96% ≤ 180 days 100% ≤ 360 days		

\*This metric was not met because allegations in the first quarter were not being closed in ≤ 150 days. Three of the four were impacted by regional staff reassignments and case complexities requiring substantial review by staff and management. The fourth case involved issues of dual regulation between the NRC and the U.S. Environmental Protection Agency (EPA) and required extensive research of EPA requirements and communications with State representatives. The Region focused attention in this area throughout the remainder of FY 2010 (closed all but one fuel facility allegation in the second and third quarters in ≤ 150 days), but was ultimately unable to meet the metric, primarily due to the considerable staff and management effort required to evaluate three new fuel facility allegations in the fourth Quarter of FY 2010 that each involved unusually large numbers of concerns, causing the time needed for closure to be > 150 (but < 180) days.

**NEW FUEL FACILITIES HEARING SUPPORT\***

	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Target:</b>	New efficiency measure in FY 2011				TBD	Actual hours expended on major tasks in support of licensing board hearings as documented in the Fuel Cycle Safety and Safeguards Division Operating Plan will not exceed the projected hours by more than 10 percent.
<b>Actual:</b>						

\*Targets, baselines, and calculation methods are under development, and the measure may be revised.

**NUCLEAR MATERIALS USERS BY PRODUCT LINE  
(DOLLARS IN MILLIONS)**

Product Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Licensing	15.5	67.8	13.1	66.6	(2.4)	(1.2)
Oversight	20.1	105.6	19.1	99.5	(0.9)	(6.2)
Rulemaking	3.3	18.5	3.6	20.3	0.3	1.8
Research	1.2	2.9	1.4	4.2	0.3	1.3
International Activities	1.3	8.2	1.9	10.8	0.5	2.6
Generic Homeland Security	13.0	27.6	15.7	36.3	2.7	8.7
Event Response	0.4	2.6	0.9	5.2	0.4	2.6
State, Tribal, and Federal Programs	8.3	42.5	7.3	39.2	(0.9)	(3.3)
<b>Subtotal</b>	<b>\$63.0</b>	<b>275.7</b>	<b>\$63.1</b>	<b>282.0</b>	<b>\$0.1</b>	<b>6.4</b>
Corporate Support	28.6	62.3	29.0	65.0	0.4	2.7
<b>Total</b>	<b>\$91.6</b>	<b>338.0</b>	<b>\$92.1</b>	<b>347.1</b>	<b>\$0.4</b>	<b>9.1</b>

Numbers may not add due to rounding.

## NUCLEAR MATERIALS USERS

Nuclear materials have many industrial, medical, and academic uses. The NRC licenses, oversees, and regulates large and small users of nuclear materials, such as radiographers, hospitals, private physicians, nuclear gauge users, irradiators, and universities.

Nuclear materials users activities support the licensing, inspection, event evaluation, research, incident response, allegation and investigations, enforcement, and rulemaking to maintain the regulatory safety and security infrastructure needed to process and handle nuclear materials. The agency's safety activities include completion of approximately 2,500 materials licensing actions and 1,000 routine health and safety inspections. The NRC will also work on

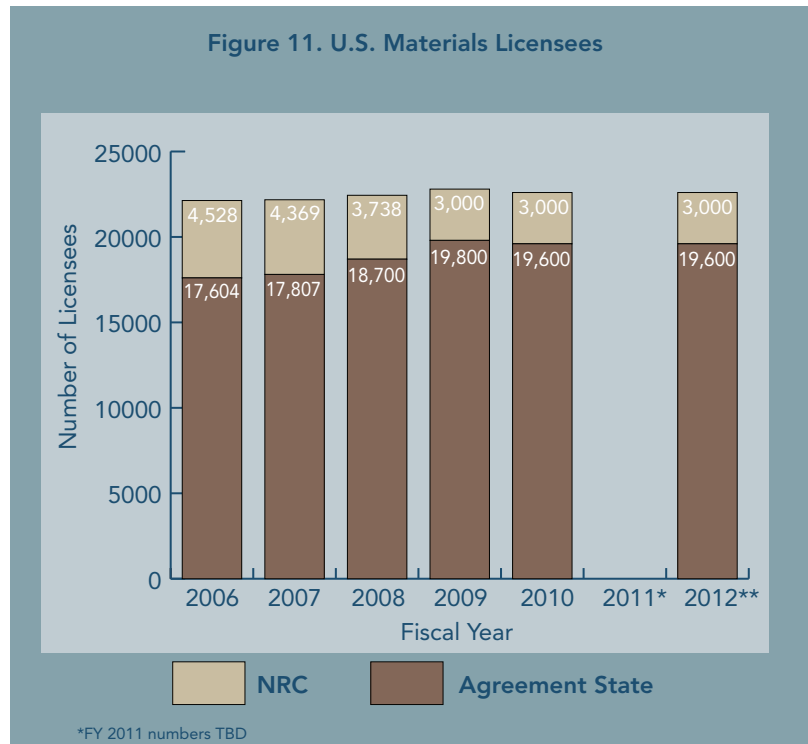
approximately 20–25 active materials and waste rulemakings.

The Agreement State program has been in existence since 1959 with the adoption of Section 274 of the AEA. The Agreement State program is a discontinuance of NRC regulatory authority over certain radioactive materials and assumption of that authority by the State government. At present, there are 37 Agreement States, and four more States have indicated interest in becoming an Agreement State. Under Section 274 of the AEA, the NRC has programmatic oversight responsibility to periodically review the actions of the Agreement States to comply with the requirements of the AEA to continue to maintain adequate and compatible programs. While this authority is reserved to the NRC, the current review process under the Integrated Materials Performance Evaluation Program (IMPEP) is conducted with

State staff participation under the NMP. The IMPEP process employs a team of NRC and Agreement State staff to assess Agreement State radioactive materials programs. The NRC will conduct materials activities related to Agreement States, including oversight, technical assistance, regulatory development, and cooperative efforts. This includes security inspections of Agreement State licensees. The NRC will continue to fund the cost of Agreement State staff training, including associated travel costs.

Materials activities include reviews and issuance of NRC import/export authorizations, materials-related wrongdoing investigations, adjudicatory hearings for materials licensing and enforcement proceedings, technical training, and continuous improvements and centralized oversight of information technology and information management.

Nuclear materials users security activities include the implementation and operation of a national registry of radioactive sources of concern to improve controls on risk-significant radioactive materials to prevent their malevolent use. The Integrated Source Management Portfolio (ISMP) contract has integrated the three core systems, consisting of the NSTS, Web-Based Licensing (WBL), and License Verification System (LVS), that will license and track sources and other radioactive materials under one management mechanism. Further, security activities include conducting inspections of increased controls at materials facilities; security inspections of irradiators, manufacturers, and distributors; inspections of radioactive materials in quantities of concern; and preclicensing inspections of new materials applicants. All of these activities strengthen controls



for the possession, handling, import, and export of nuclear materials. In addition, resources will be used to conduct the NRC's Agreement State liaison activities regarding enhanced control and security actions for materials licensees, as well as cooperative efforts and liaison with all State and local governments and Native American Tribal governments, in matters related to homeland security for nuclear waste and materials.

The NRC has organized nuclear material users activities into product lines that best support safety and security strategies and impact strategic outcomes as they relate to materials licensing, inspection, and Agreement State activities. The resources requested support all direct aspects of nuclear materials users activities within the following eight product lines—Licensing, Oversight, Rulemaking, Research, International Activities, Generic Homeland Security,

**STRATEGIC GOAL**  
**STRATEGIES**  
**SUPPORTED BY**  
**LICENSING**

*Safety—develop, maintain, and implement licensing and regulatory programs for fuel facilities, materials, spent fuel management, waste management, uranium recovery, and decommissioning activities.*

*Security—support Federal response plans that employ an approach to the security of nuclear facilities and radioactive material that integrates the efforts of licensees, Federal, State, local, and Tribal authorities.*

Event Response, and State, Tribal, and Federal Programs. The outputs of these product lines contribute to the scoring of the NRC Safety and Security goals' performance measures and their contribution to achievement of the strategic outcomes. The efforts under nuclear materials users are designed to ensure that nuclear materials are licensed and used in a manner that adequately protects the health and safety of the public, protects the environment, and promotes the common defense and security.

### *Licensing*

For FY 2012, the NRC requests \$13.1 million, including 66.6 FTE, to provide for licensing activities. This represents a funding decrease of \$2.4 million, including 1.2 FTE, when compared with FY 2010 funding levels.

The Licensing Product Line supports completion of approximately 2,500 materials licensing actions (new applications, amendments, renewals, and terminations) in FY 2012. The agency will continue implementing the program revisions to address the recommendations for enhanced security for licensing in the materials licensing process. Licensing confirms that requests to use nuclear materials or modify existing uses provide an adequate margin of safety and security consistent with the NRC's rules and regulations to ensure the adequate protection of public health and safety and protect the environment.

Resources are also budgeted over the planning period for legal assistance supporting materials licensing. In FY 2012, the agency supports adjudicatory hearing-related activities and limited

appearance sessions for materials licensing proceedings. Legal advice and counsel will support materials licensing and enforcement actions based on new security requirements affecting materials licensees.

### *Oversight*

For FY 2012, the NRC requests \$19.1 million, including 99.5 FTE, to provide for oversight activities. This represents a funding decrease of \$0.9 million, including 6.2 FTE, when compared with FY 2010 funding levels.

The Oversight Product Line activities provide for the continued safe and secure use of nuclear materials. These activities provide the means to identify significant issues and ensure that licensees take appropriate actions to maintain acceptable levels of safety and security in their operating procedures, performance, and the use of nuclear materials. Oversight includes resources for inspections, event evaluations, allegations, investigations, enforcement, and related activities associated with the management and oversight of nuclear materials.

The workload includes completion of approximately 1,000 routine health and safety inspections in FY 2012, as well as reciprocity inspections and a registration and followup inspection program for certain general licensees. The NRC will also inspect Agreement State licensees operating under reciprocity in NRC jurisdictions. Resources will support implementation of the recommendation from the materials working group and external independent review working group to revise the licensing and inspection infrastructure, and will

support implementing the materials licensees oversight program for safety culture activities.

The agency will support investigations of wrongdoing, materials-related enforcement actions, oversight of the Alternative Dispute Resolution and Allegation Programs, and external safety culture program activities.

The resources support event and incident evaluation activities, which include the Protective Measures Team emergency response support function, as well as the orphan source activity, and funding for the Nuclear Material Events Database.

Continued coordination with States on agreements, as authorized by Section 274i of the AEA, and homeland security is planned. These activities include support for development and distribution of advisories, development and implementation of additional security measures (e.g., development of implementing guidance), and ensuring that other homeland security information is provided to authorized State and local government officials. The agency will continue to develop, coordinate, and assist in the maintenance of Section 274i agreements with States to conduct security inspections on behalf of the NRC for NRC-issued security orders.

## *Rulemaking*

For FY 2012, the NRC requests \$3.6 million, including 20.3 FTE, to provide for rulemaking activities. This represents a funding increase of \$0.3 million, including 1.8 FTE, when compared with FY 2010 funding levels.

The Rulemaking Product Line will support rulemaking activities, including legal support to maintain the regulatory infrastructure needed to process and handle nuclear materials. Rules, guidance, and regulations promote licensee compliance with underlying safety principles and requirements.

Rulemaking activities support work on approximately 20–25 active materials and waste safety rulemakings in FY 2012, as well as continued interactive liaison with industry and professional societies to develop new codes and consensus standards and to address petitions for rulemaking submitted to the agency. Examples of rulemakings determined as high priority are amendments under 10 CFR Part 35, “Medical Uses of Byproduct Material,” and 10 CFR Part 71, “Packaging and Transportation of Radioactive Materials,” compatibility with IAEA transportation standards. Rulemaking resources systematically improve the NRC’s regulatory program to ensure the safe use and management of nuclear materials and to resolve safety issues. They also improve the NRC’s regulations by adding needed requirements, eliminating unnecessary requirements, and minimizing jurisdictional overlaps. The NRC will continue work on all high- and medium-priority rulemakings.

## *Research*

For FY 2012, the NRC requests \$1.4 million, including 4.2 FTE, to provide for research activities. This represents a funding increase of \$0.3 million, including 1.3 FTE, when compared with FY 2010 funding levels.

### **STRATEGIC GOAL STRATEGIES SUPPORTED BY OVERSIGHT**

*Safety—oversee licensee safety performance through inspections, investigations, enforcement, and performance assessment activities.*

*Security—enhance the programs to control the security of radioactive sources and strategic special nuclear materials commensurate with their risk, including enhancement required by the Energy Policy Act of 2005.*

### **STRATEGIC GOAL STRATEGIES SUPPORTED BY RULEMAKING**

*Safety—use sound science and state-of-the-art methods to establish, where appropriate, risk-informed and performance-based regulations.*

*Security—use a risk-informed approach to implement appropriate regulatory controls for the possession, handling, import, export, and transshipment of radioactive materials.*

**STRATEGIC GOAL  
STRATEGIES  
SUPPORTED BY  
RESEARCH**

*Safety—improve the NRC’s regulatory programs and apply safety-focused research to anticipate and resolve safety issues.*

*Security—use research to inform the security activities of the agency.*

**STRATEGIC GOAL  
STRATEGIES  
SUPPORTED BY  
INTERNATIONAL  
ACTIVITIES**

*Safety—use domestic and international collaboration and cooperation to inform decisionmaking.*

*Security—promote U.S. national security interests and nuclear proliferation policy objectives for NRC-licensed imports and exports of source and special nuclear materials and nuclear equipment.*

The Research Product Line supports research to develop tools informed by human reliability analysis for byproduct materials licensing, and for radiation assessment methods through the development of modern hand/body models. In addition, research for the medical and industrial sectors will support development and alignment of radiation protection regulations and guidance with the 2007 International Commission on Radiation Protection recommendations.

Research provides the means to identify, lead, or sponsor reviews that support the resolution of ongoing and future safety issues, including providing tools and expertise needed to support the NRC’s independent decisionmaking process.

***International Activities***

For FY 2012, the NRC requests \$1.9 million, including 10.8 FTE, to provide for international activities. This represents a funding increase of \$0.5 million, including 2.6 FTE, when compared with FY 2010 funding levels.

The International Activities Product Line supports NRC expectations to complete reviews and make decisions on 135–180 import/export authorizations of nuclear components and radiological materials, continue the control and tracking of imports and exports of sources, and support bilateral and multilateral activities initiated for the exchange of technical information for the safe handling, storage, transport, and disposal of nuclear waste. Resources also provide for assistance activities related to the safety and security of medical and industrial sources, support

to the IAEA missions related to training and regulation of nuclear materials, and assistance to foreign regulatory bodies through the assignee program.

Resources also support international committees and groups, memoranda of understanding development, and, specifically, intergovernmental coordination and communication with the Government Coordinating Council, National Nuclear Security Administration, and various trilateral activities. Resources support multilateral and bilateral international activities related to the NRC’s mission, as well as broader U.S. domestic and international interests for nuclear safety and security.

The International Activities Product Line provides the means to work with international counterparts to exchange information, expertise, operating experience, and ongoing research to recognize and respond to emerging technical issues and promote best safety and security practices. The NRC also participates in the development of international standards to ensure that they are soundly based and determine whether substantial safety improvements can be identified and incorporated domestically.

***Generic Homeland Security***

For FY 2012, the NRC requests \$15.7 million, including 36.3 FTE, to provide for generic homeland security activities.

The Generic Homeland Security Product Line supports international homeland security; security rulemaking activities, including legal support for the homeland security regulatory improvements



initiatives; control and tracking of imports and exports of sources; homeland security travel funds; and the ISMP contract.

The resources support the ISMP contract, which will integrate the three systems (NSTS, WBL, and LVS) that license and track sources and radioactive materials under one management mechanism. The majority of NSTS tasks are for operational support (hosting, user support, data entry, and software maintenance). In FY 2012, work will continue on the 11 ISMP tasks that established the infrastructure for hosting all ISMP component systems (NSTS, User Enrollment Module, WBL, and LVS), maintenance and user support for the three component systems, and integration of Agreement State license information into the ISMP through data entry. This data entry effort is vital to forming a comprehensive national materials license repository. As each new system is deployed, the ISMP contract will provide all operational support as described above. The near-term results in FY 2012 will be the first year of operation of WBL and LVS, and the overall results will be enhanced control and accountability of radioactive materials.

### *Event Response*

For FY 2012, the NRC requests \$0.9 million, and 5.2 FTE, to provide for event response activities. This represents an increase of \$0.4 million, including 2.6 FTE, when compared with FY 2010 funding levels.

The Event Response Product Line provides the means to effectively respond to events involving nuclear

materials, including maintaining and enhancing the NRC's critical event response and communication capabilities. In FY 2012, the budget for the Event Response Product Line supports event response actions for materials licensees, including the maintenance of a 24/7 response capability for materials-related incidents.

### *State, Tribal, and Federal Programs*

For FY 2012, the NRC requests \$7.3 million, including 39.2 FTE, to provide for State, Tribal, and Federal programs. This represents a funding decrease of \$0.9 million, including 3.3 FTE, when compared with FY 2010 funding levels.

The State, Tribal, and Federal Programs Product Line conducts materials activities related to Agreement States, including oversight, technical assistance, and cooperative efforts, as well as coordination and liaison with States and local governments, Federal agencies, Native American Tribal governments, and interstate organizations on policy and notifications of interest for nuclear waste and materials.

The AEA provides authority for the NRC to relinquish to the States, by written agreement, portions of its regulatory authority to license and regulate byproduct materials, source materials, and certain quantities of SNM. Currently, the NRC has partnered with 37 States for this purpose and continually provides assistance and support to these Agreement States. Together, the NRC and Agreement States regulate more than 22,000 specific and 150,000 general licenses.

### **STRATEGIC GOAL STRATEGIES SUPPORTED BY GENERIC HOMELAND SECURITY**

*Safety—use domestic and international collaboration and cooperation to inform decisionmaking.*

*Security—promote U.S. national security interests and nuclear proliferation policy objectives for NRC-licensed imports and exports of source and special nuclear materials and nuclear equipment.*

**STRATEGIC GOAL  
STRATEGIES  
SUPPORTED BY  
EVENT RESPONSE**

*Safety—effectively respond to events at NRC-licensed facilities and other events of national interest, including maintaining and enhancing the NRC’s critical incident response and communication capabilities.*

*Security—support Federal response plans that employ an approach to the security of nuclear facilities and radioactive material that integrates the efforts of licensees and Federal, State, local, and Tribal authorities.*

**SUPPORTED  
STRATEGIC GOAL  
STRATEGIES FOR  
STATE, TRIBAL, AND  
FEDERAL PROGRAMS**

*Safety—continue to support Agreement States in developing, maintaining, and implementing licensing and regulatory programs for materials users.*

*Security—share security information with appropriate stakeholders and international partners.*

This product line supports the activities of Agreement States and the conduct of periodic reviews of Agreement State programs to ensure that they are adequate to protect public health and safety and the environment and are compatible with NRC programs. The NRC will work closely with the Agreement States to develop consistent, risk-informed processes to review event information and identify safety issues for materials licensees. Resources provide for conducting materials activities related to Agreement States and liaison, including oversight, technical assistance, cooperative efforts, and enhanced control and security actions for materials licensees. Resources also fund NRC-sponsored Agreement State training and travel activities.

Agreement State program resources provide support to conduct 10–12 IMPEP reviews, conduct outreach to potential new Agreement States and process one new agreement, process 50 Agreement State incidents or events, participate in and coordinate State participation in regulatory development, coordinate and fund State participation in NRC training courses, respond to State technical assistance requests, respond to or coordinate responses to allegations about Agreement State licensees or regulatory programs, interact with the Conference of Radiation Control Program Directors, Inc., and the Organization of Agreement States, Inc., and develop and maintain policies and procedures for the program. This activity includes the statutory requirement for the NRC to make a determination that all applicable standards and requirements have been met prior to a uranium milling license termination by the Agreement State and that alternate

11e(2) standards are adequate before they are implemented by the Agreement State (one or two cases per year).

The NRC also coordinates with Agreement States in the waste area on LLW and decommissioning since all currently operating LLW sites are located in Agreement States. These activities evaluate the safety effectiveness of the Agreement State programs and provide public confidence and assurance that the Agreement States are conducting adequate and compatible programs. The NRC will continue to coordinate the effort for the implementation of the increased control requirements in the Agreement States.

With respect to new Agreement States, Michigan has submitted a letter of intent to become an Agreement State in FY 2013. There is also interest in becoming an Agreement State from three States that have not yet submitted a letter of intent from their respective Governors: Connecticut, Hawaii, and Indiana.

This product line provides for the State, Federal, and Tribal liaison program that informs, notifies, and coordinates with Governor-appointed representatives, other Federal agencies, and Native American Tribal governments on matters in the Materials and Waste Safety Program, including new or revised regulations, policy, and guidance. This outreach enhances the public confidence in the NMP and collects input from the NRC stakeholders.

Consistent with Executive Order 13175, “Consultation and Coordination with Indian Tribal Governments,” dated November 6, 2006, the NRC has adopted agency practices that ensure consultation and cooperation with Tribal governments.

For example, the NRC interacts with Native American Tribal governments on nuclear-related regulatory issues that include uranium recovery licensing and long-term strategies for remediation, reactor licensing and inspection activities, reactor license renewal, and nuclear waste transportation and disposal. The NRC is implementing an internal protocol for government-to-government interaction with Tribal governments in response to Commission direction. Recently, the NRC has expanded Tribal outreach and communication with all 564 Federally recognized tribes.

### *Significant Accomplishments in FY 2010*

The agency completed 2,460 materials licensing actions and 930 routine health and safety inspections.

The NRC undertook several rulemaking activities to allow the use of radioactive materials while protecting public health and safety and the environment. These activities included rulemaking to enhance domestic nonproliferation activities in accordance with IAEA recommendations, implementing improvements to the licensing and distribution of byproduct materials, and notifying Native American Tribes of transportation of certain types of nuclear wastes. The agency also published a final rule related to the requirements for categorical exclusion from environmental review under the National Environmental Policy Act of 1969.

The NRC worked with Agreement States to implement requirements imposed on licensees that enhance the security and control of risk-significant radioactive

material, including development of an inspection program to verify the implementation of these measures. In FY 2010, the NRC completed work on the development of the proposed new 10 CFR Part 37, “Physical Protection of Byproduct Material Category 1 and Category 2 Quantities of Radioactive Material,” which captures these requirements. The objective of the proposed rulemaking is to ensure that effective security measures are in place for the protection of IAEA Category I and Category II quantities of radioactive material against the possibility of the dispersion of radioactive material for malevolent purposes.

The NRC, with the assistance of the Agreement States, completed nine IMPEP reviews to determine the adequacy and compatibility of the programs in the evaluated Agreement States, one review for the materials licensing and inspection program in a regional office, and one review of the sealed source and device evaluation program at NRC Headquarters (HQ) during FY 2010.

In July 2010, the NRC completed a self-assessment of IMPEP using a five-person team consisting of staff from NRC HQ, the regions, and two Agreement States. The team evaluated IMPEP to determine if changes or enhancements were warranted. Overall, the team found the program to be highly effective in fulfilling its basic objective (evaluating the adequacy and compatibility of Agreement State and the NRC materials activities using a common set of performance review criteria and similar review methodology). The team developed a set of recommendations and enhancements that could result in an even stronger and more efficient IMPEP in the future,

which were approved by the management review board. The staff is evaluating and incorporating the recommended changes, as appropriate.

In August 2010, the NRC submitted the second report of the Radiation Source Protection Task Force to President Obama and Congress; the report outlined the Federal Government's efforts over the past 4 years to enhance the security of radioactive sources. The task force was established by the Energy Policy Act of 2005, with the NRC as its chair, to evaluate and provide recommendations on the security of radiation sources in the United States from potential criminal or terrorist threats, including acts of sabotage, theft, or use in a "dirty bomb." The task force consists of representatives from the NRC; the Departments of Homeland Security, Defense, Energy, Transportation, Justice, State, and Health and Human Services; the Director of National Intelligence; the Central Intelligence Agency and Federal Bureau of Investigation; the Office of Science and Technology Policy; EPA; the Conference of Radiation Control Program Directors; and the Organization of Agreement States. The legislation required a task force report in 2006, and every 4 years thereafter. The 2010 report presents the status of recommendations and actions from the 2006 report and new recommendations on coordination and communication improvements among government agencies and the public, advances in the security and controls of radioactive sources, recovery and disposition of unused radioactive sources, and alternative technologies that could perform all or some of the functions that use radiation sources. The task force will continue to meet to implement and monitor the progress of efforts to improve

the security of radioactive sources and identify any additional gaps that may arise.

## Nuclear Materials Users Output Measures

### Licensing

#### TIMELINESS OF LICENSING ACTIONS—REVIEW OF APPLICATION FOR NEW MATERIALS LICENSES AND LICENSE AMENDMENTS

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	92% ≤ 90 days 100% ≤ 1 yr	80% ≤ 90 days 100% ≤ 2 yr	85% ≤ 90 days 100% ≤ 2 yr	90% ≤ 90 days 100% ≤ 2 yr	TBD	92% ≤ 90 days 100% ≤ 2 yr
Actual:	98% ≤ 90 days 99.8% ≤ 1 yr	98% ≤ 90 days 100% ≤ 1 yr	97% ≤ 90 days 100% ≤ 2 yr	95% ≤ 90 days 100% ≤ 2 yr		

#### TIMELINESS OF LICENSING ACTIONS—REVIEW OF APPLICATIONS FOR MATERIALS LICENSE RENEWALS AND SEALED SOURCE AND DEVICE DESIGNS

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	92% ≤ 180 days 100% ≤ 2 yr	80% ≤ 180 days 100% ≤ 2 yr	80% ≤ 180 days 100% ≤ 2 yr	90% ≤ 180 days 100% ≤ 2 yr	TBD*	92% ≤ 180 days 100% ≤ 2 yr
Actual:	98% ≤ 180 days 100% ≤ 2 yr	94% ≤ 180 days 100% ≤ 2 yr	91% ≤ 180 days 100% ≤ 2 yr	95% ≤ 180 days 100% ≤ 2 yr		

\*This metric was inadvertently stated as 90 days in the FY 2011 Congressional Budget Justification.

### Oversight

#### TIMELINESS OF SAFETY INSPECTIONS OF MATERIALS LICENSEES

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	> 90% completed on time.	> 95% completed on time.	> 98% completed on time.	> 98% completed on time.	TBD	> 98% completed on time.
Actual:	99% completed on time.	99% completed on time.	99% completed on time.	99% completed on time.		

#### TIMELINESS IN COMPLETING REVIEWS FOR TECHNICAL ALLEGATIONS

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	70% ≤ 150 days 90% ≤ 180 days 100% ≤ 360 days	80% ≤ 150 days 90% ≤ 180 days 100% ≤ 360 days	90% ≤ 150 days 95% ≤ 180 days 100% ≤ 360 days	90% ≤ 150 days 95% ≤ 180 days 100% ≤ 360 days	TBD	90% ≤ 150 days 95% ≤ 180 days 100% ≤ 360 days
Actual:	90% ≤ 150 days 99% ≤ 180 days 100% ≤ 360 days	92% ≤ 150 days 95% ≤ 180 days 98% ≤ 360 days	98% ≤ 150 days 100% ≤ 180 days 100% ≤ 360 days	94% ≤ 150 days 98% ≤ 180 days 100% ≤ 360 days		

## TIMELINESS IN COMPLETING ENFORCEMENT ACTIONS

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Investigation cases: 100% completed within 360 days of OE processing time. Noninvestigation cases: 100% completed within 180 days of OE processing time.	Investigation cases: 100% completed within 360 days of OE processing time. Noninvestigation cases: 100% completed within 180 days of OE processing time.	Investigation cases: 100% completed within 360 days of OE processing time. Noninvestigation cases: 100% completed within 180 days of OE processing time.	Investigation cases: 100% completed within 360 days of OE processing time. Noninvestigation cases: 100% completed within 180 days of OE processing time.	TBD	Investigation cases: 100% completed within 330 days of OE processing time. Noninvestigation cases: 100% completed within 160 days of OE processing time.
Actual:	Investigation: None ≥ 360 days Noninvestigations: None ≥ 180 days	Investigation: None ≥ 360 days Noninvestigations: None ≥ 180 days	Investigation: None ≥ 360 days Noninvestigations: None ≥ 180 days	Investigation: None ≥ 360 days Noninvestigations: None ≥ 180 days		

## TIMELINESS IN COMPLETING INVESTIGATIONS—TARGET 1

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	85% of investigations that developed sufficient information to reach a conclusion regarding wrongdoing will be completed in 10 months or less.	85% of investigations that developed sufficient information to reach a conclusion regarding wrongdoing will be completed in 10 months or less.	85% of investigations that developed sufficient information to reach a conclusion regarding wrongdoing will be completed in 10 months or less.	85% of investigations that developed sufficient information to reach a conclusion regarding wrongdoing will be completed in 9 months or less.	TBD	85% of investigations that developed sufficient information to reach a conclusion regarding wrongdoing will be completed in 9 months or less.
Actual:	96.2%	Completed 37 investigations in which 100% (37) developed sufficient information to reach a conclusion regarding wrongdoing in 10 months or less.	Completed 33 investigations in which 100% (33) reached sufficient information to reach a conclusion regarding wrongdoing in 10 months or less.	Completed 18 investigations in which 100% (18) reached sufficient information to reach a conclusion regarding wrongdoing in 9 months or less.		

### TIMELINESS IN COMPLETING INVESTIGATIONS—TARGET 2

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Close 100% of OI investigations in time to initiate civil and/or criminal enforcement action.	Close 100% of OI investigations in time to initiate civil and/or criminal enforcement action.	Close 100% of OI investigations in time to initiate civil and/or criminal enforcement action.	Close 100% of OI investigations in time to initiate civil and/or criminal enforcement action.	TBD	Close 100% of OI investigations in time to initiate civil and/or criminal enforcement action.
Actual:	100%	100%	100%	100%		

### Rulemaking

#### PERCENTAGE OF MATERIALS AND WASTE RULEMAKING ACTIVITIES COMPLETED ON SCHEDULE

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New Measure in FY 2009		90%	90%	TBD	90%
Actual:			100%	93%		

### Research

#### TIMELINESS OF COMPLETING ACTIONS ON CRITICAL RESEARCH PROGRAMS\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	85% of major milestones met on or before their due date.	90% of major milestones met on or before their due date.	90% of major milestones met on or before their due date.	90% of major milestones met on or before their due date.	TBD	90% of major milestones met on or before their due date.
Actual:	100% across programs.	100% across programs.	100% across programs.	100% across programs.		

\*Critical research programs typically respond to high-priority needs from the Commission and the NRC's licensing organizations. Critical research programs regarding the highest priority needs are identified at the beginning of the FY.

#### ACCEPTABLE TECHNICAL QUALITY OF AGENCY RESEARCH TECHNICAL PRODUCTS\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Combined score $\geq 3.0$	Combined score $\geq 3.0$	Combined score $\geq 3.5$	Combined score $\geq 3.5$	TBD	Combined score $\geq 3.5$
Actual:	4	4	4	4.6		

\*The NRC has developed a process to measure the quality of research products using surveys of end users to determine the usability and value-added of the products. As appropriate, other mechanisms will be developed and added to this process to measure the quality of research products.

## International Activities

### ISSUANCE OF NRC IMPORT/EXPORT AUTHORIZATIONS

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Complete reviews for, and issue as appropriate, 160–225 NRC import/export authorizations (NRC licenses or amendments). Staff reviews will be completed for 100% of the cases within 60 days.	Complete reviews for, and issue as appropriate, 150–200 NRC import/export authorizations (NRC licenses or amendments). Staff reviews will be completed for 100% of the cases within 60 days.	Complete reviews for, and issue as appropriate, 150–200 NRC import/export authorizations (NRC licenses or amendments). Staff reviews will be completed for 100% of the cases within 60 days.	Complete reviews for, and issue as appropriate, 150–200 NRC import/export authorizations (NRC licenses or amendments). Staff reviews will be completed for > 95% of the cases within 60 days.	TBD	Measure discontinued in FY 2012
Actual:	Completed 153 staff reviews. 97% were completed within 60 days.	Completed 136 staff reviews. 95% were completed within 60 days.	Completed 139 staff reviews. 97.8% were completed within 60 days.	Completed 127 staff reviews. 96.1% were completed within 60 days.		



**SPENT FUEL STORAGE AND TRANSPORTATION BY PRODUCT LINE  
(DOLLARS IN MILLIONS)**

Product Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Licensing	13.1	58.1	12.6	59.0	(0.5)	0.8
Oversight	3.2	20.5	3.7	23.6	0.5	3.1
Rulemaking	3.4	10.6	4.2	16.3	0.8	5.7
Research	1.3	2.9	5.9	17.4	4.6	14.5
International Activities	0.6	1.8	1.0	4.5	0.4	2.8
Generic Homeland Security	0.7	3.8	0.2	1.0	(0.5)	(2.8)
<b>Subtotal</b>	<b>\$22.3</b>	<b>97.6</b>	<b>\$27.6</b>	<b>121.7</b>	<b>\$5.2</b>	<b>24.1</b>
Corporate Support	11.5	25.0	13.7	30.7	2.2	5.6
<b>Total</b>	<b>\$33.8</b>	<b>122.7</b>	<b>\$41.2</b>	<b>152.4</b>	<b>\$7.4</b>	<b>29.7</b>

Numbers may not add due to rounding.

## SPENT FUEL STORAGE AND TRANSPORTATION

The Spent Fuel Storage and Transportation Business Line activities are conducted to ensure the safe and secure storage of reactor spent fuel and for the safe and secure transport of radioactive materials to support domestic and international transport commerce. Activities include licensing, oversight, rulemaking, research, international activities, and generic homeland security efforts associated with radioactive material transportation and the storage of spent nuclear fuel.

About 3 million packages of radioactive materials are shipped each year in the United States by road, rail, air, or water. Regulating the safety of commercial radioactive material shipments is the joint responsibility of the NRC and DOT. The NRC ensures transportation safety by reviewing and certifying shipping package designs for the transport of large quantities of radioactive materials and

fissile materials. In addition, the NRC reviews and certifies certain shipping package designs for DOE. For example, the NRC reviews and certifies packages used to transport transuranic waste to the Waste Isolation Pilot Plant in New Mexico.

Resources in this business line support the following:

- ▶ safety, security, technical, and environmental reviews of spent fuel storage designs and facilities and transportation packages, including development and update of regulations, standard review plans, and interim staff guidance
- ▶ safety inspections of transportation package and storage cask vendors and fabricators and ISFSI operations, and security inspections of spent fuel transportation and route surveys
- ▶ resolution of technical issues associated with allowance of burnup credit for transportation

## STRATEGIC GOAL STRATEGIES SUPPORTED BY LICENSING

*Safety—develop, maintain, and implement licensing and regulatory programs for fuel facilities, materials, spent fuel management, waste management, uranium recovery, and decommissioning activities.*

*Security—use a risk-informed approach to implement appropriate regulatory controls for the possession, handling, import, export, and transshipment of radioactive materials.*

packages and spent fuel storage casks and for the transportation and storage of high burnup fuels (greater than 45 gigawatt-days per metric ton of uranium)

- ▶ evaluation of the adequacy of regulatory programs for ensuring safe and secure storage and transportation of spent nuclear fuel for extended periods beyond the 120-year time frame currently considered
- ▶ identification and resolution of regulatory issues associated with extended storage and transportation (EST) of spent nuclear fuel, which support the waste confidence rulemaking and associated the EIS and initial development of a licensing regulatory framework to accommodate alternative waste disposal options
- ▶ coordination with domestic and international partners on the safety and security of storage and transport matters
- ▶ legal advice and representation
- ▶ domestic and international travel
- ▶ training

Additionally, efforts on EST and on different disposal options and different waste forms in this business line are closely coordinated with fuel reprocessing efforts in the Fuel Facilities Business Line, as part of the Plan for Integrating Spent Nuclear Fuel Regulation Activities.

The efforts for this business line support the following:

- ▶ the environmental review of the Prairie Island ISFSI license renewal
- ▶ the replacement and expansion of the agency's database for transportation certificates and approvals
- ▶ rulemaking efforts on ISFSIs that will provide consistent regulation for the various types and locations
- ▶ ongoing research on technical issues associated with extended storage of spent nuclear fuel

## Licensing

For FY 2012, the NRC requests \$12.6 million, including 59.0 FTE, to provide for licensing activities. This represents a decrease of \$0.5 million, including an increase of 0.8 FTE, when compared with FY 2010 funding levels.

The Licensing Product Line supports safety, security, technical, and environmental licensing activities, which are the methods the NRC employs to confirm that licensee requests for radioactive material transportation and interim spent fuel storage provide adequate safety and security consistent with the NRC's rules and regulations. The NRC conducts safety and safeguards reviews of radioactive material transportation package designs; safety, emergency planning, and safeguards reviews of spent fuel storage cask designs and ISFSIs; environmental reviews of ISFSIs; and plant-specific security-related licensing reviews. The agency develops generic communications and regulatory infrastructure to ensure that licensed activities are conducted in a manner that adequately



*Dry casks at Diablo Canyon in Avila Beach, CA.*

protects public health and safety, protects the environment, and provides a high assurance of physical security.

Licensing also supports the review of approximately 70 transportation package design applications and approximately 25 spent fuel storage cask design and facility applications to ensure the safe and secure of storage of reactor spent fuel. Resources also support the continuation of outreach activities with external stakeholders to demonstrate the safety of the NRC's radioactive material transportation and spent fuel storage regulatory oversight, including support for quarterly meetings of regional transportation groups, and the replacement and expansion of the Transportation Approval Package Information System database of issued transportation certificates and approvals. Resources also provide for renewal of the Prairie Island ISFSI license and related EA support and legal advice and representation on spent fuel storage and radioactive material transportation matters. Additionally, resources provide for transportation certification security reviews, security reviews for onsite storage (licensees under 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material"), issuance of ISFSI security orders, and ISFSI security licensing reviews. Lastly, resources provide for the initiation of the development of a licensing regulatory framework to accommodate alternative geologic disposal or other disposal options.

## Oversight

For FY 2012, the NRC requests \$3.7 million, including 23.6 FTE, to provide for oversight activities. This

represents an increase of \$0.5 million, including 3.1 FTE, when compared with FY 2010 funding levels.

The Oversight Product Line supports the activities of the NRC to continually oversee the safe and secure licensee use of radioactive material transportation packages, spent fuel storage casks, and ISFSIs; identify significant performance issues; and confirm that licensees take appropriate action to maintain acceptable operating performance to ensure the adequate protection of public health and safety and the environment and protect the common defense and security.

Oversight resources provide for completion of 16 regional and HQ safety inspections of storage and transportation cask vendors, fabricators, and designers and ISFSI pad construction, dry-run operations, initial loading operations, and routine operations. Resources also provide for security inspection oversight of spent nuclear fuel transportation, reactor decommissioning, and wet and dry ISFSI operations. Lastly, resources provide for spent nuclear fuel inspection program development, maintenance, and update and route surveys.

## Rulemaking

For FY 2012, the NRC requests \$4.2 million, including 16.3 FTE, to provide for rulemaking activities. This represents an increase of \$0.8 million, including 5.7 FTE, when compared with FY 2010 funding levels.

The Rulemaking Product Line supports the development and update of rules and regulatory guidance that promote licensee compliance with underlying safety principles and security requirements. This

### STRATEGIC GOAL STRATEGIES SUPPORTED BY OVERSIGHT

*Safety—oversee licensee safety performance through inspections, investigations, enforcement, and performance assessment activities.*

*Security—use a risk-informed approach to implement appropriate regulatory controls for the possession, handling, import, export, and transshipment of radioactive materials.*

### STRATEGIC GOAL STRATEGIES SUPPORTED BY RULEMAKING

*Safety—use sound science and state-of-the-art methods to establish, where appropriate, risk-informed and performance-based regulations.*

*Security—use a risk-informed approach to implement appropriate regulatory controls for the possession, handling, import, export, and transshipment of radioactive materials.*

**STRATEGIC GOAL**  
**STRATEGIES**  
**SUPPORTED BY**  
**RESEARCH**

*Safety—improve the NRC's regulatory programs and apply safety-focused research to anticipate and resolve safety issues.*

*Security—use research to inform the security activities of the agency.*

regulatory framework guides the safety and security activities of the agency and its licensees.

Resources provide for continuation of efforts on four high-priority and four medium-priority safety rulemakings related to radioactive material transportation (10 CFR Part 71) and spent fuel storage (10 CFR Part 72, “Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste”), and security rulemakings for transportation of radioactive material in quantities of concern, safeguarding shipments of spent fuel (Nevada Petition), and enhanced security at ISFSIs that will provide consistent regulation for various types and locations. Resources also provide for implementation of a risk-informed regulatory framework for EST of spent nuclear fuel that is enhanced by risk insights and consideration of the integration and harmonization of the NRC's transportation and storage regulations to address EST of spent nuclear fuel. Additionally, resources provide for an EA for EST of spent nuclear fuel and a scoping study to identify additional generic EA needs for ensuring protection of the environment from EST of spent nuclear fuel. These activities will support development of a waste confidence rulemaking and associated EIS. Lastly, resources provide for initial development of the analyses and technical bases for rulemaking for alternative disposal strategies, including the evaluation of the interface of other NRC regulations with disposal regulations to ensure safety, security, and environmental protection and to avoid redundancies and inefficiencies.

### *Research*

For FY 2012, the NRC requests \$5.9 million, including 17.4 FTE, to provide for research activities. This represents an increase of \$4.6 million, including 14.5 FTE, when compared with FY 2010 funding levels.

The Research Product Line supports the NRC's regulatory mission by providing technical advice, tools, and information to identify and resolve safety issues and make regulatory decisions. This includes conducting confirmatory experiments and analyses and preparing the agency for the future through evaluation of the safety aspects of new technologies and designs for radioactive material transportation packages and spent fuel storage casks and ISFSIs.

Resources provide for continued research to obtain and analyze data to support the allowance of full (fission product and actinides) burnup credit for spent boiling-water reactor fuel transportation and storage casks, to evaluate storage and transportation of high burnup fuels greater than 45 gigawatt-days per metric ton of uranium, and to evaluate the risk of criticality associated with the transportation of spent nuclear fuel. Resources also provide for continued research on technical issues associated with EST of spent nuclear fuel; potential issues to be examined include concrete degradation, weld corrosion, impacts of high burnup and MOX fuels; climate change impacts on cask performance; transportability of fuel after extended storage; and the need for an improved hazards assessment, including the potential impacts of extended storage on eventual disposal. Additionally, resources provide for a gap study to identify methods, data, decision criteria, and policy statements that are needed to enhance the regulatory

framework.

Lastly, resources provide for:

- ▶ analyses, data collection, and modeling for future waste management strategies, including laboratory studies and field investigations to understand key technical issues and risk insights
- ▶ resolving regulatory gaps
- ▶ continued development of the total-system performance assessment tool risk insights
- ▶ interaction, as requested, with the Blue Ribbon Commission

### *International Activities*

For FY 2012, the NRC requests \$1.0 million, including 4.5 FTE, to provide for international activities. This represents an increase of \$0.4 million, including 2.8 FTE, when compared with FY 2010 funding levels.

The International Activities Product Line supports the NRC's international work, which assists decisionmaking, awareness of and responses to emerging technical issues, and promoting best practices in realizing the Safety and Security goals and related strategic measures and outcomes. Additionally, the NRC participates in the development and evaluation of international standards to ensure that they are soundly based and to determine if they should be implemented domestically.

Resources provide for international coordination with IAEA to compare regulatory frameworks and share research on storage and transport matters. Resources also provide for investigation and partici-

pation in select international activities, experiments, and collaboration to develop an understanding of the methods used by various countries in dealing with the regulatory, technical, environmental, legal, and programmatic aspects of spent fuel storage and transportation and waste disposal, as well as an understanding of the impact of public and political opinion and the socioeconomic programs developed to address such concerns.

### *Generic Homeland Security*

For FY 2012, the NRC requests \$0.2 million, including 1.0 FTE, to provide for generic homeland security activities. This represents a funding decrease of \$0.5 million, including 2.8 FTE, when compared with FY 2010 funding levels.

The Generic Homeland Security Product Line supports security activities related to intergovernmental coordination and communication, in support of safe, secure, and environmentally acceptable transportation and spent fuel storage. It also supports security activities that are not plant specific, or associated with a class of licensees which contribute to the common defense and security.

Resources provide for activities associated with international transportation security; Category I/II transportation guidance development; biennial updates of NUREG-0725, "Public Information Circular for Shipments of Irradiated Reactor Fuel"; coordination with other agencies; and update of adversary characteristics.

### *Significant Accomplishments*

#### **STRATEGIC GOAL STRATEGIES SUPPORTED BY INTERNATIONAL ACTIVITIES**

*Safety—use domestic and international collaboration and cooperation to inform decisionmaking.*

*Security—use a risk-informed approach to implement appropriate regulatory controls for the possession, handling, import, export, and transshipment of radioactive materials.*

#### **STRATEGIC GOAL STRATEGIES SUPPORTED BY GENERIC HOMELAND SECURITY**

*Safety—conduct NRC safety, security, and emergency preparedness programs in an integrated manner.*

*Security—support Federal response plans that employ an approach to the security of nuclear facilities and radioactive material that integrates the efforts of licensees and Federal, State, local, and Tribal authorities.*

In FY 2010, the NRC completed 20 inspections, reviewed 59 transportation package design approval requests, and reviewed 19 spent fuel storage cask and facility license requests from applicants and licensees to support safe and secure domestic and international transportation, regulatory requirements for full-core offload capability at operating reactor sites, and transfer of spent fuel to ISFSIs to support reactor decommissioning.

Also in FY 2010, the NRC completed rulemaking concerning licensing requirements for the independent storage of spent nuclear fuel, HLW, and reactor-related greater-than-class-C waste. The amendments extend and clarify the license terms for dry storage cask certificates of compliance (COCs) and ISFSI licenses. The amendments also require certain aging management requirements for both specific license and COC renewals. Finally, the amendments allow 10 CFR Part 72 general licensees to implement changes authorized by a later COC amendment to a cask loaded under the initial COC or an earlier COC amendment. This rulemaking is needed to improve the regulatory efficiency of 10 CFR Part 72.

During FY 2010, the agency developed a Plan for Integrating Spent Nuclear Fuel Regulatory Activities to more effectively address the regulatory and licensing aspects of EST (i.e., greater than 120 years), reprocessing, and disposal of spent nuclear fuel and HLW. The purpose of the plan is to ensure that regulation of the back end of the fuel cycle accomplishes safety, security, and environmental protection in an efficient and effective manner and that decisions made about one component or area of this system

adequately consider other components or areas (i.e., treating spent fuel and HLW regulation as a system of interrelated activities). By coordinating the approach for regulation of spent nuclear fuel or HLW storage, potential reprocessing, transportation, and disposal, the NRC can improve the efficiency and effectiveness of its regulatory processes and provide stability and predictability for stakeholders in a dynamic environment.

## Spent Fuel Storage and Transportation Output Measures

### Licensing

#### COMPLETE STORAGE CONTAINER AND INSTALLATION DESIGN REVIEWS WITHIN TIMELINESS GOALS

	FY 2007	FY 2008*	FY 2009	FY 2010	FY 2011	FY 2012
Target:	80% ≤ 12.6 mo. 100% ≤ 2 yr	80% ≤ 12.6 mo. 100% ≤ 2 yr	80% ≤ 12.6 mo. 100% ≤ 2 yr	80% ≤ 12.6 mo. 100% ≤ 2 yr	TBD	80% ≤ 12.6 mo. 100% ≤ 2 yr
Actual:	100% ≤ 12.6 mo. 100% ≤ 2 yr	90% ≤ 12.6 mo. 100% ≤ 2 yr	82% ≤ 12.6 mo. 100% ≤ 2 yr	92% ≤ 12.6 mo. 100% ≤ 2 yr		

\*Output targets for FY 2008 and beyond are being held at the FY 2007 metric to reflect the changing profile of the casework, based on the increased technical complexity and applicants' "bundling" of multiple requests in a single application and updated labor rates for the current mix of casework.

#### COMPLETE TRANSPORTATION CONTAINER DESIGN REVIEWS WITHIN TIMELINESS GOALS

	FY 2007	FY 2008*	FY 2009	FY 2010	FY 2011	FY 2012
Target:	80% ≤ 7.4 mo. 100% ≤ 2 yr	80% ≤ 7.4 mo. 100% ≤ 2 yr	80% ≤ 7.4 mo. 100% ≤ 2 yr	80% ≤ 7.4 mo. 100% ≤ 2 yr	TBD	80% ≤ 7.4 mo. 100% ≤ 2 yr
Actual:	92% ≤ 7.4 mo. 100% ≤ 2 yr	86% ≤ 7.4 mo. 100% ≤ 2 yr	86% ≤ 7.4 mo. 100% ≤ 2 yr	87% ≤ 7.4 mo. 100% ≤ 2 yr		

\*Output targets for FY 2008 and beyond are being held at the FY 2007 metric to reflect the changing profile of the casework, based on the increased technical complexity and applicants' "bundling" of multiple requests in a single application and updated labor rates for the current mix of casework. The labor rates were updated based on historical expenditures during FY 2006 and FY 2007.

### Oversight

#### NUMBER OF SPENT FUEL STORAGE AND TRANSPORTATION INSPECTIONS COMPLETED

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	16 inspections	16 inspections	16 inspections	16 inspections	TBD	16 inspections
Actual:	16 inspections	16 inspections	17 inspections	20 inspections		

## Research

### TIMELINESS OF COMPLETING ACTIONS ON CRITICAL RESEARCH PROGRAMS\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	85% of major milestones met on or before their due date.	90% of major milestones met on or before their due date.	90% of major milestones met on or before their due date.	90% of major milestones met on or before their due date.	TBD	90% of major milestones met on or before their due date.
Actual:	100% across programs.	100% across programs.	100% across programs.	100% across programs.		

\*Critical research programs typically respond to high-priority needs from the Commission and the NRC's licensing organizations. Critical research programs regarding the highest priority needs are identified at the beginning of the FY.

### ACCEPTABLE TECHNICAL QUALITY OF AGENCY RESEARCH TECHNICAL PRODUCTS\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Combined score $\geq 3.0$	Combined score $\geq 3.0$	Combined score $\geq 3.5$	Combined score $\geq 3.5$	TBD	Combined score $\geq 3.5$
Actual:	4	4	4	4.6		

\*The NRC has developed a process to measure the quality of research products using surveys of end users to determine the usability and value-added of the products. As appropriate, other mechanisms will be developed and added to this process to measure the quality of research products.



**DECOMMISSIONING AND LOW-LEVEL WASTE BY PRODUCT LINE  
(DOLLARS IN MILLIONS)**

Product Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Licensing	16.8	77.7	17.5	73.2	0.7	(4.4)
Oversight	4.8	26.3	4.6	27.3	(0.2)	1.0
Rulemaking	0.5	3.4	1.2	2.7	0.6	(0.7)
Research	1.5	8.6	0.8	5.3	(0.7)	(3.3)
International Activities	0.6	3.5	0.9	5.2	0.3	1.7
Generic Homeland Security	0.1	0.4	0.0	0.0	(0.1)	(0.4)
<b>Subtotal</b>	<b>\$24.3</b>	<b>119.9</b>	<b>\$25.1</b>	<b>113.7</b>	<b>\$0.8</b>	<b>(6.2)</b>
Corporate Support	13.9	30.3	12.9	28.9	(1.1)	(1.4)
<b>Total</b>	<b>\$38.2</b>	<b>150.2</b>	<b>\$37.9</b>	<b>142.6</b>	<b>(\$0.3)</b>	<b>(7.6)</b>

Numbers may not add due to rounding.

## DECOMMISSIONING AND LOW-LEVEL WASTE

Decommissioning and LLW activities include the oversight of licensed and unlicensed facilities undergoing decontamination and decommissioning, the licensing of uranium recovery facilities, oversight of the national LLW management program, and oversight of the DOE waste management activities of Waste Incidental to Reprocessing (WIR) at the Savannah River and Idaho facilities.

Decommissioning is the safe removal of a nuclear facility from service and reduction of residual radioactivity to a level that permits release of the property and termination of the NRC license. The NRC rules for decommissioning establish site release criteria and provide for unrestricted and, under certain conditions, restricted release of a site. The NRC regulates the decontamination and decommissioning of 80 materials and fuel cycle facilities, nuclear power plants, research

and test reactors, and uranium recovery facilities, with the ultimate goal of license termination.

The NRC ensures safety and security in the disposition of radioactive waste. Certain nuclear waste is categorized as LLW, such as items that have become contaminated with radioactive material or have become radioactive through exposure. The NRC regulates the management and disposition of LLW. The NRC or Agreement States license, oversee, and regulate commercial LLW disposal facilities. The NRC maintains the national LLW framework for both the disposal facilities and the generators through rulemaking, guidance development, and licensing activities. In addition, the NRC provides technical assistance to DOE and the States on essential LLW regulatory issues.

The NRC performs project management and financial, technical, safety, and environmental reviews for licensing uranium recovery facilities; conducts oversight of the facilities; and interfaces

**STRATEGIC GOAL  
STRATEGIES  
SUPPORTED BY  
LICENSING**

*Safety—oversee the decontamination and decommissioning of nuclear facilities in license termination.*

*Security—review security plans for decommissioning for consistency with security requirements.*

with licensees, applicants, Federal and State agencies, the public, other stakeholders, and Native American Tribal governments. Resources support eight environmental and 11 safety reviews (hearings included) for uranium recovery facility applications.

Resources provide for oversight of certain DOE waste determination activities and plans consistent with the NRC's responsibilities in the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005. This act requires DOE to consult with the NRC on its WIR determinations for facilities in South Carolina and Idaho and NRC monitoring at those sites after waste determinations are completed by DOE. In addition, resources support guidance development and import/export reviews of nuclear equipment and material.

Research activities will continue the development and improvement of data, models, and other analytical tools for assessing the environmental effects of releases from NRC-licensed facilities. These resources will also provide issue-specific assistance for emerging scientific issues in complex decommissioning reviews.

The NRC has organized decommissioning and LLW activities into product lines that best support safety and security strategies and impact strategic outcomes as they relate to decommissioning and LLW activities, uranium recovery licensing, inspection, and related environmental activities. The resources requested support all direct aspects of decommissioning and LLW within the following five product lines: Licensing, Oversight, Rulemaking, Research, and International Activities. The outputs of these product lines

contribute to the scoring of the NRC Safety and Security goals' performance measures and their contribution to achievement of strategic outcomes.

### *Licensing*

For FY 2012, the NRC requests \$17.5 million, including 73.2 FTE, to provide for licensing activities. This represents a funding increase of \$0.7 million, including a decrease of 4.4 FTE, when compared with FY 2010 funding levels.

The Licensing Product Line supports activities that approve requests to terminate a license through a decommissioning process, licensing of uranium recovery and LLW disposal sites, or supporting Agreement State licensing. Such requests must provide safety and security. This margin must be consistent with NRC rules and regulations. Licensing supports project management and financial, technical, safety, and environmental reviews; other licensing activities supporting operational uranium recovery facilities; and the decommissioning of power reactors, research and test reactors, complex materials sites, and inactive uranium recovery facilities. Product line resources support interfaces with NRC licensees, applicants, Federal and State agencies, the public, other stakeholders, and Native American Tribal governments, in addition to legal advice and representation.

The resources for decommissioning will support performing project management and financial, policy, technical, and safety reviews for 10 power reactors, two early demonstration reactors, 10 research and test reactors, 24 materials facilities, and

38 decommissioning uranium recovery facilities, which includes reviews of license termination plans, decommissioning plans, reclamation plans, long-term surveillance plans, and license amendments. Complex environmental reviews for decommissioning cases and for licensing actions will also be performed.

The NRC will perform safety reviews, environmental reviews, and project management for uranium recovery facilities. FY 2012 resources for uranium recovery environmental reviews will support eight environmental and 11 safety reviews (hearings included) of applications in the FY 2012 time frame. Resources will also support interactions with licensees, applicants, Federal and State agencies, the public, other stakeholders, and Native American Tribal governments.

The resources also support legal advice and representation for activities related to decommissioning nuclear power reactors and materials sites, uranium recovery licensing, adjudications, LLW, and WIR activities.

### *Oversight*

For FY 2012, the NRC requests \$4.6 million, including 27.3 FTE, to provide for oversight activities. This represents a funding decrease of \$0.2 million, including an increase of 1.0 FTE, when compared with FY 2010 funding levels.

The Oversight Product Line supports the NRC in continuously overseeing decommissioning and LLW activities to ensure that licensees maintain acceptable, safe, and secure practices. In FY 2012, resources provide for

decommissioning and uranium recovery inspections, LLW program activities, and WIR determinations at one DOE site.

Budgetary resources support decommissioning and uranium recovery inspections to ensure that these operations are being conducted safely and in accordance with NRC regulations and to cover LLW program activities, which include updating storage inspection procedures, supporting activities related to greater-than-Class-C waste activities, and supporting Agreement States.

Resources also support WIR activities, including monitoring visits at the Savannah River and the Idaho National Laboratory sites.

### *Rulemaking*

For FY 2012, the NRC requests \$1.2 million, including 2.7 FTE, to provide for rulemaking activities. This represents a funding increase of \$0.6 million, including a decrease of 0.7 FTE, when compared with FY 2010 funding levels.

The Rulemaking Product Line supports the NRC goal of maintaining a safety and security framework of rules, regulatory guidance, and standard review plans that promote licensee compliance with underlying safety principles and security requirements.

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#### **STRATEGIC GOAL STRATEGIES SUPPORTED BY OVERSIGHT**

*Safety—develop, maintain, and implement licensing and regulatory programs for fuel facilities, materials, spent fuel management, waste management, uranium recovery, and decommissioning.*

*Security—review security plans and changes for consistency with security requirements.*

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#### **STRATEGIC GOAL STRATEGIES SUPPORTED BY RULEMAKING**

*Safety—use sound science and state-of-the-art methods to establish, where appropriate, risk-informed and performance-based regulations.*

*Security—use a risk-informed approach to implement appropriate regulatory controls.*

**STRATEGIC GOAL  
STRATEGIES  
SUPPORTED BY  
RESEARCH**

*Safety—improve the NRC's regulatory programs and apply safety-focused research to anticipate and resolve safety issues.*

*Security—use research to inform the security activities of the agency.*

**STRATEGIC GOAL  
STRATEGIES  
SUPPORTED BY  
INTERNATIONAL  
ACTIVITIES**

*Safety—use domestic and international operating experience to inform decisionmaking.*

*Security—use a risk-informed approach to implement appropriate regulatory controls for the possession, handling, import, export, and transshipment of radioactive materials.*

## *Research*

For FY 2012, the NRC requests \$0.8 million, including 5.3 FTE, to provide for research activities. This represents a decrease of \$0.7 million, including 3.3 FTE, when compared with FY 2010 funding levels.

The Research Product Line supports activities to identify, lead, or sponsor reviews that support the resolution of safety issues, including providing tools and expertise needed to support the NRC's independent decisionmaking process. The FY 2012 budget includes resources to provide issue-specific assistance for emerging scientific issues in complex decommissioning reviews and to continue the development and improvement of data models and other analytical tools for assessing the environmental effects of releases from NRC-licensed facilities.

## *International Activities*

For FY 2012, the NRC requests \$0.9 million, including 5.2 FTE, to provide for international activities. This represents a funding increase of \$0.3 million, including 1.7 FTE, when compared with FY 2010 funding levels.

The International Activities Product Line supports activities with international counterparts to exchange information, expertise, operating experiences, and ongoing research to recognize and respond to emerging technical issues and promote best safety and security practices. The NRC also participates in the development of international standards to ensure that they are soundly based and to determine whether

substantial safety improvements can be identified and incorporated domestically. Resources provide contract support for international activities and support for bilateral assistance to foreign counterparts on decommissioning issues and development of regulations for the handling and disposal of LLW, as well as decommissioning of nuclear power plants and other facilities.

Resources support assistance to IAEA, the Nuclear Energy Agency, IAEA's Waste Safety Standards Committee, the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, and many other working groups and committees for the preparation and updating of safety guides and standards. In addition, resources provide for staff assistance to the foreign assignee program and for bilateral and multilateral exchanges of technical information.

## *Significant Accomplishments in FY 2010*

**Decommissioning:** The NRC has completed decommissioning at 29 materials sites and 11 power or research reactors for a total of 40 sites since 2003. In FY 2010, the NRC provided oversight of decommissioning activities at approximately 85 power and early demonstration reactors, research and test reactors, uranium recovery sites, and complex materials sites and fuel cycle facilities. The NRC placed increased emphasis on the decommissioning of legacy uranium recovery sites during FY 2010. The NRC has worked extensively with EPA, the State of New Mexico, and Native

American Tribes on decommissioning activities at the Churchrock, Homestake, and Ambrosia Lake Mill sites.

The agency also completed work on the technical evaluation report for the West Valley Demonstration Project (WVDP) Phase I decommissioning plan and the environmental decision. The evaluation of compliance with the WVDP policy statement was also completed, which allows significant progress to be made in decommissioning the site.

**Uranium Recovery Licensing and Oversight:** In addition to decommissioning uranium recovery sites, the NRC conducts regulatory oversight at eight operational uranium recovery sites and reviews and approves the applications for new, restarting, or expanding uranium recovery facilities. The NRC continued the review of seven applications for new, expanding, or restarting uranium recovery facilities that were received between FY 2007 and FY 2010 and issued a license for the Moore Ranch uranium recovery facility in September 2010. The NRC published one supplemental EIS in FY 2010.

**Low-Level Waste:** The agency conducted regulatory activities to help ensure the safe management and disposal of low-level radioactive waste generated by radioactive material users, nuclear power plants, and other NRC licensees. The agency performed monitoring visits and issued reports for the Savannah River Site Saltstone facility and the Idaho National Laboratory.

## Decommissioning and Low-Level Waste Output Measures

### Licensing

#### SUPPORT PROGRAM LICENSING ACTIVITIES BY REVIEWING ENVIRONMENTAL REPORTS AND PREPARING ENVIRONMENTAL REVIEW DOCUMENTS

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Complete 1 final EIS or draft EIS.* Complete 3 complex EAs.	Complete 2 final EISs or draft EISs.* Complete 3 complex EAs.	Complete 1 final EIS or draft EIS.* Complete 3 complex EAs.	Complete 2 draft EISs.* Complete 2 complex EAs.	TBD	Complete environmental reviews consistent with the Environmental Protection and Performance Assessment Operating Plan.
Actual:	Completed the draft Sequoyah Fuels Corp. EIS and provided comments as a cooperating agency on the preliminary final draft West Valley EIS.  Completed 3 EAs (naturally occurring radioactive material rulemaking, Westinghouse License Renewal EA, and the Rancho Seco EA).	Completed the Final EIS for Sequoyah Fuels Corp. and the draft Generic EIS for ISR Uranium Recovery facilities.  No complex EAs completed because there were none to complete in FY 2008.	Completed GEIS for Uranium Recovery. Completed 3 complex EAs for AREVA, Global Nuclear Fuel-Americas, and Ocone.	Completed draft EISs for AREVA-Eagle Rock and GE-Silex license applications. Completed the Final Supplemental EIS for the Moore Ranch ISR license application. Completed one complex EA for the Prairie Island ISFSI License Amendment.		

\*Within 45 days of acceptance of the application and environmental report, the agency will publish notice of intent to prepare the EIS and proposed schedule in the *Federal Register*.

## Oversight

### CLEAN UP COMPLEX MATERIAL SITES, FUEL CYCLE SITES, POWER REACTORS, AND RESEARCH AND TEST REACTORS AND COMPLETE URANIUM RECOVERY LICENSE REVIEWS

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Complete licensing actions as scheduled in the Decommissioning Operating Plan. Conduct Program Assessment Rating Tool (PART) review for the Decommissioning and Low-Level Waste (DLLW) program. Complete proposed rule to prevent legacy sites.	Complete decommissioning and uranium recovery licensing actions as scheduled in the Decommissioning Operating Plan. Complete final rule to prevent legacy sites.	Complete decommissioning and uranium recovery licensing actions as scheduled in the Decommissioning Operating Plan.	Complete licensing actions consistent with the Decommissioning Operating Plan.	TBD	Complete licensing actions as scheduled in the Decommissioning Operating Plan.
Actual:	Completed proposed rule to prevent future legacy sites. Conducted PART for the DLLW program; program rated "effective" by OMB.  Completed decommissioning at 11 sites.	Completed decommissioning at 8 sites.  Completed 2 uranium recovery licensing actions.	Completed decommissioning at 1 site. Completed final rule for preventing future legacy sites.	Consistent with the Decommissioning Operating Plan, completed 15 financial assurance reviews. Completed 55 licensing actions related to decommissioning and operating facilities.		

**PROVIDE SUPPORT TO DOE FOR WASTE INCIDENTAL TO REPROCESSING (WIR) ACTIVITIES**

	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Target:</b>	Complete 2 WIR monitoring plans. Complete the draft Final WIR Standard Review Plan (SRP). Complete resolution of 2 WIR generic technical and policy issues identified in FY 2006.	Complete monitoring activities as scheduled in the Environmental Protection and Performance Assessment Operating Plan. Complete resolution of 2 WIR generic technical and policy issues identified in FY 2006.	Complete WIR review or monitoring plan activities as scheduled in the Environmental Protection and Performance Assessment Operating Plan.	Complete WIR review or monitoring plan activities as scheduled in the Environmental Protection and Performance Assessment Operating Plan.	TBD	Complete WIR review and monitoring plan activities as scheduled in the Environmental Protection and Performance Assessment Operating Plan.
<b>Actual:</b>	Completed 2 WIR monitoring plans (Idaho National Laboratory and the Savannah River Site). Issued the Draft Final WIR SRP (NUREG-1854). Completed resolution of 2 WIR generic technical and policy issues.	Completed 4 WIR monitoring visits and issued 4 WIR monitoring reports. Completed resolution of 7 WIR generic technical and policy issues identified in FY 2006.	Completed 3 WIR monitoring visits and reviewed 11 technical reports related to Saltstone Disposal Facility.	Completed 3 monitoring visits and issued a request for additional information on the revised performance assessment for the Savannah River Site's Saltstone Disposal Facility. Completed 1 monitoring visit for Idaho National Laboratory.		

**Research**

**TIMELINESS OF COMPLETING ACTIONS ON CRITICAL RESEARCH PROGRAMS\***

	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Target:</b>	85% of major milestones met on or before their due date.	90% of major milestones met on or before their due date.	90% of major milestones met on or before their due date.	90% of major milestones met on or before their due date.	TBD	90% of major milestones met on or before their due date.
<b>Actual:</b>	100% across programs.	100% across programs.	100% across programs.	100% across programs.		

\*Critical research programs typically respond to high-priority needs from the Commission and the NRC's licensing organizations. Critical research programs regarding the highest priority needs are identified at the beginning of the FY.



### ACCEPTABLE TECHNICAL QUALITY OF AGENCY RESEARCH TECHNICAL PRODUCTS\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Combined score ≥ 3.0	Combined score ≥ 3.0	Combined score ≥ 3.5	Combined score ≥ 3.5	TBD	Combined score ≥ 3.5
Actual:	4	4	4	4.6		

\*The NRC has developed a process to measure the quality of research products using surveys of end users to determine the usability and value-added of the products. As appropriate, other mechanisms will be developed and added to this process to measure the quality of research products.

### International Activities

#### PROVIDE SUPPORT TO IAEA WASTE SAFETY STANDARDS COMMITTEE REVIEWS, CONSULTANCIES/ EXPERT MISSIONS, JOINT CONVENTION AND NUCLEAR ENERGY AGENCY SUPPORT

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New Measure in FY 2012					Complete actions as scheduled in the Decommissioning and Environmental Protection and Performance Assessment Operating Plans.

Actual:

### Efficiency

#### ELIMINATE THE NEED FOR SOME SITE-SPECIFIC ENVIRONMENTAL IMPACT STATEMENTS (I.E., BY REDUCING RESOURCE NEEDS) BY DEVELOPING A GENERIC ENVIRONMENTAL IMPACT STATEMENT (GEIS) FOR URANIUM RECOVERY REVIEWS\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New Measure in FY 2009		Projected savings of \$1,040K and 1 FTE	Projected savings of \$1,100K and 4 FTE	TBD	Projected savings of \$450K and 0.7 FTE
Actual:			\$2,200K and 0.6 FTE	\$1,250K and 0 FTE**		

\*Between FY 2008 and FY 2013, the staff expects to receive 18 in situ recovery (ISR) uranium recovery license applications. The development of a GEIS is expected to eliminate the need to develop site-specific EISs for some of these applications. Rather than developing a site-specific EIS for each site, the staff will be able to "tier off" the GEIS and instead rely on a less resource-intensive supplemental EIS or a site-specific supplemental EIS to evaluate the environmental impacts of the site-specific ISR license request (total savings of at least \$2.0M and 7.0 FTE in FY 2008–FY 2011 and beyond). The final GEIS was issued in June 2009 on schedule.

\*\*Target not met due to a decrease in actual number of reviews and increasing stakeholder involvement.

## HIGH-LEVEL WASTE REPOSITORY BY PRODUCT LINE (DOLLARS IN MILLIONS)

Product Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Licensing	22.8	82.0	0.0	0.0	(22.8)	(82.0)
Oversight	0.9	5.2	0.0	0.0	(0.9)	(5.2)
Rulemaking	0.0	0.0	0.0	0.0	0.0	0.0
International Activities	0.1	0.6	0.0	0.0	(0.1)	(0.6)
<b>Subtotal</b>	<b>\$23.8</b>	<b>88.0</b>	<b>\$0.0</b>	<b>0.0</b>	<b>(\$23.8)</b>	<b>(88.0)</b>
Corporate Support	5.2	11.0	0.0	0.0	(5.2)	(11.0)
<b>Total</b>	<b>\$29.0</b>	<b>99.0</b>	<b>\$0.0</b>	<b>0.0</b>	<b>(\$29.0)</b>	<b>(99.0)</b>

Numbers may not add due to rounding.

### HIGH-LEVEL WASTE REPOSITORY

The NRC and two other Federal agencies have roles related to the development of a High-Level Waste repository. DOE is responsible for constructing and operating a HLW repository in accordance with the Nuclear Waste Policy Act of 1982, as amended, and applying to the NRC for a license to develop and operate the HLW repository. EPA is responsible for issuing environmental standards that the NRC will use to evaluate the safety of a geologic repository. The NRC is responsible for issuing regulations that implement EPA's standards and for reviewing DOE's application and deciding whether to issue a construction authorization for the proposed repository. If the NRC issues a construction authorization and issues a license, it must ensure that DOE safely constructs, operates, and eventually closes the repository.

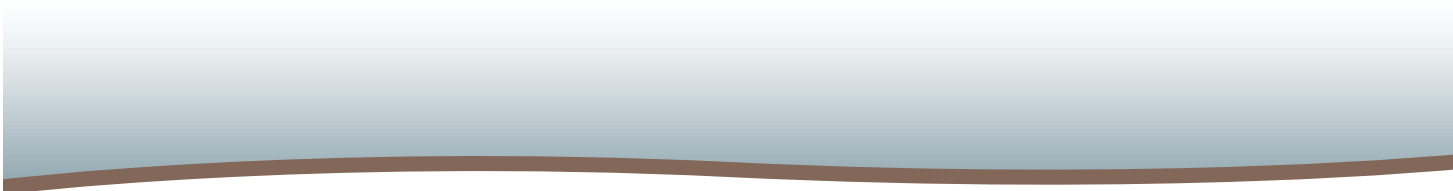
On September 8, 2008, the NRC docketed the June 3, 2008, application from DOE for a license to construct and operate the Nation's first geologic repository

for high-level nuclear waste at Yucca Mountain, NV. This initiated the NRC staff's review of the technical merits of the repository application and formulation of a position on whether to issue a construction authorization for the repository. In May 2009, the Atomic Safety and Licensing Board granted petitions to intervene regarding the DOE license application and admitted contentions. On March 3, 2010, DOE filed a motion seeking to withdraw its license application, with prejudice. On June 29, 2010, the Licensing Board denied DOE's motion. Commission review of the Licensing Board's decision has been sought. In FY 2010, the staff continued to conduct a technical review of the application and issued the first of five volumes of its "Safety Evaluation Report Related to Disposal of High-Level Wastes in a Geologic Repository at Yucca Mountain, Nevada" (NUREG-1949). Review of the Licensing Board's decision remains pending before the Commission in FY 2011. No resources are budgeted for this business line in FY 2012. This activity terminates in FY 2011.

# PERFORMANCE MEASUREMENT



119	5,386,824	1,902
1,626,549	5,463,538	8,554,013
1,902	5,494	93,100
8,554,013	900	93,100
93,100	31,119	19,968
19,968	1,626,549	110,251
110,251	1,902	31,119
9,040	8,554,013	1,626,549
1,881,730	1,902	1,902
1,706,600	1,626,549	8,554,013
2,108,658	1,902	1,902
5,386,824	1,626,549	8,554,013
5,463,538	1,902	1,902
5,494	1,626,549	8,554,013
900	1,902	1,902
31,119	8,554,013	1,902
1,626,549	1,902	1,902
1,902	1,626,549	8,554,013
8,554,013	1,902	1,902
93,100	1,626,549	8,554,013
19,968	1,902	1,902



## PERFORMANCE MEASUREMENT

The U.S. Nuclear Regulatory Commission's (NRC's) Strategic Plan for fiscal years (FY) 2008–2013 describes the agency's mission and establishes the Commission's direction by defining its goals, strategic outcomes, and strategies and means. The plan's goal structure ensures a focus on outcomes. The FY 2012 Performance Budget uses the Strategic Plan structure to align resources and to show a clear linkage between programs and the agency's goals.

Measuring and monitoring performance is one of the four components of the NRC's Planning, Budgeting, and Performance Management (PBPM) process. The other components are Setting the Strategic Direction, Determining Resources and Planned Activities, Measuring and Monitoring Performance, and Assessing Performance.

The components of the PBPM process are closely linked and complementary, reflecting a continuous cycle of performance management centered on outcomes. Annual performance assessments are used to analyze performance and seek improvements in effectiveness and efficiency.

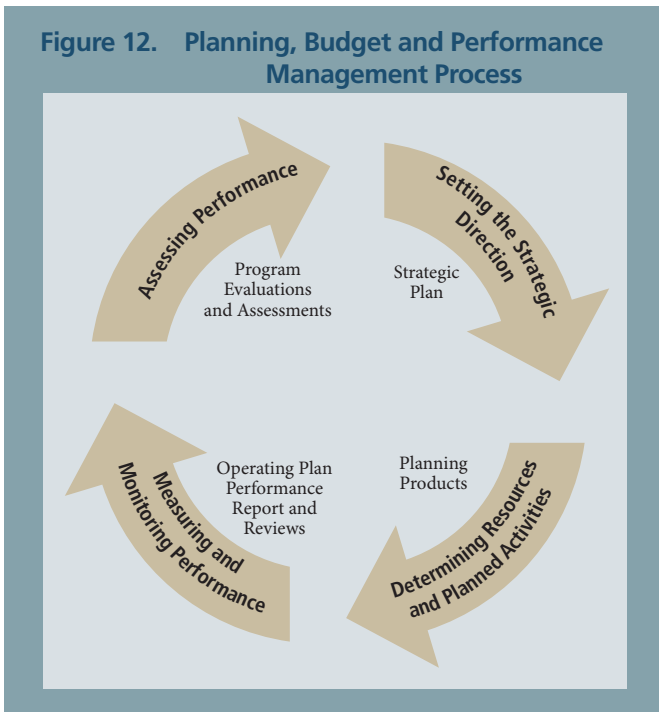
### *Relating Goals to Resources*

The NRC has implemented the PBPM process to accomplish performance budgeting, performance measuring and monitoring, and performance assessments within the agency. The performance budget integrates the agency's PBPM functions by aligning resources with the agency's goals and establishing performance measures to enable measurement and monitoring

of program execution. The business line descriptions in this document identify which strategic goal—Safety or Security—each individual business line contributes to and how.

The agency is also aligning its budget and accounting structures. This will enable the NRC to use cost and other financial data together to evaluate agency program performance. The integration of financial, budget, and performance data will provide managers with the kind of information that can be used to drive improved agency performance.

**Figure 12. Planning, Budget and Performance Management Process**



The NRC identifies which activities under the agency's two major program areas support the NRC's outcome-based performance measures and uses these as guides to formulate the budget. Specifically, the agency develops program considerations and priorities, which identify key external factors and internal influences that would significantly affect the NRC's work activities and resource requirements. For each major activity, the NRC identifies the products needed to achieve the outcome-based performance measures, taking into consideration the program considerations and priorities. The NRC also identifies and prioritizes products needed based on their contribution to goals. Lastly, the NRC determines the resource requirements needed to achieve each product, forming

the basis for developing the agency's budget for each program area. Each of the NRC's performance budget review levels takes into consideration the factors described above in relating outcome-based and output-based performance measures to resources in making budget recommendations and decisions.

### Goals

The table below shows the alignment of the NRC's fully costed Nuclear Reactor Safety Program and Nuclear Materials and Waste Safety Program with the Safety and Security goals. The full cost includes an allocation of the agency's infrastructure and support costs to specific programs.

#### ALIGNMENT OF RESOURCES TO NRC GOALS (DOLLARS IN MILLIONS) (EXCLUDES OFFICE OF THE INSPECTOR GENERAL)

Major Programs	FY 2010 Enacted			FY 2012 Request		
	Safety	Security	Total	Safety	Security	Total
Nuclear Reactor Safety	765.2	37.0	802.2	756.1	44.6	800.8
Nuclear Materials and Waste Safety	224.7	29.0	253.7	193.3	33.2	226.5
Total	\$989.9	\$66.0	\$1,055.9	\$949.5	\$77.8	\$1,027.3

Numbers may not add due to rounding.

## Safety Performance Measures

### NUMBER OF NEW CONDITIONS EVALUATED AS RED BY THE NRC'S REACTOR OVERSIGHT PROCESS<sup>1</sup>

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	≤ 3	≤ 3	≤ 3	≤ 3	TBD	≤ 3
Actual:	0	0	0	0		

<sup>1</sup> This measure is the number of new red inspection findings during the FY plus the number of new red performance indicators during the FY. Programmatic issues at multiunit sites that result in red findings for each individual unit are considered separate conditions for purposes of reporting for this measure. A red performance indicator and a red inspection finding that are due to an issue with the same underlying causes are also considered separate conditions for purposes of reporting for this measure. Red inspection findings are included in the FY in which the final significance determination was made. Red performance indicators are included in the FY in which the Reactor Oversight Process (ROP) external Web page was updated to show the red indicator.

### NUMBER OF SIGNIFICANT ACCIDENT SEQUENCE PRECURSORS OF A NUCLEAR REACTOR ACCIDENT<sup>2</sup>

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	0	0	0	0	TBD	0
Actual:	0	0	0	0		

<sup>2</sup> Significant accident sequence precursor (ASP) events have a conditional core damage probability or  $\Delta CDP$  of  $> 1 \times 10^{-3}$ . Such events have a 1/1,000 ( $10^{-3}$ ) or greater probability of leading to a reactor accident involving core damage. An identical condition affecting more than one plant is counted as a single ASP event if a single accident initiator would have resulted in a single reactor accident.

### NUMBER OF OPERATING REACTORS WHOSE INTEGRATED PERFORMANCE ENTERED INSPECTION MANUAL CHAPTER 0350 PROCESS, THE MULTIPLE/REPETITIVE DEGRADED CORNERSTONE COLUMN, OR UNACCEPTABLE PERFORMANCE COLUMN OF THE ROP MATRIX, WITH NO PERFORMANCE EXCEEDING ABNORMAL OCCURRENCE CRITERION I.D.4<sup>3</sup>

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	≤ 4	≤ 4	≤ 3	≤ 3	TBD	≤ 3
Actual:	1	0	0	0		

<sup>3</sup> This measure is the number of plants that have entered the process under Inspection Manual Chapter 0350, the multiple/repetitive degraded cornerstone column, or the unacceptable performance column during the FY (i.e., were not in these columns or process the previous FY). Data for this measure are obtained from the NRC external Web Action Matrix Summary page, which provides a matrix of the five columns, with the plants that are listed within their applicable column, and notes the plants in the Inspection Manual Chapter 0350 process. For reporting purposes, plants that are the subject of an approved deviation from the Action Matrix are included in the column or process in which they appear on the Web page. The target value is set based on the expected addition of several indicators and a change in the long-term trending methodology (which will no longer be influenced by the earlier data and will be more sensitive to changes in current performance).

**NUMBER OF SIGNIFICANT ADVERSE TRENDS IN INDUSTRY SAFETY PERFORMANCE WITH NO TREND EXCEEDING ABNORMAL OCCURRENCE CRITERION I.D.4<sup>4</sup>**

	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
Target:	≤ 1	≤ 1	≤ 1	≤ 1	TBD	≤ 1
Actual:	0	0	0	0		

4 Considering all indicators qualified for use in reporting.

**NUMBER OF EVENTS WITH RADIATION EXPOSURES TO THE PUBLIC AND OCCUPATIONAL WORKERS THAT EXCEED ABNORMAL OCCURRENCE CRITERION I.A.3**

	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
Reactor Target:	0	0	0	0	TBD	0
Actual:	0	0	0	0		
Material Target:	≤ 3	≤ 2	≤ 2	≤ 2	TBD	≤ 2
Actual:	0	0	0	0		
Waste Target:	0	0	0	0	TBD	0
Actual:	0	0	0	0		

**NUMBER OF RADIOLOGICAL RELEASES TO THE ENVIRONMENT THAT EXCEED APPLICABLE REGULATORY LIMITS<sup>5</sup>**

	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
Reactor Target: <sup>6</sup>	≤ 3	0	0	0	TBD	0
Actual:	0	0	0	0		
Material Target:	≤ 2	≤ 2	≤ 2	≤ 2	TBD	≤ 2
Actual:	0	0	0	0		
Waste Target:	0	0	0	0	TBD	0
Actual:	0	0	0	0		

5 Releases for which a 30-day report requirement under 10 CFR 20.2203(a)(3) is required.

6 With no event exceeding AO Criterion 1.B.1.



## Security Performance Measures

### NUMBER OF UNRECOVERED LOSSES OR THEFTS OF RISK-SIGNIFICANT<sup>7</sup> RADIOACTIVE SOURCES

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	0	0	0	0	TBD	0
Actual:	0	0	0	0		

<sup>7</sup> "Risk-significant" is defined as any unrecovered lost or abandoned sources that exceed the values listed in Appendix P to 10 CFR Part 110—High Risk Radioactive Material, Category 2. Excluded from reporting under this criterion are those events involving sources that are lost or abandoned under the following conditions: (1) sources abandoned in accordance with the requirements of 10 CFR 39.77(c), (2) recovered sources with sufficient indication that doses in excess of the reporting thresholds specified in AO Criteria I.A.1 and I.A.2 did not occur during the time the source was missing, (3) unrecoverable sources lost under such conditions that doses in excess of the reporting thresholds specified in AO Criteria I.A.1 and I.A.2 were not known to have occurred, (4) other sources that are lost or abandoned and declared unrecoverable, (5) for which the agency has made a determination that the risk-significance of the source is low based upon the location (e.g., water depth) or physical characteristics (e.g., half-life, housing) of the source and its surroundings, (6) where all reasonable efforts have been made to recover the source, and (7) it has been determined that the source is not recoverable and will not be considered a realistic safety or security risk under this measure.

### NUMBER OF SUBSTANTIATED<sup>8</sup> CASES OF THEFT OR DIVERSION OF LICENSED, RISK-SIGNIFICANT RADIOACTIVE SOURCES OR FORMULA QUANTITIES<sup>9</sup> OF SPECIAL NUCLEAR MATERIAL; OR ATTACKS THAT RESULT IN RADIOLOGICAL SABOTAGE<sup>10</sup>

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	0	0	0	0	TBD	0
Actual:	0	0	0	0		

<sup>8</sup> "Substantiated" means a situation where an indication of loss, theft, or unlawful diversion such as an allegation of diversion, report of lost or stolen material, statistical processing difference, or other indication of loss of material control or accountability, cannot be refuted following an investigation; and requires further action on the part of the agency or other proper authorities.

<sup>9</sup> A formula quantity of special nuclear material is defined in 10 CFR 70.4.

<sup>10</sup> "Radiological sabotage" is defined in 10 CFR 73.2.

### NUMBER OF SUBSTANTIATED<sup>8</sup> LOSSES OF FORMULA QUANTITIES OF SPECIAL NUCLEAR MATERIAL OR SUBSTANTIATED<sup>8</sup> INVENTORY DISCREPANCIES OF A FORMULA QUANTITY OF SPECIAL NUCLEAR MATERIAL THAT ARE JUDGED TO BE CAUSED BY THEFT, DIVERSION, OR SUBSTANTIAL BREAKDOWN OF THE ACCOUNTABILITY SYSTEM

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	0	0	0	0	TBD	0
Actual:	0	0	0	0		

<sup>8</sup> "Substantiated" means a situation where an indication of loss, theft, or unlawful diversion such as an allegation of diversion, report of lost or stolen material, statistical processing difference, or other indication of loss of material control or accountability, cannot be refuted following an investigation; and requires further action on the part of the agency or other proper authorities.

**NUMBER OF SUBSTANTIAL BREAKDOWNS<sup>11</sup> OF PHYSICAL SECURITY OR MATERIAL CONTROL (I.E., ACCESS CONTROL, CONTAINMENT, OR ACCOUNTABILITY SYSTEMS) THAT SIGNIFICANTLY WEAKENED THE PROTECTION AGAINST THEFT, DIVERSION, OR SABOTAGE**

	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Target:</b>	≤ 1	≤ 1	≤ 1	≤ 1	TBD	≤ 1
<b>Actual:</b>	0	0	0	0		

11 A "substantial breakdown" is defined as a red finding in the security cornerstone of the ROP, or any plant or facility determined to either have overall unacceptable performance or be in a shutdown condition (inimical to the effective functioning of the Nation's critical infrastructure) as a result of significant performance problems and/or operational events.

**NUMBER OF SIGNIFICANT UNAUTHORIZED DISCLOSURES OF CLASSIFIED AND/OR SAFEGUARDS INFORMATION<sup>12</sup>**

	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Target:</b>	0	0	0	0	TBD	0
<b>Actual:</b>	0	0	0	0		

12 "Significant unauthorized disclosure" is defined as a disclosure that harms national security or public health and safety.

## DATA COLLECTION PROCEDURES FOR VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

Most of the data used to measure the NRC's performance against its strategic goals related to safety and security are obtained or derived from the NRC's abnormal occurrence (AO) data and reports or preliminary notifications of events submitted by licensees. The AO criteria have been amended to ensure that they are consistent with the NRC's Strategic Plan for FY 2008–2013 and the NRC rulemaking on Title 10 of the *Code of Federal Regulations* (10 CFR) Part 35, "Medical Use of Byproduct Material."

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 AOs originate from external sources, such as Agreement States and NRC licensees. The NRC believes these data are credible because the

information needed from external sources is required to be reported to the NRC by regulations, 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 there are agency procedures for reviewing and evaluating licensees. The NRC database systems for safety that support this process include the Licensee Event Report Search (LER) System (LERSearch), the Accident Sequence Precursor (ASP) Database, the Nuclear Material Events Database (NMED), and the Radiation Exposure Information Report System. The NRC database systems for security that support this process include the Suspicious Incidents Data 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 NRC licensee reports, NRC inspection reports, Agreement State reports, periodic review of Agreement State regulatory programs, NRC consultant/contractor reports, and U.S. Department of Energy (DOE) Operating Experience Weekly

Summaries. In addition, there are daily interactions and exchanges of event information between NRC Headquarters (HQ) and the regional offices, as well as periodic conference calls between HQ, the regions, and Agreement States to discuss event information. Identified events that meet the AO criteria are validated and verified by all applicable NRC HQ program offices, regional offices, and agency management before submission to Congress.

The following performance measures have been identified for verification and validation.

*Goal 1—Safety: Ensure adequate protection of public health and safety and the environment.*

### Nuclear Reactor Safety

**Strategic Outcomes:**

- ▶ Prevent the occurrence of any nuclear reactor accidents.
- ▶ Prevent the occurrence of any inadvertent criticality events.
- ▶ Prevent the occurrence of any acute radiation exposures resulting in fatalities.
- ▶ Prevent the occurrence of any releases of radioactive materials that result in significant radiation exposures.
- ▶ Prevent the occurrence of any releases of radioactive materials that cause significant adverse environmental impacts.

**Performance Measures:**

1—Number of new conditions evaluated as red by the NRC’s Reactor Oversight Process (ROP).

**Reactor Safety Target: Less than or equal to three**

Verification: The data for this performance measure are collected in two ways as part of the NRC’s ROP. Inspection findings are collected at least quarterly by NRC inspectors. Inspectors use formal detailed inspection procedures to review plant operations and maintenance. Inspection findings are reviewed by NRC managers to assess their significance as part of the ROP’s significance determination process (SDP). The data for performance indicators are collected by licensees and submitted to the NRC at least quarterly. The significance of the data is determined by thresholds for each indicator. The NRC conducts inspections of licensee processes for collecting and submitting the data to ensure completeness, accuracy, consistency, timeliness, and validity.

The NRC enhances the quality of its inspections through inspector feedback and periodic reviews of results. The inspectors are trained through a rigorous qualification program. The quality of performance indicators is improved through continuous feedback from licensees and inspectors that is incorporated into guidance documents. The NRC publishes the inspection findings and performance indicators on the agency’s Web site and incorporates feedback received from all stakeholders as appropriate.

Validation: The inspection findings and performance indicators used by the ROP cover a broad range of plant operations

and maintenance. NRC managers review significant issues that are identified and inspectors conduct supplemental inspections of selected aspects of plant operations as appropriate. Plants that are identified as having performance issues, as well as a self-assessment of the ROP, are reviewed by senior agency managers on an annual basis, and the results are reported to the Commission.

This measure is the number of new red inspection findings plus the number of new red performance indicators during the fiscal year. Programmatic issues at multiunit sites that result in red findings for each individual unit are considered separate conditions for purposes of reporting for this measure. A red performance indicator and a red inspection finding that are due to an issue with the same underlying causes are also considered separate conditions for purposes of reporting for this measure. Red inspection findings are included in the fiscal year in which the final significance determination was made. Red performance indicators are included in the fiscal year in which the ROP external Web page was updated to show the red indicator.

## 2—Number of significant accident sequence precursors of a nuclear accident.

### **Reactor Safety Target: Zero**

**Verification:** The NRC has an ASP program to evaluate U.S. nuclear power plant operating experience systematically 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 the LERSearch 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. However, for ASP analyses of noncontroversial, low-risk precursors in which the ASP results reasonably agree with the SDP results, formal peer reviews by licensees may not be performed. The NRC staff will continue to perform an in-house review process for all analyses. Lastly, findings from the analyses are provided to the licensee and the public.

It must also be noted that there is a time lag in obtaining ASP analysis results since they are often based on LERs (submitted up to 60 days after an event) and most analyses take approximately 6 months to complete. Final data will be reported in the year in which the event occurred.

**Validation:** The ASP program identifies significant precursors as those events that have a 1/1,000 ( $10^{-3}$ ) or greater

probability of leading to a nuclear reactor accident. Significant ASP events have a conditional core damage probability or  $\Delta$ CDP of  $> 1 \times 10^{-3}$ .

3—Number of operating reactors whose integrated performance entered the Inspection Manual Chapter 0350 process, the multiple/repetitive degraded cornerstone column, or the unacceptable performance column of the ROP Action Matrix with no performance exceeding Abnormal Occurrence Criterion I.D.4.

**Reactor Safety Target: Less than or equal to three**

Verification: The data for this performance measure are collected by the NRC ROP on a continuous basis, and the information is published at least quarterly. NRC inspectors use detailed formal procedures to conduct inspections of licensee performance, and NRC managers review the results to ensure the completeness, accuracy, consistency, timeliness, and validity of the data.

The NRC enhances the quality of its inspections through inspector feedback and periodic reviews of results. The inspectors are trained through a rigorous qualification program. The quality is also improved through continuous feedback from licensees and inspectors that is incorporated into guidance documents. The NRC publishes the data on the agency's Web site and incorporates feedback received from all stakeholders as appropriate.

Validation: The information collected by the ROP covers a broad range of plant operations and maintenance.

NRC managers review significant issues that are identified and inspectors conduct supplemental inspections of selected aspects of plant operations as appropriate. Plants that are identified as having performance issues are reviewed by senior agency managers on an annual basis, and the results are reported to the Commission. The same is true of the agency's self-assessment of the ROP.

This measure is the number of plants that have entered the Inspection Manual Chapter 0350 process, the multiple/repetitive degraded cornerstone column, or the unacceptable performance column during the fiscal year (i.e., were not in these columns or process the previous fiscal year). Data for this measure are obtained from the NRC external Action Matrix Summary Web page that provides a matrix of the five columns, with the plants listed within their applicable column, and notes the plants in the Inspection Manual Chapter 0350 process. For reporting purposes, plants that are the subject of an approved deviation from the Action Matrix are included in the column or process in which they appear on the Web page.

4—Number of significant adverse trends in industry safety performance with no trend exceeding Abnormal Occurrence Criterion I.D.4.

**Reactor Safety Target: Less than or equal to one**

Verification: The data for this performance measure are derived from data supplied by all power plant licensees in LERs and from monthly operating reports, as well as performance

indicator data submitted for the ROP. These data are required by 10 CFR 50.73, “Licensee Event Report System,” 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.

The target value is set based on the expected addition of several indicators and a change in the long-term trending methodology.

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.

#### 5—Number of events with radiation exposures to the public and occupational workers from nuclear reactors that exceed Abnormal Occurrence Criterion I.A.3.

##### **Reactor Safety Target: Zero**

Verification: Licensees report overexposures through the LER process, which are then entered into a searchable database. The database is used to identify those LERs that report overexposures. NRC resident 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.

6—Number of radiological releases to the environment from nuclear reactors that exceed applicable regulatory limits.

**Reactor Safety Target: Zero**

Verification: As with worker overexposures, licensees report environmental releases of radioactive materials that are in excess of regulations or license conditions through the LER process, which are then entered into a searchable database. The database is used 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 followup inspections.

Validation: The generation of nuclear power creates radioactive materials that are released into the environment in a controlled manner. These radioactive discharges are subject to regulatory controls that limit the amount discharged and the resultant dose to members of the public. Consequently, the NRC tracks all releases of radioactive materials in excess of regulatory limits as a performance measure because large releases in excess of regulatory limits have the potential to endanger public safety or harm the environment. The NRC inspects every nuclear power plant for compliance with regulatory requirements and specific license conditions related to radiological effluent releases. The inspection program includes enforcement actions to be taken for violations of the regulations or license conditions, based on the severity of the event.

This performance measure includes dose values that are classified as being as low as reasonably achievable, contained in Appendix I, “Numerical Guides for Design Objectives and Limiting Conditions for Operation To Meet the Criterion ‘As Low As Is Reasonably Achievable’ for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents,” to 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities,” as well as the public dose limits contained in 10 CFR Part 20, “Standards for Protection Against Radiation.” Because the performance measure includes as low as reasonably achievable values, which are not safety limits, and because Appendix I to 10 CFR Part 50 allows licensees to temporarily exceed the as low as reasonably achievable dose values, for good reason, the performance measure is set to two.



## Nuclear Materials and Waste Safety

### *Strategic Outcomes:*

- ▶ Prevent the occurrence of any inadvertent criticality events.
- ▶ Prevent the occurrence of any acute radiation exposures resulting in fatalities.
- ▶ Prevent the occurrence of any releases of radioactive materials that result in significant radiation exposures.
- ▶ Prevent the occurrence of any releases of radioactive materials that cause significant adverse environmental impacts.

### *Performance Measures:*

1—Number of events with radiation exposures to the public and occupational workers from radioactive material that exceed Abnormal Occurrence Criterion I.A.3

**Materials Safety Target: Less than or equal to two**

**Waste Safety Target: Zero**

Verification: This performance measure includes any event involving licensed radioactive materials that results in significant radiation exposures to members of the public and/or occupational workers that exceed the dose limits in the AO reporting criteria. Due to the extremely high doses employed during medical applications of radioactive materials, it is also appropriate to use a radiation exposure that results in unintended permanent functional damage to an organ or a

physiological system as determined by a physician as a criterion for this measure. AO Criterion I.A.3 is used as the basis for this measure.

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. These events are summarized in event notifications and preliminary notifications, which are used to widely disseminate the information to internal and external stakeholders.

The fuel facilities, nuclear material users, spent fuel storage and transportation, decommissioning and low-level waste, and high-level waste repository programs contain elements that verify 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 consistently 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 monthly staff reviews; emphasis and analysis during the IMPEP reviews; NMED training in HQ, the regions, and in Agreement States; and discussions at all Agreement State and the Conference of Radiation Control Program Directors meetings.

Validation: There is a logical basis for using events involving radiation exposures to the public and occupational workers from radioactive material

that exceed AO Criterion I.A.3 as a performance measure for ensuring the protection of public health and safety. An event is considered an AO if it is determined to be significant from the standpoint of public health or safety. The NRC's regulatory process, including licensing, inspection, guidance, regulations, and enforcement activities, is designed to mitigate the likelihood of an event that would exceed AO Criterion I.A.3.

Events of this magnitude are rare. In the unlikely event that an AO should occur, the NRC or Agreement State technical specialists will confirm whether the criteria were met, with input provided by expert consultants, as necessary.

The NRC does not use statistical sampling of data to determine results. Rather, all event data are reviewed to determine if the performance measure has been met. There are two important data limitations in determining this performance measure. These include delay time for receiving information and/or the failure of the NRC to become aware of an event that causes significant radiation exposures to the public or occupational workers. The NRC regulations associated with event reporting include specific requirements for timely notifications; there is a lag time separating the occurrence of an event and the known consequences of an event.

The NRC believes the probability of not being aware of an event that causes significant radiation exposures to the public or occupational workers is very small. Periodic licensee inspections and regulatory reporting requirements are sufficient to ensure that an event of this magnitude would become known. If such an event occurred, 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 validate the occurrence of these events.

2—Number of radiological releases to the environment that exceed applicable regulatory limits.

**Materials Safety Target: Less than or equal to two**

**Waste Safety Target: Zero**

Verification: This performance measure is defined as any release to the environment from the following activities: fuel facilities, nuclear material users, spent fuel storage and transportation, decommissioning and low-level waste, and high-level waste repository activities that exceed applicable regulations as defined in 10 CFR 20.2203(a)(3). A 30-day written report is required on such releases.

Should an event meeting this threshold occur, it would be reported to the NRC, Agreement States, or both 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 internal and external stakeholders.

The fuel facilities, nuclear material users, spent fuel storage and transportation, decommissioning and low-level waste, and high-level waste repository programs

contain elements that verify the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are consistently 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 monthly staff reviews; emphasis and analysis during the IMPEP review; NMED training in HQ, the regions, and Agreement States; and discussions at all Agreement State and Conference of Radiation Control Program Directors meetings.

**Validation:** The regulations in 10 CFR Part 20 provide standards for protection against radiation. There is a logical basis for tracking releases subject to the 30-day reporting requirement under 10 CFR 20.2203(a)(3)(ii) as a performance measure for ensuring the protection of the environment. The NRC's regulatory process, including licensing, inspection, guidance, regulations, and enforcement activities, is sufficient to ensure that releases of radioactive materials that exceed regulatory limits are infrequent.

In the unlikely event that a release to the environment exceeds regulatory limits, the NRC or Agreement State technical specialists or agency consultants will confirm whether the criteria were met, with input provided by expert consultants as necessary.

The NRC does not look at statistical sampling of data to determine results. Rather, all event data are reviewed to determine if the performance measure has been met. There are two important data limitations in determining this

performance measure. These include delay time for receiving information and/or the failure of the NRC to become aware of an event that causes environmental impacts. The NRC regulations associated with event reporting include specific requirements for timely notifications; there is a lag time separating the occurrence of an event and the known consequences of an event.

The NRC believes the probability of not being aware of an event that causes a radiological release to the environment that exceeds applicable regulations is very small. Periodic licensee inspections and regulatory reporting requirements are sufficient to ensure that an event of this magnitude would become known.

If such an event occurred, it would result in a 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 validate the occurrence of these events.

## *Goal 2—Security: Ensure the secure use and management of radioactive materials.*

### **Nuclear Reactor and Nuclear Materials and Waste Security**

#### ***Strategic Outcome***

Prevent any instances where licensed radioactive materials are used domestically in a manner hostile to the security of the United States.

## *Performance Measures*

1 – Number of unrecovered losses or thefts of risk-significant radioactive sources.

### **Target: Zero**

Under AO Criterion I.C.1, the agency counts any unrecovered lost, stolen, or abandoned sources that exceed the values listed in Appendix P, “Category 1 and 2 Radioactive Material,” to 10 CFR Part 110, “Export and Import of Nuclear Equipment and Material.” Excluded from reporting under this criterion are those events involving sources that are lost, stolen, or abandoned under certain conditions, specifically (1) sources abandoned in accordance with the requirements of 10 CFR 39.77(c), (2) sealed sources contained in labeled, rugged source housings, (3) recovered sources with sufficient indication that doses in excess of the reporting thresholds specified in AO Criteria I.A.1 and I.A.2 did not occur during the time the source was missing, (4) unrecoverable sources lost under such conditions that doses in excess of the reporting thresholds specified in AO Criteria I.A.1 and I.A.2 were not known to have occurred, and (5) other sources that are lost or abandoned and declared unrecoverable, for which the agency has determined that the risk-significance of the source is low based on the location (e.g., water depth) or physical characteristics (e.g., half-life, housing) of the source and its surroundings where all reasonable efforts have been made to recover the source, and where it has been determined that the source is not recoverable and would not be considered a realistic safety or security risk under this measure.

Verification: Losses or thefts of radioactive material greater than or equal to 1,000 times the quantity specified in Appendix C, “Quantities of Licensed Material Requiring Labeling,” to 10 CFR Part 20 must be reported (per 10 CFR 20.2201(a)) by telephone to the NRC HQ Operations Center or Agreement State immediately (interpreted as within 4 hours) if the licensee believes that an exposure could result to persons in unrestricted areas. If an event meeting the thresholds described above occurs, it would be reported through a number of sources, but primarily through this required licensee notification. Events that are publicly available are then entered and tracked in NMED, which is an essential system used to collect and store information on such events. Separate methods are used to track events that are not publicly available. Additionally, licensees must meet the reporting and accounting requirements in 10 CFR Part 73, “Physical Protection of Plants and Materials,” and 10 CFR Part 74, “Material Control and Accounting of Special Nuclear Material.”

The NRC’s 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 the NRC regions are consistently collecting and reporting such events as received from the licensees and are entering these events in NMED. In some cases, upon receiving a report, the NRC or Agreement State initiates an independent investigation that verifies the reliability of the reported information. When performed, these investigations enable the NRC or Agreement State to verify the accuracy of the reported data.

The regulation in 10 CFR 20.2201(b) requires a 30-day written report for lost or stolen sources that are greater than or equal to 10 times the quantity specified in Appendix C to 10 CFR Part 20 if the source is still missing at that time. In addition, 10 CFR 20.2201(d) requires another written report within 30 days of a licensee learning any additional substantive information. The NRC interprets this requirement as including reporting recovery of sources.

The NRC issued guidance in the form of a regulatory information summary (RIS 2005-21, “Clarification of the Reporting Requirements in 10 CFR 20.2201,” issued November 2005) to clarify the current 10 CFR 20.2201(d) requirement for reporting recovery of a risk-significant source. The NRC asked the Agreement States to send copies of the RIS (or equivalent document) to their licensees. The NRC issued the National Source Tracking System (NSTS) final rule in November 2006. On January 31, 2009, NRC licensees and Agreement State licensees were required to begin reporting information on source transactions to the NSTS. Implementation of this system creates an inventory of risk-significant sources. This rulemaking established reporting requirements for risk-significant sources (including reporting timeframes) by adding specific requirements to 10 CFR 20.2201, “Reports of Theft or Loss of Licensed Material,” for risk-significant sources, including a requirement for licensees to report the recovery of a risk-significant source within 30 days of recovery.

**Validation:** Events collected under this performance measure are actual losses, thefts, or diversions of materials described above. Such events could compromise public health and safety, the

environment, and the common defense and security. Events of this magnitude are expected to be rare. The information reported under 10 CFR Part 73 and 10 CFR Part 74 is required so that the NRC is aware of events that could endanger public health and safety or national security. Any failures at the level of the strategic plan would result in immediate investigation and followup.

If an event subject to the reporting requirements described above occurs, it would result in a prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee, the NRC, and Agreement State or combination of the three to mitigate the situation and prevent recurrence.

2—Number of substantiated cases of theft or diversion of licensed risk-significant radioactive sources or formula quantities of special nuclear material, or attacks that result in radiological sabotage.

**Target: Zero**

**Verification:** In AO Criterion I.C.2, “substantiated” means a situation that requires additional action by the agency or other proper authorities because of an indication of loss, theft, or unlawful diversion—such as an allegation of diversion, report of lost or stolen material, statistical processing difference, or other indication of loss of material control or accountability—that cannot be refuted following an investigation. A formula quantity of special nuclear material is defined in 10 CFR 70.4, “Definitions.” Radiological sabotage is defined in 10 CFR 73.2.

“Definitions.” Licensees subject to the requirements of 10 CFR Part 73 must call the NRC within 1 hour of an occurrence to report any breaches of security or other event that may potentially lead to theft or diversion of material or to sabotage at a nuclear facility. The NRC’s safeguards requirements are described in 10 CFR 73.71, “Reporting of Safeguards Events”; Appendix G, “Reportable Safeguards Events,” to 10 CFR Part 73; and 10 CFR 74.11, “Reports of Loss or Theft or Attempted Theft or Unauthorized Production of Special Nuclear Material.” The information assessment team composed of NRC HQ and regional staff members would conduct an immediate assessment for any significant events to determine any further actions that are needed, including coordination with the intelligence community and law enforcement. In accordance with 10 CFR 73.71(d), the licensee must also file a written report within 60 days of the incident describing the event and the steps that the licensee took to protect the nuclear facility. This information will enable the NRC to adequately assess whether radiological sabotage has occurred.

Validation: Events subject to reporting requirements are those that endanger public health and safety and the environment through deliberate acts of theft or diversion of material or through sabotage directed against the nuclear facilities that the agency licenses. Events of this type are extremely rare. If such an event occurs, it would result in a prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee, the NRC, or both to mitigate the situation and prevent recurrence. The investigation

ensures the validity of the information and assesses the significance of the event.

3—Number of substantiated losses of formula quantities of special nuclear material or substantiated inventory discrepancies of a formula quantity of special nuclear material that are judged to be caused by theft, diversion, or substantial breakdown of the accountability system.

**Target: Zero**

Verification: Licensees must record events associated with AO Criterion I.C.3 within 24 hours of the identified event in a safeguards log maintained by the licensee. The licensee must retain the log 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. The NRC makes a determination of whether a substantiated breakdown has resulted in a vulnerability to radiological sabotage, theft, diversion, or unauthorized enrichment of special nuclear material. When making substantiated breakdown determinations, the NRC evaluates the materials event data to ensure that licensees are reporting and collecting the proper event data.

Validation: “Substantiated” means a situation that requires additional action by the agency or other proper authorities because of an indication of loss, theft, or unlawful diversion—such as an allegation of diversion, report of lost or stolen material, statistical processing difference, other system breakdown closely related to the material control and accounting program (such as an item control system

associated with the licensee's facility information technology system), or other indication of loss of material control or accountability—that cannot be refuted following an investigation. A formula quantity of special nuclear material is defined in 10 CFR 70.4. 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 or material control and accounting system has actually resulted in vulnerability.

4—Number of substantial breakdowns of physical security or material control (i.e., access control containment, or accountability systems) that significantly weaken the protection against theft, diversion, or sabotage.

**Target: Less than or equal to one**

**Verification:** In AO Criterion I.C.4, a “substantial breakdown” is defined as a red finding in the security cornerstone of the ROP or significant performance problems, operational events, or both resulting in a determination of overall unacceptable performance or in a shutdown condition (inimical to the effective functioning of the Nation's critical infrastructure). Radiological sabotage is defined in 10 CFR 73.2. Licensees are required to report to the NRC, immediately after the

occurrence becomes known, any known breakdowns of physical security, based on the requirements in 10 CFR 73.71 and Appendix G to 10 CFR Part 73. If a licensee reports such an event, the HQ operations officer prepares an official record of the initial event report. The NRC begins responding to such an event immediately upon notification, with the activation of its information assessment team. A licensee must follow its initial telephone notification with a written report submitted to the NRC within 30 days.

The licensee records breakdowns of physical protection resulting in a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste within 24 hours in a safeguards log maintained by the licensee. The licensee must retain the log as a record for 3 years after the last entry is made or until termination of the license. Licensees subject to 10 CFR Part 73 must also meet the reporting requirements detailed in 10 CFR 73.71. The NRC evaluates all of the reported events based on the criteria in 10 CFR 73.71 and Appendix G to 10 CFR Part 73. The NRC also maintains and relies on its safeguards inspection program to ensure the reliability of recorded and reported data.

**Validation:** Events assessed under this performance measure are those that threaten nuclear activities by deliberate acts, such as radiological sabotage, directed against facilities. If a licensee reports such an event, the information assessment team evaluates and validates the initial report and determines any further actions that may be necessary. Tracking breakdowns of

physical security indicates 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.

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 actually resulted in a vulnerability.

#### 5—Number of significant unauthorized disclosures of classified and/or safeguards information.

##### **Target: Zero**

**Verification:** With regard to AO Criterion I.C.5, any alleged or suspected violations by NRC licensees of the Atomic Energy Act, Espionage Act, or other Federal statutes related to classified or safeguards information must be reported to the NRC under the requirements of 10 CFR 95.57(a) (for classified information), 10 CFR Part 73 (for Safeguards Information), and NRC orders (for Safeguards Information subject to modified handling requirements). However, for performance reporting, the NRC would only count those disclosures or compromises that actually cause

damage to national security or to public health and safety. Such events would be 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, “U.S. Nuclear Regulatory Commission Offices and Classified Mailing Addresses,” to 10 CFR Part 73. The Regional Administrator would then contact the Division of Security Operations at NRC HQ, which would assess the violation and notify other NRC offices and other government agencies, as appropriate. A determination would be made as to whether the compromise damaged national security or public health and safety. Any unauthorized disclosures or compromises of classified or safeguards information that damaged national security or public health and safety would result in immediate investigation and followup by the NRC. In addition, NRC inspections will verify that licensees’ routine handling of classified and safeguards information (including Safeguards Information subject to modified handling requirements) conforms to established security information management requirements.

Any alleged or suspected violations of this performance measure by NRC employees, contractors, or other personnel would be reported in accordance with NRC procedures to the Director of the Division of Facilities and Security at NRC HQ. The NRC maintains a strong system of controls over national security and safeguards information, including (1) annual required training for all employees, (2) safe and secure document storage, and (3) physical access control in the form of guards and badged access.

**Validation:** Events collected under this



performance measure are unauthorized disclosures of classified or safeguards information that damage the national security or public health and safety. Events of this magnitude are not expected and would be rare. If such an event occurs, it would result in a 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 the materials event data to ensure that licensees are reporting and collecting the proper event data.

## GOALS, PERFORMANCE MEASURES, AND PROGRAMS CROSSWALK

The following table shows the relationship between the agency’s goals, performance measures, and its seven program business lines. For example, the strategic outcome of “prevent the occurrence of any nuclear reactor accidents” relates to the New Reactors and Operating Reactors Business Lines. The strategic outcome of “prevent the

occurrence of any inadvertent criticality events” relates to all of the agency’s business lines. Each program evaluates event reports and other pertinent data to report the results for each strategic outcome, performance measure, and output measure. For each output measure, the specific product line involved is identified in the table.

### GOALS, PERFORMANCE MEASURES, AND PROGRAMS CROSSWALK—SAFETY

Measures	NRC Business Lines						
	Operating Reactors	New Reactors	Fuel Facilities	Materials Users	Spent Fuel	Decomm & LLW	HLW
<b>Strategic Outcomes</b>							
Prevent the occurrence of any nuclear reactor accidents.	x	x	x				
Prevent the occurrence of any inadvertent criticality events.	x	x	x	x	x	x	x
Prevent the occurrence of any acute radiation exposures resulting in fatalities.	x	x	x	x	x	x	x
Prevent the occurrence of any releases of radioactive materials that result in significant radiation exposures.	x	x	x	x	x	x	x
Prevent the occurrence of any releases of radioactive materials that cause significant adverse environmental impacts.	x	x	x	x	x	x	x
<b>Performance Measures</b>							
Number of new conditions evaluated as red by the NRC’s Reactor Oversight Process.	x						
Number of significant accident sequence precursors of a nuclear reactor accident.	x						

## GOALS, PERFORMANCE MEASURES, AND PROGRAMS CROSSWALK—SAFETY

### NRC Business Lines

Measures	Operating Reactors	New Reactors	Fuel Facilities	Materials Users	Spent Fuel	Decomm & LLW	HLW
Number of operating reactors whose integrated performance entered the Manual Chapter 0350 process, the multiple/repetitive degraded or unacceptable cornerstone of the Reactor Oversight Process Action Matrix with no performance exceeding Abnormal Occurrence Criterion 1.D.4.	x						
Number of significant adverse trends in industry safety performance not exceeding Abnormal Occurrence Criterion 1.D.4.	x						
Number of events with radiation exposures to the public and occupational workers that exceed Abnormal Occurrence Criterion 1.A.3.	x	x	x	x	x	x	x
Number of radiological releases to the environment that exceed applicable regulatory limits.	x	x	x	x	x	x	x

### Output Measures

Licensing actions completed per year.	Licensing
Age of other licensing task inventory.	Licensing
Age of licensing action inventory.	Licensing
Other licensing tasks completed per year.	Licensing
Number of operator licensing examinations administered.	Licensing
Completion of license renewal application reviews.	Licensing
Number of plants for which the baseline inspection program was completed during the most recently ended inspection cycle.	Oversight
Timeliness of significance determination process evaluations.	Oversight
Time to complete reviews of technical allegations.	Oversight

**GOALS, PERFORMANCE MEASURES, AND PROGRAMS CROSSWALK—SAFETY**

**NRC Business Lines**

<b>Measures</b>	<b>Operating Reactors</b>	<b>New Reactors</b>	<b>Fuel Facilities</b>	<b>Materials Users</b>	<b>Spent Fuel</b>	<b>Decomm &amp; LLW</b>	<b>HLW</b>
Timeliness in completing enforcement actions.	Oversight						
Timeliness in completing investigations—Target 1.	Oversight						
Timeliness in completing investigations—Target 2.	Oversight						
Timeliness in completing actions on critical research programs.	Research						
Acceptable technical quality of agency research technical products.	Research						
Emergency Response Performance Index.	Event Response						
Efficiency measure: Transitioning from hard-copy distribution of outgoing licensee correspondence to electronic distribution.	Licensing						
Efficiency measure: Revise inspection process.	Oversight						
Efficiency measure: Minimize necessary communication systems devices for senior manager use.	Oversight						
Review early site permit applications on the schedules negotiated with the applicants.		Licensing					
Review design certification applications on the schedules negotiated with the applicants.		Licensing					
Review combined license (COL) applications on the schedules negotiated with the applicants.		Licensing					
Complete all vendor inspections as scheduled and resourced.		Oversight					
Efficiency: Transition subsequent COL reviews from a 6-phase to a 4-phase approach.		Licensing					
Timeliness of completing “complex” fuel cycle licensing actions, from the date of acceptance, excluding request for additional information with an assumption of 30-day response to a request for additional information.			Licensing				

## GOALS, PERFORMANCE MEASURES, AND PROGRAMS CROSSWALK—SAFETY

### NRC Business Lines

Measures	Operating Reactors	New Reactors	Fuel Facilities	Materials Users	Spent Fuel	Decomm & LLW	HLW
Timeliness of completing “non-complex” fuel cycle licensing actions (e.g., amendments and reviews) from the date of acceptance, including a 30-day response for a request for additional information.			Licensing				
Safety and safeguards inspection modules. Complete all core and reactive inspection modules as scheduled in Fuel Cycle Master Inspection Plan.			Oversight				
Timeliness of safety and safeguards inspection modules. Complete core inspection modules as scheduled in Fuel Cycle Master Inspection Plan.			Oversight				
Timeliness in completing reviews for technical allegations.			Oversight				
Efficiency measure: New fuel facilities hearing support.			Licensing				
Timeliness of licensing actions—review of application for new materials licenses and license amendments.				Licensing			
Timeliness of licensing actions—reviews of application for materials license renewals and sealed-source and device designs.				Licensing			
Timeliness of safety inspections of materials licensees.				Oversight			
Timeliness in completing reviews for technical allegations.				Oversight			
Timeliness in completing enforcement actions.				Oversight			
Timeliness in completing investigations—Target 1.				Oversight			
Timeliness in completing investigations—Target 2.				Oversight			
Percentage of materials and waste rulemakings completed on schedule.				Rulemaking			
Timeliness of completing actions on critical research programs.				Research			

## GOALS, PERFORMANCE MEASURES, AND PROGRAMS CROSSWALK—SAFETY

Measures	NRC Business Lines						
	Operating Reactors	New Reactors	Fuel Facilities	Materials Users	Spent Fuel	Decomm & LLW	HLW
Acceptable technical quality of agency research technical products.				Research			
Issuances of NRC import/export authorizations.				International Activities			
Complete storage container and installation design reviews within timeliness goals.					Licensing		
Complete transportation container design reviews within timeliness goals.					Licensing		
Number of spent fuel storage and transportation inspections completed.					Oversight		
Timeliness of completing actions on critical research programs.					Research		
Acceptable technical quality of agency research technical products.					Research		
Support program licensing activities by preparing and/or reviewing environmental reports and preparing environmental review documents.						Licensing	
Clean up complex materials, fuel cycle sites, and power reactors; complete uranium recovery licensing reviews.						Oversight	
Provide support to DOE for waste incidental to reprocessing activities.						Oversight	
Timeliness of completing actions on critical research programs.						Research	
Acceptable technical quality of agency research technical products.						Research	
Provide support to IAEA Waste Safety Standards Committee reviews, consultancies/expert missions, Joint Convention and Nuclear Energy Agency support.						International Activities	

## GOALS, PERFORMANCE MEASURES, AND PROGRAMS CROSSWALK—SAFETY

### NRC Business Lines

Measures	Operating Reactors	New Reactors	Fuel Facilities	Materials Users	Spent Fuel	Decomm & LLW	HLW
Eliminate the need for some site-specific EISs (i.e., by reducing resource needs) by developing a generic environmental impact statement for uranium recovery environmental reviews.						Licensing	

## GOALS, PERFORMANCE MEASURES, AND PROGRAMS CROSSWALK—SECURITY

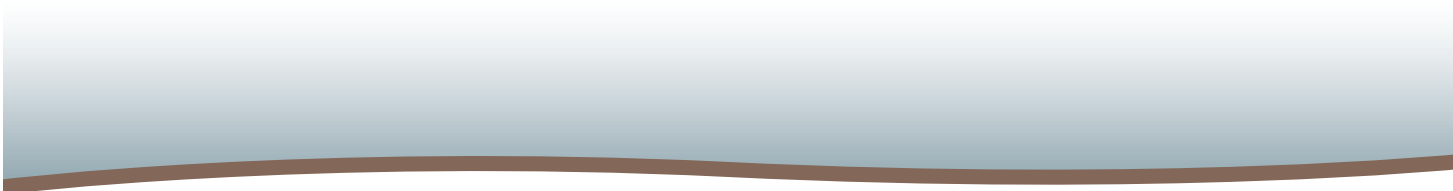
Measures	NRC Business Lines						
	Operating Reactors	New Reactors	Fuel Facilities	Materials Users	Spent Fuel	Decomm & LLW	HLW
<b>Strategic Outcome</b>							
No instances where licensed radioactive materials are used domestically in a manner hostile to the security of the United States.	x	x	x	x	x	x	x
<b>Performance Measures</b>							
Number of unrecovered losses or theft of risk-significant radioactive sources.	x	x	x	x	x	x	x
Number of substantiated cases of actual theft or diversion of licensed risk-significant radioactive sources or formula quantities of special nuclear material, or attacks that result in radiological sabotage.	x	x	x	x	x	x	x
Number of substantiated losses of formula quantities of special nuclear material or substantiated inventory discrepancies of formula quantities of special nuclear material that are judged to be caused by theft or diversion or substantial breakdown of the accountability system.	x	x	x	x	x	x	x
Number of substantial breakdowns of physical security or material control (i.e., access control, containment, or accountability systems) that significantly weakened the protection against theft, diversion, or sabotage.	x	x	x	x	x	x	x
Number of significant unauthorized disclosures of classified and/or safeguards information.	x	x	x	x	x	x	x



# OFFICE OF THE INSPECTOR GENERAL



119	5,386,824	1,902
1,626,549	5,463,538	8,554,013
1,902	5,494	93,100
8,554,013	900	93,100
93,100	31,119	19,968
19,968	1,626,549	110,251
110,251	1,902	110,251
9,040	8,554,013	
1,881,730		
1,706,600		
2,106,658		
5,386,824		
5,463,538		
5,494		
900		
31,119		
1,626,549		
1,902		
8,554,013		
93,100		
19,968		



# Office of the Inspector General

The NRC's Office of the Inspector General (OIG) was established as a statutory entity on April 15, 1989, in accordance with the 1988 amendments. The OIG mission is to (1) independently and objectively conduct and supervise audits and investigations relating to NRC programs and operations; (2) prevent and detect fraud, waste, and abuse; and (3) promote economy, efficiency, and effectiveness in NRC's programs and operations.

In addition, OIG reviews existing and proposed regulations, legislation, and directives and provides comments, as appropriate, and makes recommendations to the agency concerning their impact on the economy and efficiency of agency programs and operations. The Inspector

General keeps the NRC Chairman and members of Congress informed about problems; recommends corrective actions; and monitors the NRC's progress in implementing these actions.

## PROGRAM RESOURCE SUMMARY

The FY 2012 proposed budget request for the OIG is \$10.86 million. These resources will fund the activities for the Audits and Investigations Programs.

In accordance with Office of Management and Budget (OMB) requirements, OIG is showing the full cost associated with its

### OIG BUDGET AUTHORITY AND FULL-TIME EQUIVALENTS BY PROGRAM (DOLLARS IN MILLIONS)

Business Line	FY 2010 Enacted		FY 2012			
			Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Audits	7.142	37.0	7.206	37.0	0.034	0.0
Investigations	3.718	21.0	3.654	21.0	(0.034)	0.0
<b>Total</b>	<b>\$10.860</b>	<b>58.0</b>	<b>\$10.860</b>	<b>58.0</b>	<b>\$0.0</b>	<b>0.0</b>

Numbers may not add due to rounding.

programs for the FY 2012 budget with the following caveat: as a result of an October 1989 Memorandum of Understanding between NRC's Chief Financial Officer and the Inspector General and a subsequent amendment in March 1991, OIG no longer requests that funding for some OIG management and support services be included in the OIG appropriation. It was agreed that funds for OIG infrastructure requirements and other agency support services would instead be included in NRC's main appropriation. For the most part, these costs are not readily severable. Thus, this funding continues to be included in NRC's main appropriation.

## AUDITS

The OIG Audits Program focuses on the agency's management and financial operations; economy and efficiency with which an organization, program, or function is managed; and whether the programs achieve intended results. OIG auditors assess the degree to which an organization complies with laws, regulations, and internal policies in carrying out programs, and they test program effectiveness as well as the accuracy and reliability of financial

statements. The overall objective of an audit is to identify ways to enhance agency operations and promote greater economy and efficiency.

For FY 2012, OIG requests \$7.206 million and 37 Full-Time Equivalents (FTE), to carry out its Audits Program activities. With these resources, the Audits Program will conduct approximately 25 audits and evaluations. This will enable the OIG to provide enhanced coverage of NRC's Nuclear Reactor Safety Program that has grown in response to a national resurgence of interest in the construction of new nuclear power plants and associated facilities and programs. OIG's assessment of these mission-critical programs will support the agency in accomplishing its goals while protecting public health and safety.

### *Program Resource Summary*

The FY 2012 proposed budget request for the Audits Program is \$7.206 million, which includes \$1.175 million in contract support and travel and \$6.031 million in salaries and benefits to support 37 FTE. This represents an increase of \$0.034 million when compared with FY 2010 funding levels.

## AUDITS (DOLLARS IN MILLIONS)

Business Line	FY 2010 Enacted		FY 2012			
	\$M	FTE	Request		Changes from FY 2010	
			\$M	FTE	\$M	FTE
Program Support	7.142	37.0	7.206	37.0	0.034	0.0
<b>Total</b>	<b>\$7.142</b>	<b>37.0</b>	<b>\$7.206</b>	<b>37.0</b>	<b>\$0.034</b>	<b>0.0</b>

Numbers may not add due to rounding.

## FY 2012 Audits Program Performance Goals

- ▶ safety area: 85 percent of audit products/activities undertaken will identify risk areas or management challenges relating to the improvement of NRC's safety programs.
- ▶ security area: 90 percent of audit products/activities undertaken will identify risk areas or management challenges relating to the improvement of NRC's security programs.
- ▶ corporate management area: 80 percent of audit products/activities undertaken will identify risk areas or management challenges relating to the improvement of NRC's corporate management programs.
- ▶ 80 percent of completed audit products or activities will have a high impact on strengthening NRC's safety, security, and/or corporate management programs.
- ▶ obtain agency agreement on at least 92 percent of OIG audit recommendations.
- ▶ obtain final agency action on an aggregate of 70 percent of OIG audit recommendations within 2 years.

## Selected FY 2010 Audits Program Accomplishments

In FY 2010, OIG issued 21 reports pertaining to NRC programs and

operations. These reports either evaluate high-risk agency programs or comply with mandatory financial and computer security-related legislation.

### Examples of Recently Completed Work are as Follows:

#### ***Social Engineering Assessment Report:***

Social engineering is the practice of obtaining confidential information through manipulation of legitimate users. Social engineers will commonly use the telephone or Internet to trick a person into revealing sensitive information or getting them to do something that is against typical policies, exploiting the natural tendency to trust others. The evaluation objective was to assess the effectiveness of agency security policies and control measures protecting sensitive information technology systems against a social engineering attack. A contractor with expertise in this area performed the assessment.

#### *Assessment Results:*

The assessment, performed between August 19, 2009, and November 6, 2009, demonstrated that NRC had improved its controls since 2006, when a prior OIG social engineering assessment was conducted. The assessment, however, also revealed areas where NRC can further strengthen the controls needed to protect against social engineering attacks and made recommendations

to help NRC address specific areas noted for improvement. Additional information concerning the assessment results cannot be reported publicly due to the security-related nature of the assessment and results.

### ***Audit of NRC's Vendor Inspection Program:***

NRC endeavors to protect the public health and safety and the environment by overseeing vendor compliance with NRC's regulations for assuring the integrity of domestic and global parts and services supplied to nuclear power reactors. NRC directly oversees compliance by conducting reactive and routine inspections of vendors, and indirectly through licensee audits of vendors and through American Society of Mechanical Engineers (ASME) standards. Vendors manufacture a range of components such as fasteners, pumps, valves, and reactor vessels, as well as provide design, engineering, and construction services. The audit objective was to assess NRC's regulatory approach for ensuring the integrity of domestic and global parts and services supplied to nuclear power reactors.

### **Audit Results:**

Since 2007, NRC has enhanced its overall approach to vendor inspections and increased vendor outreach efforts. However, additional improvements are needed. Specifically, NRC should improve its communication of regulatory expectations and requirements to vendors, clarify its expectations and requirements for

commercial products used in nuclear power plants, clarify its expectations for using accredited calibration laboratories, and improve monitoring and evaluating for counterfeit, fraudulent, and substandard items in the nuclear supply chain.

### ***Audit of NRC's Management of Agreements with Department of Energy Laboratories:***

As of July 13, 2009, NRC had 186 active agreements with U.S. Department of Energy (DOE) laboratories totaling approximately \$365 million. NRC Management Directive (MD) 11.7, "NRC Procedures for Placement and Monitoring of Work with U.S. Department of Energy," specifies the interagency responsibilities, authorities, and procedures for placing and monitoring work at DOE laboratories. The audit objective was to determine whether NRC has established and implemented an effective system of internal control over the placement and monitoring of work with DOE laboratories.

### **Audit Results:**

OIG identified two major opportunities for program improvements. First, project managers need to develop convincing justifications for using a DOE laboratory rather than a commercial source. Of the 38 justifications reviewed, 32 lacked an indication that commercial firm capabilities were assessed or considered as part of the decisionmaking process and 20 justifications did not effectively demonstrate why a DOE laboratory was preferred. Without adequate consideration that commercial firms can or cannot perform the work awarded to DOE laboratories, NRC cannot be assured that best value was

obtained on these acquisitions. Second, NRC needs to receive DOE laboratory audit results because the Memorandum of Understanding between NRC and DOE does not provide for this to occur. Without access to audit information, NRC cannot ensure the propriety of amounts paid for work performed and NRC's ability to effectively monitor and make decisions regarding agency funding at DOE laboratories is limited.

### ***Audit of NRC's Oversight of Irradiator Security:***

Irradiators are devices that expose products, such as food and medical supplies, to radiation for sterilization and other purposes. Radiation is achieved by the exposure to high-risk radioactive materials, such as cobalt-60 and cesium-137. Commercial firms, as well as State-run organizations such as hospitals and universities, operate irradiators and are licensed to possess the radioactive materials used in these devices. Of particular concern, from a security perspective, is the protection of these radioactive materials from malevolent appropriation by terrorists for use in an attack against the American public. The purpose of this audit was to determine the adequacy of NRC's oversight of industrial irradiator security.

### **Audit Results:**

While NRC has increased its security oversight of irradiators and other radiological materials of concern, more enhancements are needed. Specifically, NRC needs to (1) establish security inspection frequencies based on a risk-informed approach, (2) enhance access

authorization controls of individuals with unescorted access to materials of concern, and (3) fully develop the security training program for materials inspectors. These enhancements would make it more difficult for unauthorized individuals to be in a position to aid or perpetuate a malevolent act that could result in serious harm to public health and safety, the environment, and in significant economic loss.

### **Examples of Ongoing Audit Work are as Follows:**

#### ***Audit of NRC's Oversight of Independent Spent Fuel Storage Installation Safety:***

The need for alternative spent nuclear fuel storage began to grow in the late 1970s/early 1980s as spent fuel pools at many nuclear reactors began to fill up with stored fuel. NRC authorizes licensees to store spent nuclear fuel at independent spent fuel storage installations, generally consisting of casks on a concrete pad located on site. A site-specific independent spent fuel storage installation is licensed for 20 years from the date of approval. Until a high-level waste repository is made available, spent nuclear fuel at independent spent fuel storage installations across the Nation will continue to accumulate. The audit objective is to determine if NRC has the requisite processes in place for reviewing and approving independent spent fuel storage installations.

#### ***Audit of NRC's Oversight of Master Materials Licensees:***

The NRC has the responsibility to

provide program oversight for the master materials license program. Master materials licenses provide designated organizations with regulatory authority for the receipt, possession, distribution, use, transportation, transfer, and disposal of radioactive material. As of August 2010, there were three master materials licensees: the Departments of Air Force, Navy, and Veterans Affairs (VA). The public and Government officials have recently questioned the effectiveness of NRC oversight in the aftermath of the reported misadministration of treatments to 92 patients at a VA hospital in Pennsylvania. Congressional and public interest remains high in regard to the use of radioactive material at other VA hospitals and other organizations to which NRC has delegated master materials licenses. The audit objective is to determine the extent to which NRC is providing effective oversight of master materials licensees.

***Audit of NRC’s Implementation of Homeland Security Presidential Directive-12:***

Federal agencies are required to apply Homeland Security Presidential Directive 12 (HSPD-12) to Federal

employees, contractors, and affiliates requiring long-term access to Federal facilities and information systems. This initiative employs electronically validated identity credentials to achieve secure access and interoperability among Federal agencies. In 2009, the Government’s Chief Information Officer Council issued *Federal Identity, Credential, and Access Management (FICAM) Roadmap and Implementation Guidance* to Federal agencies to maximize and aggressively pursue the use of credentials and to plan and implement Identity, Credential, and Access Management (ICAM) programs in FY 2010.

The FICAM standard is too broad to represent the unique risk requirements of individual agencies, which must be derived from individual risk assessments reflecting the security profiles of each. NRC conducted an independent survey and developed an Identity and Access Management (IAM) Strategy Framework document to identify key focus areas for its HSPD-12 strategy; provide actionable recommendations; and identify priorities, solutions, and a high-level timeline. Currently, NRC is deploying some of the ICAM-related efforts identified in the

**INVESTIGATIONS  
(DOLLARS IN MILLIONS)**

Business Line	FY 2010 Enacted		FY 2012 Request		FY 2012 Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
	Program Support	3.718	21.0	3.654	21.0	(0.034)
<b>Total</b>	<b>\$3.718</b>	<b>21.0</b>	<b>\$3.654</b>	<b>21.0</b>	<b>\$(0.034)</b>	<b>0.0</b>

Numbers may not add due to rounding.



IAM document. The audit objective is to assess whether NRC has effectively established and implemented the required ICAM program.

## INVESTIGATIONS

OIG's responsibility for detecting and preventing fraud, waste, and abuse within NRC includes investigating possible violations of criminal statutes relating to NRC programs and activities, investigating misconduct by NRC employees, interfacing with the U.S. Department of Justice on OIG-related criminal matters, and coordinating investigations and other OIG initiatives with Federal, State, and local investigative agencies and other OIGs. Investigations may be initiated as a result of allegations or referrals from private citizens; licensee employees; NRC employees; Congress; other Federal, State, and local law enforcement agencies; OIG audits; the OIG hotline; and IG initiatives directed at bearing a high potential for fraud, waste, and abuse.

For FY 2012, OIG requests \$3.654 million and 21 FTE to carry out its Investigations Program activities. Reactive investigations into allegations of criminal and other wrongdoing will continue to claim priority on OIG's use of available resources. Because NRC's mission is to protect the health and safety of the public, the Investigations Program's main concentration of effort and resources will involve investigations of alleged NRC staff misconduct that could adversely impact matters related to health and safety. OIG has also implemented a series of proactive

initiatives designed to identify specific high-risk areas that are most vulnerable to fraud, waste, and abuse. With these resources, OIG will conduct approximately 60 investigations and Event Inquiries covering a broad range of allegations concerning misconduct and mismanagement affecting various NRC programs.

### *Program Resource Summary*

The FY 2012 proposed budget request for the Investigations Program is \$3.654 million, which includes \$0.231 million in contract support and travel and \$3.423 million in salaries and benefits to support 21 FTE. This represents a decrease of \$0.034 million when compared with FY 2010 funding levels.

### FY 2012 Investigations Program Performance Goals

- ▶ safety area: 85 percent of investigation products/activities undertaken will identify risk areas or management challenges relating to the improvement of NRC's safety programs.
- ▶ security area: 90 percent of investigation products/activities undertaken will identify risk areas or management challenges relating to the improvement of NRC's security programs.
- ▶ corporate management area: 80 percent of investigation products/activities undertaken will identify risk areas or management challenges relating to the improvement of NRC's corporate management programs.

- ▶ 80 percent of investigations or activities completed will have a high impact on strengthening the NRC's safety, security, and/or corporate management programs.
- ▶ obtain 90 percent agency action in response to OIG investigative reports.
- ▶ complete 90 percent of active cases in less than 18 months on average.

### Selected FY 2010 Investigations Program Accomplishments

In FY 2010, OIG completed 52 investigations and Event Inquiries. These investigative efforts focused on violations of law or misconduct by NRC employees and contractors and allegations of irregularities or inadequacies in NRC programs and operations.

### Examples of Recently Completed Work Are as Follows:

#### ***NRC Oversight of Nuclear Fuel Services:***

OIG conducted an investigation involving six separate allegations concerning the NRC's oversight of Nuclear Fuel Services (NFS), an NRC licensee located in Erwin, TN, that manufactures and processes nuclear reactor fuel for commercial purposes and for the military.

#### **Investigative Results:**

OIG substantiated three of the six allegations. The first issue pertained to whether the NRC followed its rules

and policies with regard to approval of an NFS license amendment. OIG determined that the NRC approved a license amendment prior to the deadline for public comment. However, this was allowed under the Atomic Energy Act. The NRC may issue a licensing action prior to the expiration of the public comment period because the agency can later rescind its licensing action as a result of an adjudication action. The second issue pertained to withholding information from the public. OIG confirmed that the agency misapplied a June 2004 policy to withhold from the public all information on DOE naval reactor activities involving NFS. Instead of withholding only the naval reactor-related information, the NRC withheld information on all activities, regardless of whether the information related to naval reactor or commercial operations. The third issue pertained to the handling of an allegation against a senior NFS official. OIG found that the NRC improperly referred the allegation to the licensee. This was not in accordance with agency guidance because the subject was a licensee high-level management official and typically responsible for receiving and handling NRC allegation referrals.

#### ***The NRC's Handling of the Requirement of a Battery Backup Power for the Alert Notification System at the Indian Point Nuclear Power Plant:***

OIG conducted an investigation into whether the NRC fulfilled its responsibilities under the Energy Policy Act of 2005 because the Act assigned to the

NRC a specific role pertaining to the implementation of a new emergency notification system (ENS) at Indian Point Nuclear Power Plant.

### Investigative Results:

OIG determined that the NRC followed the Energy Policy Act's direction to require that a backup power source be available for Indian Point's ENS. Specifically, on January 31, 2006, the NRC issued a confirmatory order to Entergy, the license operator for Indian Point, requiring that a battery backup power source for the ENS be installed and operational by January 30, 2007. Because Entergy did not comply with the confirmatory order, the NRC took enforcement action against the licensee.

### Examples of Ongoing Investigative Work are as Follows:

#### ***Review of Regulatory Requirements Involving NRC Medical Use Program:***

The NRC has authority to regulate the use of radioactive materials for medical purposes. OIG has several investigations underway involving the effectiveness of the NRC's oversight of requirements under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 35, "Medical Use of Byproduct Material," to include: the NRC's oversight of medical events and reporting requirements when the potential dose administered to patients differs from the intended treatment plans by certain amounts; the NRC's oversight of its policy pertaining to the release of patients

who have been treated with radioactive materials, including how licensees determine if the total effective dose to any other individual from exposure to the released individual is not likely to exceed NRC dose level requirements; and NRC oversight of medical events involving the brachytherapy program at the Philadelphia Veterans Administration Medical Center.

#### ***NRC Network Intrusion, Computer Misuse, and Computer Forensic Support:***

The OIG Cyber Crime Unit conducts investigations into internal and external cyber breaches to the NRC's IT infrastructure; conducts cyber investigations involving the NRC and its employees; and works jointly with NRC staff to identify unauthorized or unknown activity on the NRC network. Investigations include computer misuse by NRC employees, targeted spear phishing attacks against NRC employees, attempted network intrusions into the NRC's Agencywide Documents Access and Management System (ADAMS), and forensic assistance to the NRC regarding alleged licensees' unauthorized disclosure of sensitive information.

#### ***Nuclear Material Diversion:***

OIG has an ongoing proactive effort to address possible diversion of nuclear materials within the regulatory purview of the NRC. As part of this effort, OIG has focused on materials licensees that are authorized to possess certain nuclear materials and may exceed their authorized license limits. OIG will evaluate the National Source Tracking

System, an NRC database for tracking the transfer of such material from the originator to the NRC licensee, and the quantity possessed by licensees, with a focus on the potential for the diversion of radioactive material and whether or not license limits are exceeded.

### *OIG's Strategic Goals, Strategies, and Actions*

OIG carries out its mission through its Audits and Investigations Programs. The FY 2008-2013 NRC-OIG Strategic Plan features three goals and guides the activities of these programs. The plan identifies the major challenges and risk areas facing the NRC and generally aligns with the agency's mission. It also includes a number of supporting strategies and actions that describe OIG's planned accomplishments over the strategic planning period. OIG's strategic plan can be found in its entirety at the following address: <http://www.nrc.gov/insp-gen/plandocs/strategic-plan.pdf>.

Through annual planning activities, audit and investigative resources focus on assessing the 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 the OIG auditors and investigators supports and complements each other in pursuit of these objectives. Below are OIG's strategic goals and strategies covering this budget cycle.

### *OIG Strategic Goals*

**Strategic Goal 1: Strengthen the NRC's efforts to protect public health and safety and the environment.**

The NRC faces many safety challenges and an associated increased workload related to nuclear reactor oversight, the regulation of nuclear materials, and the handling of nuclear waste. A significant concern for the NRC is regulating the safe operation of the Nation's nuclear power plants through an established oversight process. The NRC must also 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. Further, the NRC must ensure that its regulatory activities regarding nuclear fuel cycle facilities and nuclear materials adequately protect public health and safety. Below are OIG's strategies to support the agency's efforts in facing these challenges.

- ▶ Strategy 1-1: Identify risk areas associated with the NRC's Reactor Oversight Process and make recommendations, as warranted, for addressing them.
- ▶ Strategy 1-2: Identify risk areas associated with NRC efforts to (1) prepare for and manage the review of applications for new power reactors, and (2) oversee construction of new power reactors to verify that they are built in conformance with approved designs

and in compliance with approved construction standards and make recommendations, as warranted, for addressing them.

- ▶ Strategy 1-3: Identify risk areas facing the materials programs and make recommendations, as warranted, for addressing them.
- ▶ Strategy 1-4: Identify risk areas associated with low-level waste and the prospective licensing of the high-level waste repository and make recommendations, as warranted, for addressing them.

## Strategic Goal 2: Enhance the NRC's efforts to increase security in response to an evolving threat environment.

The NRC continues to face a number of challenges in ensuring that the public is protected from improper use of nuclear materials and technology. The NRC, in concert with other agencies, must maintain a comprehensive assessment of threats and effectively integrate security considerations into its regulatory process. The NRC must also ensure that security is adequately incorporated into the design and construction of new facilities. Below are OIG's strategies to support the NRC in facing these and other security-related challenges.

- ▶ Strategy 2-1: Identify risk areas involved in effectively securing both operating and proposed nuclear power plants, nuclear fuel cycle facilities, and nuclear materials and make recommendations, as warranted, for addressing them.

- ▶ Strategy 2-2: Identify risks associated with emergency preparedness and make recommendations, as warranted, for addressing them.
- ▶ Strategy 2-3: Identify challenges involved in responding to incidents and make recommendations, as warranted, for addressing them.
- ▶ Strategy 2-4: Identify evolving threats to NRC security and make recommendations, as warranted, for addressing them.
- ▶ Strategy 2-5: Identify risks associated with nonproliferation of nuclear material and nuclear technology and make recommendations, as warranted, for addressing them.

## Strategic Goal 3: Increase the economy, efficiency, and effectiveness with which the NRC manages and exercises stewardship over its resources.

The NRC faces significant challenges to efficiently, effectively, and economically manage its resources. Although a number of organizational changes have been implemented in recent years, more changes will occur over the strategic time frame. The agency will need to continue balancing workloads and priorities to support new reactor licensing efforts. This will create tremendous pressure on all program management areas, including human resources management, IT, and financial management. Below is OIG's strategy to support the agency in mitigating these challenges.

- ▶ Strategy 3-1: Identify areas of corporate management risk within the NRC and make recommendations, as warranted, for addressing them.

## OIG PROGRAM PERFORMANCE MEASURES

### OIG STRATEGIC GOAL 1: STRENGTHEN THE NRC'S EFFORTS TO PROTECT PUBLIC HEALTH AND SAFETY AND THE ENVIRONMENT

	2007	2008	2009	2010	2011	2012
<b>Measure 1. Percentage of OIG products/activities<sup>1</sup> undertaken to identify risk areas or management challenges<sup>2</sup> relating to the improvement of NRC's safety programs.</b>						
Target:	80%	80%	80%	85%	TBD	85%
Actual:	100%	100%	100%	100%	TBD	TBD
<b>Measure 2. Percentage of OIG products/activities that have a high impact<sup>3</sup> on improving NRC's safety program.</b>						
Target:	70%	70%	70%	85%	TBD	85%
Actual:	100%	100%	89%	100%	TBD	TBD
<b>Measure 3. Number of audit recommendations agreed to by agency.</b>						
Target:	90%	90%	90%	92%	TBD	92%
Actual:	100%	93%	60% <sup>4</sup>	60% <sup>5</sup>	TBD	TBD
<b>Measure 4. Final agency action within 1 year of audit recommendations.</b>						
Target:	50%	50%	50%	70% <sup>6</sup>	TBD	70%
Actual:	36% <sup>7</sup>	63%	67%	80%	TBD	TBD
<b>Measure 5. Agency action in response to investigative reports.</b>						
Target:	90%	90%	90%	95%	TBD	95%
Actual:	100%	100%	100%	100%	TBD	TBD
<b>Measure 6. Complete active cases in less than 18 months on average.</b>						
Target:						90% <sup>8</sup>
Actual:						TBD

1 OIG products are issued OIG reports. For the Audits Program, these are audit reports and evaluations. For the Investigations Program, these are investigations, Event Inquiries, and special inquiries. Activities are the OIG hotline or proactive investigative reports.

2 Congress left the determination and threshold of what constitutes a most serious challenge to the discretion of the Inspectors General. As a result, OIG applied the following definition: Serious management challenges are mission-critical areas or programs that have a potential for a perennial weakness or vulnerability that, without substantial management attention, would seriously impact agency operations or strategic goals.

3 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, or (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.

4 The agency required more than 90 days to review 5 of 6 recommendations on the Agreement State Program audit before resolution. Three of the 5 recommendations were agreed to within 98 days.

5 The agency required more than 90 days to review 4 recommendations on the Quality Assurance Planning for New Reactors audit prior to resolution. Subsequently, all 4 recommendations have been closed or resolved.

6 Measure changed from final agency action within 1 year on audit recommendations to 2 years on audit recommendations starting in FY 2010.

7 During FY 2007, five recommendations involving three separate audit reports on byproduct materials licensing, probabilistic risk assessment, and the National Source Tracking System, respectively, have taken longer than 1 year for the agency to implement.

8 Starting in FY 2012, OIG will measure the percentage of active cases completed in less than 18 months on average.

## OIG STRATEGIC GOAL 2: ENHANCE THE NRC'S EFFORTS TO INCREASE SECURITY IN RESPONSE TO AN EVOLVING THREAT ENVIRONMENT

	2007	2008	2009	2010	2011	2012
<b>Measure 1. Percentage of OIG products/activities undertaken to identify risk areas or management challenges relating to the improvement of NRC's security programs.</b>						
Target:	85%	85%	85%	90%	TBD	90%
Actual:	100%	100%	100%	100%	TBD	TBD
<b>Measure 2. Percentage of OIG products/activities that have a high impact on improving NRC's security program.</b>						
Target:	70%	70%	70%	75%	TBD	75%
Actual:	100%	100%	100%	100%	TBD	TBD
<b>Measure 3. Number of audit recommendations agreed to by agency.</b>						
Target:	90%	90%	90%	92%	TBD	92%
Actual:	100%	100%	82% <sup>9</sup>	96.6%	TBD	TBD
<b>Measure 4. Final agency action within 1 year of audit recommendations.</b>						
Target:	65%	65%	65%	70% <sup>10</sup>	TBD	70%
Actual:	61% <sup>11</sup>	70%	40% <sup>12</sup>	80%	TBD	TBD
<b>Measure 5. Agency action in response to investigative reports.</b>						
Target:	90%	90%	90%	90%	TBD	90%
Actual:	100%	100%	100%	100%	TBD	TBD
<b>Measure 6. Complete active cases in less than 18 months on average.</b>						
Target:						90% <sup>13</sup>
Actual:						TBD

9 The agency took more than 90 days to review 2 recommendations on the National Source Tracking System audit. The agency agreed to both recommendations within 97 days.

10 Measure changed from final agency action within 1 year on audit recommendations to 2 years on audit recommendations starting in FY 2010.

11 During FY 2007, 11 recommendations involving 3 separate audit reports on baseline security, nuclear security and incident response, and the Integrated Personnel Security System have taken longer than 1 year for the agency to implement.

12 The agency is taking more than 1 year to complete final action on recommendations related to information security. The agency agreed with all recommendations and action has been taken to correct identified deficiencies.

13 Starting in FY 2012, OIG will measure the percentage of active cases completed in less than 18 months on average.

**OIG STRATEGIC GOAL 3: INCREASE THE ECONOMY, EFFICIENCY, AND EFFECTIVENESS WITH WHICH THE NRC MANAGES AND EXERCISES STEWARDSHIP OVER ITS RESOURCES**

	2007	2008	2009	2010	2011	2012
<b>Measure 1. Percentage of OIG products/activities undertaken to identify risk areas or management challenges relating to the improvement of NRC's resources stewardship.</b>						
Target:	65%	65%	65%	80%	TBD	80%
Actual:	100%	100%	100%	100%	TBD	TBD
<b>Measure 2. Percentage of OIG products/activities that have a high impact on improving NRC's resources stewardship.</b>						
Target:	70%	70%	70%	85%	TBD	85%
Actual:	100%	100%	92%	69.6% <sup>14</sup>	TBD	TBD
<b>Measure 3. Number of audit recommendations agreed to by the agency.</b>						
Target:	90%	90%	90%	92%	TBD	92%
Actual:	100%	100%	96%	100%	TBD	TBD
<b>Measure 4. Final agency action within 1 year of audit recommendations.</b>						
Target:	65%	65%	65%	70% <sup>15</sup>	TBD	70%
Actual:	85%	53% <sup>16</sup>	54% <sup>17</sup>	92.9%	TBD	TBD
<b>Measure 5. Agency action in response to investigative reports.</b>						
Target:	90%	90%	90%	90%	TBD	90%
Actual:	100%	100%	100%	100%	TBD	TBD
<b>Measure 6. Acceptance by NRC's Office of the General Counsel of OIG-referred Program Fraud and Civil Remedies Act cases.</b>						
Target:	70%	70%	70% <sup>18</sup>			
Actual:	No referrals	No referrals	No referrals			
<b>Measure 7. Complete active cases in less than 18 months on average.</b>						
Target:						90% <sup>19</sup>
Actual:						TBD

14 For FY 2010, a more rigorous standard was applied for the impact of investigations in the corporate management arena.

15 Measure changed from final agency action within 1 year on audit recommendations to 2 years on audit recommendations starting in FY 2010.

16 Majority of these audit recommendations pertain to the Technical Training Center audit recommendations audit that took longer for the agency to implement.

17 The agency is taking more than 1 year to complete final action on 12 of 17 Training and Development audit recommendations. The agency agreed with all recommendations and final action has been completed on all 17 recommendations.

18 Performance measure was determined to be ineffective since another NRC program office was primarily responsible for ensuring completion of action with minimal activity from year to year, and it will be removed starting in FY 2010.

19 Starting in FY 2012, OIG will measure the percentage of active cases completed in less than 18 months on average.



## Verification and Validation of Measured Values and Performance

OIG uses an automated management information system to capture program performance data for the Audits and Investigations Programs. The integrity of the system was thoroughly tested and validated before implementation. Reports generated by the system provide both detailed information and summary data. Beginning with FY 2006, statistics for the Audits and Investigations Programs were fully integrated into the new system and used to compile OIG statistical performance data. All system data are deemed reliable.

## Program Evaluations (Peer Reviews)

An independent audit peer review performed in FY 2009 found that the Audits Program's system of quality control provided reasonable assurance that audits were conducted in accordance with applicable professional standards. Independent quality assurance reviews undertaken in FY 2007 and FY 2008 determined that audits

were conducted in conformance with the Government Accountability Office's Government Auditing Standards.

In addition, an independent investigative peer review was conducted in FY 2010 of the OIG Investigations Program. The program was found to be in compliance with the Council of the Inspectors General on Integrity and Efficiency (CIGIE) investigative standards and U.S. Department of Justice guidelines.

## Inspector General Reform Act Requirements for FY 2012

The NRC OIG budget estimate that was submitted to the NRC Chairman for FY 2012 was for \$10.86 million and was subsequently approved. Further, the Inspector General certifies that the NRC's OIG training request of \$120,000 satisfies the training requirements for the Inspector General's office for FY 2012.

## FY 2012 Office of the Inspector General Budget Resources Linked to Strategic Goals

This table depicts the relationship of the Inspector General program and

### FY 2012 OFFICE OF THE INSPECTOR GENERAL BUDGET RESOURCES LINKED TO STRATEGIC GOALS

#### OIG Strategic Goals

Program Links to Strategic Goals	Strengthen NRC's Public Health & Safety Efforts	Enhance NRC's Security Efforts	Increase NRC's Resource Stewardship Efforts
FY 2012 Programs (\$10,860,000; 58 FTE)			
Audits (\$7,206,000; 37 FTE)	\$3,062,000 18.5 FTE	\$1,223,000 6.5 FTE	\$2,921,000 12.0 FTE
Investigations (\$3,654,000; 21 FTE)	\$1,422,000 8.0 FTE	\$608,000 3.5 FTE	\$1,624,000 9.5 FTE

Numbers may not add due to rounding.

associated resource requirements to OIG strategic goals.

### Management and Operational Support

OIG's Management and Operational Support staff consists of senior managers, the General Counsel, and an administrative support staff. OIG's senior 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.

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 assist OIG programs by providing independent personnel services; IT and information management support; financial management, policy, and strategic planning support; training coordination; and the publication of OIG's Semiannual Report to Congress in accordance with the requirements of the Inspector General Act.

To carry out the functions of this program in FY 2012, OIG estimates that its costs will be \$1,415,000, which includes salaries and benefits and contract support and travel for 8 FTE. The tables below provide a breakdown of the FY 2012 budget estimates for Management and Operational Support by program.

#### ALLOCATION OF SUPPORT COSTS TO OIG PROGRAMS

Management and Operational Support Allocation by Program (\$K)	FY 2012	FY 2012	FY 2012
	FTE	Salaries and Benefits	Contract Support and Travel
Audits	5	815	70
Investigations	3	489	41
<b>Total</b>	<b>8</b>	<b>\$1,304</b>	<b>\$111</b>

Numbers may not add due to rounding.

# APPENDIX I: BUDGET AUTHORITY BY FUNCTION



119	5,386,824	1,902
1,626,549	5,463,538	8,554,013
1,902	5,494	93,100
8,554,013	900	93,100
93,100	31,119	19,968
19,968	1,626,549	110,251
110,251	1,902	
9,040	8,554,013	
1,881,730		
1,706,600		
2,106,658		
5,386,824		
5,463,538		
5,494		
900		
31,119		
1,626,549		
1,902		
8,554,013		
93,100		
19,968		



# Appendix I: Budget Authority by Function

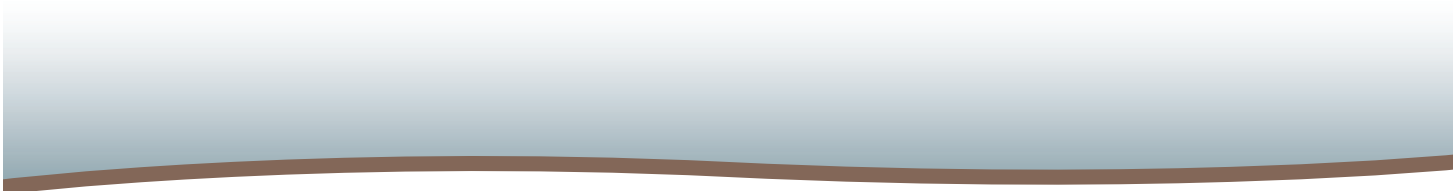
The U.S. Nuclear Regulatory Commission's (NRC's) budget authority is aggregated into the major categories of salaries and benefits, contract support, and travel. Salaries and benefits are estimated based upon full-time equivalent staff, pay rates, pay raise assumptions, and effective pay period for pay raise. Benefit costs include the Government's contributions for retirement, health

benefits, life insurance, Medicare, Social Security, and the Thrift Savings Plan. Contract support consists of obligations for commercial contracts, interagency agreements, grants, and other nontravel services such as rent and utility payments. Travel costs consist primarily of the expenses for nuclear reactor inspection trips.

## BUDGET AUTHORITY BY FUNCTION (DOLLARS IN MILLIONS)

NRC Appropriations	FY 2010 Enacted	FY 2012	
		Request	Changes from FY 2010
<b>Salaries and Expenses (S&amp;E)</b>			
Salaries and Benefits	589.8	590.3	0.6
Contract Support	437.5	407.2	(30.3)
Travel	28.6	29.8	1.1
<b>Total (S&amp;E)</b>	<b>\$1,056.0</b>	<b>\$1,027.2</b>	<b>(\$28.7)</b>
<b>Office of the Inspector General (OIG)</b>			
Salaries and Benefits	9.5	9.5	0.0
Contract Support	1.1	1.2	0.1
Travel	0.3	0.2	(0.1)
<b>Total (OIG)</b>	<b>\$10.9</b>	<b>\$10.9</b>	<b>\$0.0</b>
<b>Total NRC Appropriation</b>			
Salaries and Benefits	599.3	599.7	0.5
Contract Support	438.7	408.4	(30.3)
Travel	28.9	30.0	1.1
<b>Total (NRC)</b>	<b>\$1,066.9</b>	<b>\$1,038.1</b>	<b>(\$28.7)</b>

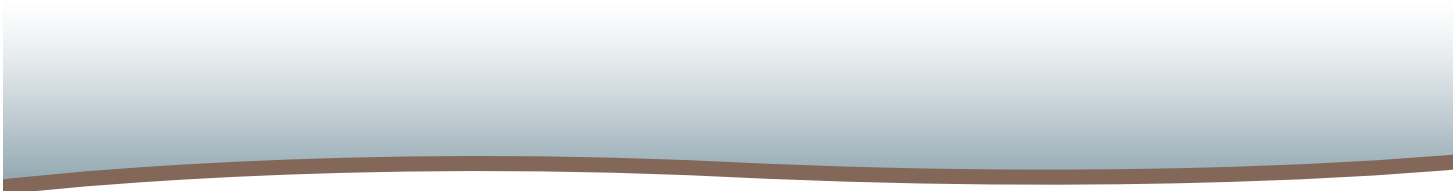
Numbers may not add due to rounding.



# APPENDIX II: CORPORATE SUPPORT



119	5,386,824	1,902
1,626,549	5,463,538	8,554,013
1,902	5,494	93,100
8,554,013	900	93,100
93,100	31,119	19,968
19,968	1,626,549	110,251
110,251	1,902	110,251
9,040	8,554,013	
1,881,730		
1,706,600		
2,106,658		
5,386,824		
5,463,538		
5,494		
900		
31,119		
1,626,549		
1,902		
8,554,013		
93,100		
19,968		





## Appendix II: Corporate Support

The Fiscal Year (FY) 2012 Performance Budget identifies the infrastructure and support costs for the U.S. Nuclear Regulatory Commission (NRC) and distributes them to programs as a portion of the total program cost. The allocation methodology is consistent with the methodology used for preparing the agency's financial statements. The business line tables present the associated infrastructure and support funding included in the programmatic funding to provide the full cost of each business line.

The agency's infrastructure and support involve centrally managed activities that are necessary for the staff and agency programs to achieve goals more efficiently and effectively. These activities include administrative services, financial management, generic homeland security, human resource management, information management (IM), information technology (IT), outreach, and policy support. The following table provides a cost breakdown of infrastructure and support by program.

### CORPORATE SUPPORT BY BUSINESS LINE (DOLLARS IN MILLIONS)

Business Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Operating Reactors	185.5	404.3	174.6	391.9	(11.0)	(12.4)
New Reactors	80.3	174.9	84.7	190.2	4.4	15.3
<b>Nuclear Reactor Safety</b>	<b>\$265.9</b>	<b>579.2</b>	<b>\$259.3</b>	<b>582.0</b>	<b>(\$6.6)</b>	<b>2.9</b>
Fuel Facilities	18.8	41.0	19.3	43.3	0.5	2.3
Nuclear Materials Users	28.6	62.3	29.0	65.0	0.4	2.7
Spent Fuel Storage and Transportation	11.5	25.0	13.7	30.7	2.2	5.6
Decommissioning and Low-Level Waste	13.9	30.3	12.9	28.9	(1.1)	(1.4)
High-Level Waste Repository	5.2	11.0	0.0	0.0	(5.2)	(11.0)
<b>Nuclear Materials and Waste Safety</b>	<b>\$78.1</b>	<b>169.6</b>	<b>\$74.8</b>	<b>167.8</b>	<b>(\$3.3)</b>	<b>(1.8)</b>
<b>Total Corporate Support Allocation</b>	<b>\$343.9</b>	<b>748.8</b>	<b>\$334.1</b>	<b>749.9</b>	<b>(\$9.9)</b>	<b>1.1</b>

Numbers may not add due to rounding.

**CORPORATE SUPPORT BUDGET AUTHORITY AND FULL-TIME  
EQUIVALENTS BY PRODUCT LINE  
(DOLLARS IN MILLIONS)**

Product Line	FY 2012					
	FY 2010 Enacted		Request		Changes from FY 2010	
	\$M	FTE	\$M	FTE	\$M	FTE
Administrative Services	106.5	101.0	108.2	105.4	1.7	4.4
Financial Management	41.2	161.4	46.7	163.4	5.5	2.0
Generic Homeland Security	1.7	1.3	0.8	1.3	(0.9)	0.0
Human Resource Management	31.2	79.5	29.6	82.8	(1.6)	3.3
Information Management	29.5	90.8	26.2	85.3	(3.4)	(5.5)
Information Technology	78.1	118.7	82.7	120.4	4.6	1.7
Outreach	27.4	38.9	9.6	18.2	(17.8)	(20.7)
Policy Support	26.2	157.3	28.3	173.2	2.1	15.9
Travel	2.1	0.0	2.0	0.0	(0.1)	0.0
<b>Product Line Total</b>	<b>\$343.9</b>	<b>748.8</b>	<b>\$334.1</b>	<b>749.9</b>	<b>(\$9.9)</b>	<b>1.1</b>

Numbers may not add due to rounding.

## ADMINISTRATIVE SERVICES

The Administrative Services Product Line budget provides resources for rent and utilities for Headquarters (HQ), regional, and Technical Training Center space; corporate rulemaking; IT systems that support security, space planning, rulemaking, facilities management, and administrative services for the agency; facilities management costs including systems and office furniture, property management, labor services, custodial services, operation and maintenance services, and building alterations; support services including shuttles, transit subsidies, supplies, and multimedia services; physical and personal security services including security equipment and investigations, drug testing, and guard services; and support and guard services in the regions. In FY 2012, resources increase for guard services for the regional

offices to be in compliance with the “Physical Security Criteria for Federal Facilities,” dated December 1, 2009, requiring guards for Level III Government facilities.

## FINANCIAL MANAGEMENT

In order to achieve the effective and efficient use of the agency’s financial resources, the FY 2012 Financial Management Product Line request supports the modernization and operation of the agency’s financial systems, acquisition of goods and services, budget development and execution, agency financial services, accounting and reporting activities, administration of a robust internal control program, and strategic and performance planning.

Resources for the financial systems modernization will be used to provide steady-state operational support for the Core Financial Module and the implementation of the Acquisitions Module of the Financial Accounting and Integrated Management Information System (FAIMIS). FY 2012 resources will support the Acquisitions Module implementation, including contract services for independent verification and validation (IV&V), programmatic support, and acquisitions transition support.

### *Financial Management Significant Accomplishments*

The NRC has taken a number of actions to improve financial management within the agency during FY 2010. Significant accomplishments in this area include progress towards the modernization of the agency's core financial system, augmentation of the agency's contracting and procurement practices, enhancements to the Budget Formulation System, streamlining of budget execution and funds utilization processes, receipt of an unqualified opinion on the FY 2009 Financial Statements Audit, and continued improvement in the agency's business processes.

More specifically, the NRC's systems modernization effort, FAIMIS, has achieved significant project milestones that include completing system configuration and design, system testing, and performing user training on the Core Financial Module. The project is within one percent variance of earned value management targets and has one significant deviation in project schedule. The FAIMIS project has completed the

upgrade of its technology infrastructure and was implemented on schedule, within scope and project cost, on October 1, 2010. In addition, the project has begun early life-cycle activities on the follow-on Acquisition Module and is currently planning the deployment of the Acquisition Module in October 2012.

Due to continued enhancements made to the agency's financial management processes, the NRC once again achieved operational excellence in FY 2010. The NRC received an unqualified audit opinion for the FY 2010 financial statements with no material weaknesses, significant deficiencies, or instances of noncompliance with laws and regulations noted. The NRC completed all other FY 2010 external reporting submissions to the U.S. Department of the Treasury and the Office of Management and Budget (OMB) on time. In addition, the 2010 final fee rule was published on schedule. To satisfy the requirements of the Prompt Pay Act, the NRC has strengthened its invoice approval process and achieved the Government standard of 98 percent of invoices paid on time. Another success in FY 2010 was a 50-percent reduction of delinquent debt over 120 days from the previous year. Additionally, for the ninth consecutive time, the NRC received the Certificate of Excellence in Accountability Reporting award from the Association of Government Accountants.

Additionally, the agency performed all aspects of contract management necessary to ensure that the agency obtains goods and services in an efficient and effective manner consistent with mission needs and sound business practices. This includes contract negotiation, award, administration, and closeout; administration of the NRC

Purchase Card Program, the Agency Acquisition Certification and Training Program, and the agency implementation of OMB Circular A-76, "Performance of Commercial Activities," dated October 31, 2006, and providing oversight of agencywide placement and monitoring of NRC/U.S. Department of Energy work orders and interagency agreements. During FY 2010, the NRC implemented the use of the Automated Acquisitions Management System to manage the agency's Advance Procurement Plan, established a grants management training certification program, performed a Lean Six Sigma study on the agency's invoice approval process and implemented procedures to improve timeliness, completed an acquisition workforce assessment, and is continuing to assess the agency's current acquisition practices against best Federal and commercial strategic approaches to contracting.

In FY 2010, the NRC staff successfully completed seven Lean Six Sigma process improvement projects and started three others. In addition, it is expected that Lean Six Sigma Black Belts will soon be leading projects to reduce agency overhead. Lastly, in order to increase the effectiveness of its process improvement initiatives, the NRC's Lean Six Sigma Black Belts are also focused on streamlining the process by which the NRC conducts its process improvements, along with collaborating, evaluating, and assessing other agencies' best practices for possible use at the NRC.

## GENERIC HOMELAND SECURITY

The Generic Homeland Security Product Line budget provides resources for maintaining enrollment and activation stations for Homeland Security Presidential Directive 12, "Policy for a Common Identification Standard for Federal Employees and Contractors," dated August 27, 2004; issuing badges to new employees; funding operation and maintenance costs for the Physical Access Control System; and completing the integration of that system with the Logical Access Control System.

## HUMAN RESOURCE MANAGEMENT

In FY 2012, resources provide for professional development training, including leadership training; recruitment and staffing activities; work-life services, including employee counseling; employee and labor relations; and agencywide policy development and strategic workforce planning. In addition, resources provide for permanent change of station activities, including resident inspector moves and new agency hires, as well as oversight of the open collaborative work environment (differing professional opinions, nonconcurrency process, and open door policy), and internal safety culture program activities.

## *Human Resource Management Significant Accomplishments*

The agency continues to enhance its Knowledge Management Program by expanding the agency's Knowledge Center, an agencywide collection of electronic communities of practice that enables staff to collaborate, capture, and share knowledge. During FY 2010, the agency organized and conducted its first agencywide Knowledge Management Fair in conjunction with the NRC's 35th anniversary celebration. The event included a broad range of NRC knowledge management applications to share best practices throughout the agency.

The NRC significantly upgraded its learning management system. User satisfaction with the learning management system increased significantly as a result of the upgrade. The agency continues to utilize efficient training delivery methods. The learning management system has returned substantial cost savings for the agency through time compression and reduced travel.

In accordance with the e-Government initiative, the NRC implemented electronic Official Personnel Folders (e-OPF) throughout the agency and trained staff on using the new system. The e-OPF allows employees real-time access to their personnel records and eliminates the need for paper copies.

The NRC kicked off the Veterans' Hiring Initiative to promote and enhance employment opportunities for veterans, as required by the President's Executive Order 13518, "Employment of Veterans in the Federal Government," dated November 9, 2009. The agency

has developed an operational plan that outlines the activities that it will undertake to maintain and demonstrate its commitment to veterans' employment through discrete goals and actions.

## **INFORMATION MANAGEMENT**

In FY 2012, IM resources will provide document and records management services such as the operation of the Public Document Room, electronic document intake, profiling, indexing, and retrieval; modernization of internal and external Web sites; and compliance with the Freedom of Information Act (FOIA) and Privacy Act. The Enterprise Content Management Program replaces the NRC's aging document and records management technology. The IM program provides the funding needed to move the agency into a 21<sup>st</sup>-century approach to electronic documents and records management.

The IM program is developing and implementing the framework and technologies for managing and protecting information in a way that ensures that it is available to support a stable and predictable regulatory environment. Information security activities support secure communications and information security; policy and procedures; maintenance/services and supplies; classification management; and management of sensitive unclassified nonsafeguards information.

The IM program will centrally manage the agency's annual subscriptions to technical journals and databases, online codes and standards, and electronic newsletters. The existing agency collection of scientific and technical journals supports

the scientific and research work of the agency staff, as well as the regulatory mission of the agency. The electronic newsletters are an integral component of communication within the energy industry, and these subscriptions ensure that the Commission, management, and staff maintain currency with industry developments, political decisions, and stakeholder concerns. Subscriptions to codes and standards are necessary to support the staff's determinations of compliance with Commission regulations. The codes and standards are cited in the regulations, and staff members require access to cited codes and standards to conduct the necessary inspections and reviews to determine compliance with NRC requirements.

### *Information Management Significant Accomplishments*

The NRC continued the process of upgrading the Agencywide Documents and Management System (ADAMS). Accomplishments to date include the development of communication, user, data, and application migration plans; stabilization of the existing ADAMS infrastructure; and initialization, prototyping, and testing of the target operating system. The NRC awarded a major maintenance and operations contract during the fourth quarter of FY 2010. This contract will support and maintain critical business functions through the ADAMS upgrade and migration and routine ADAMS operations in out-years.

In FY 2010, the Safeguards Information Local Area Network and Electronic Safe (SLES) was expanded to the HQ campus, to several resident inspector locations,

and to all but one regional office. SLES provides the ability to electronically access and manage Safeguards Information among authorized NRC staff.

The NRC is modernizing its public Web site in three phases. The first phase, which included a usability assessment of the current NRC public Web site, was successfully completed in the second quarter of FY 2010. This assessment highlighted opportunities to improve site visitor experience by making site navigation and information retrieval easier and organizing site information for efficiency of use. The second phase, which is the development of a prototype design, was completed at the end of FY 2010. The third and final phase of this project will be to transition all current pages to the new design, allowing stakeholders to take advantage of user-friendly page layouts, intuitive navigation, and standardized templates.

IM activities in FY 2010 included efforts to enhance knowledge management at the NRC by offering 22 Webinars and six "drop-in" clinics for agency staff; retrieval of books under the collection management program; five in-house records and IM training sessions for 120 staff members; publication of the IM Toolkit on the NRC internal Web site; completion and approval of comprehensive file plans for several NRC offices; semiannual FOIA training and 3 outreach FOIA training sessions for specific offices; a Public Meeting Notice System outreach clinic for the materials program staff; and ensuring that all information collection authorities remained current with OMB.

## INFORMATION TECHNOLOGY

In FY 2012, resources will support ongoing needs for IT infrastructure end-user support services for IT applications; the NRC's IT infrastructure agencywide; Capital Planning and Investment Control (CPIC) processes; IT strategic management and enterprise architecture planning; agencywide IT procurement management; configuration management and IT project management support; and database and application support for agencywide systems. Specifically, the budget will fund the following ongoing activities:

- ▶ IT infrastructure end-user support services, telecommunications services, network and production operations, and central management of all desktop, laptop, and network resources and services at HQ, regional offices, and resident inspector sites. Resources support the Network Operations Center, the Customer Support Center, the Consolidated Testing Facility, and seat management and desktop support for over 5,000 desktop workstations and the supporting infrastructure. Also included are the managed public key infrastructure and production operations support for systems administration and data center operations.
- ▶ Identification of the best technologies to fill gaps associated with strategic goals such as "Working from Anywhere" and "Working with Anyone," and identifying, testing, and piloting new technology needed to support specific agency business needs. Recent examples include technologies to support the NRC's Open Government flagship initiative such as enhancing stakeholder engagement using innovative and cost-effective collaboration technologies, defining common strategies to support mobile and universal access, and consolidating systems into enterprise solutions.
- ▶ The NRC's legacy system modernization and transformation program. Resources will be used to support an effective CPIC program, for enterprisewide configuration management, and for maintenance and operational support of approximately 120 application systems. In addition, resources will support project management, business analysis, and applications development for office-specific and enterprisewide applications.
- ▶ Compliance with the Federal Information Security Management Act (FISMA), IT security policy, standards, training, cyber situational awareness and response, and Certification and Accreditation (C&A) of all NRC IT systems. Resources support the Cyber Situational Awareness Program for penetration testing, vulnerability assessments, and computer security incident response, along with providing insight into the security impact that new technologies will have on the NRC infrastructure.
- ▶ Efforts to comply with OMB Memorandum M-10-15, "FY 2010 Reporting Instructions for Federal Information Security Management Act and Agency Privacy Management," dated April 21, 2010. This document indicates that

agencies should perform continuous monitoring of IT systems and require the automated collection of data. The new draft FISMA reporting requirements include system inventory, hardware and software inventory, connections inventory, configuration management, remote access management, identity and access management, and data leakage prevention.

- ▶ Reduction of the NRC's data center footprint. Efforts include leveraging a combination of strategies to lower energy consumption and operations costs through increased use of cloud computing alternatives, managing the NRC's application system modernization initiatives, strengthening server and desktop virtualization, and setting into operation other green IT technologies across the enterprise. As a part of its HQ building, the NRC will build an energy-efficient modern data center that uses green technologies in space, design, power, heating, ventilation, and cooling to support energy-efficient 24/7 data center operations.

### *Information Technology Significant Accomplishments*

In FY 2010, the deployment of Microsoft Office 2007 was completed, and new Microsoft product upgrades were delivered to workstations to enhance the functionality and features for users. Internet Explorer 8 was deployed to the enterprise. Other IT accomplishments included the development of an initial inventory of data center assets and a data center consolidation initiative.

Two agencywide contracts were awarded for the Project Management Methodology and IV&V. The Project Management Methodology contract will support the IT governance framework and provide agency project managers with assistance for effective project management. The IV&V contract will provide comprehensive and consistent IV&V services in support of NRC system development and testing, legacy system maintenance, and other IT planning, analysis, and testing activities.

Revisions and updates to the NRC IT Roadmap were completed. The NRC IT Roadmap provides a vision and summary-level plan for establishing IT tools and systems to meet the needs of the NRC staff and external stakeholders over the next 3 years. It is aligned with the agency's Strategic Plan and provides information about current planned capabilities related to critical business needs.

In response to OMB's Open Government Directive, issued in December 2009, the NRC published its Open Government Plan (an initial and revised plan), a comprehensive Open Government Web site, and two additional high-value data sets. Scoring the NRC plan as a 59 out of 60 for the Open the Government consortium, the Project on Government Oversight stated that the NRC "has improved upon an already strong plan with its latest revision."

## OUTREACH

In FY 2012, resources provide for outreach activities, which include maintaining a positive, discrimination-free work environment; advocating for contracts with small businesses; and continuing efforts to implement



the NRC's Outreach and Compliance Coordination Program in accordance with applicable Federal civil rights statutes and NRC regulations. There is an increase in full-time equivalents (FTE) in the Small Business and Civil Rights Programs and in the Outreach and Compliance Coordination Program to meet expanding agency needs.

Resources also support \$5 million for grants to universities for university-led, mission-related support (curriculum development) for nuclear science, engineering, and related disciplines and trades. However, no funding is requested for the Integrated University Program. This reflects the confidence that the nuclear industry, as it expands, will create incentives for students to enter nuclear-related programs.

Resources also support hosting of the annual Regulatory Information Conference with the nuclear industry to discuss safety and regulatory issues of mutual interest. The objective of the conference is to provide a communication forum for senior NRC and industry management regarding current and future safety initiatives and regulatory issues.

### *Outreach Significant Accomplishments*

In FY 2010, the NRC provided grants to educational institutions in the areas of curriculum development, faculty development, fellowships, scholarships to 4-year institutions, and scholarships to trade schools and community colleges. During FY 2010, the agency provided 100 grants to educational institutions in 33 States. The areas of focus for the grants were nuclear engineering, health physics, radiochemistry, and other related areas.

The Small Business Program continued to host the NRC Quarterly Business Seminars. These seminars introduce the agency, its mission, and business opportunities and educate the business community about the NRC's cultural and technical program environment. The seminar series provided information and guidance to more than 200 participants in the second quarter and reached over 1,000 participants during FY 2010 through in-person, Webstreaming, and Webinar participation. The program continued to implement strategies for the "Helmets to Business" initiative to reach out to the veteran business community to promote contracting and partnership opportunities. Based on contract awards to date, the agency is increasing contracts awarded to service-disabled veteran-owned small businesses.

In FY 2010, the NRC conducted 98 mandatory preaward compliance reviews for financial assistance awards and provided technical assistance to the applicants and recipients during the preaward compliance review process. Technical assistance was provided to NRC offices on compliance with limited English proficiency regulations. The agency processed informal and formal complaints, completed investigations, and conducted mediations. The Facilitated Mentoring Program continued to enhance knowledge transfer and the career progression of employees. Additionally, the NRC conducted a mentoring orientation program for mentor/mentee pairs and individual mentees and provided individual counseling sessions to mentees to define career goals, as well as identified mentors who could provide mentees with information regarding current program activities and future program directions consistent with these career goals.

## POLICY SUPPORT

Resources in FY 2012 will provide for additional policy and adjudicatory support to the Commission. Specifically, the budget provides resources for the following:

- ▶ agency policy formulation and guidance
- ▶ legal advice and adjudicatory review to the Commission
- ▶ independent evaluations of agency programs and implementation of Commission policy directives
- ▶ interaction with the executive branch on matters of international nuclear safety and security issues and developments
- ▶ advice and assistance to the Commission on congressional and protocol issues and public affairs activities leading to openness and increased public confidence
- ▶ management and oversight of agency programs

## Corporate Support Output Measures

### Administration

#### OMB-DIRECTED ACQUISITION REFORM INITIATIVE MEASURE. PERCENT OF ELIGIBLE SERVICE CONTRACTING DOLLARS (CONTRACTS OVER \$25,000) THAT USE PERFORMANCE-BASED CONTRACTING TECHNIQUES DURING THE FISCAL YEAR

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Not less than 40%	Not less than 65%	Not less than 65%	Not less than 65%	TBD	Not less than 65%
Actual:	67%	78%	89%	79%		

#### OMB-DIRECTED ACQUISITION REFORM INITIATIVE MEASURE. 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, INCLUDING ALL ASSOCIATED SOLICITATIONS EXCEPT FOR ACQUISITIONS COVERED BY AN EXEMPTION IN THE FEDERAL ACQUISITION REGULATIONS

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	100% of all required synopses	100% of all required synopses	100% of all required synopses	100% of all required synopses	TBD	100% of all required synopses
Actual:	100%	100%	100%	100%		

#### OMB-DIRECTED ACQUISITION REFORM INITIATIVE MEASURE. COMPETITIVE SOURCING FY 2004. NUMBER OF BUSINESS CASE ANALYSES PERFORMED ON COMMERCIAL ACTIVITIES LISTED ON THE APPROVED FAIR ACT INVENTORY AND CONDUCTED IN ACCORDANCE WITH AGENCY COMPETITIVE SOURCING PLAN (MEASURE REVISED IN FY 2004)

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	3 business case analyses	3 business case analyses	3 business case analyses*	3 business case analyses*	TBD	Measure deleted
Actual:	3	3	1	0		

\*During FY 2009, one reverse business case analysis (BCA) was completed. Notice was provided to OMB that the agency's competitive sourcing plan was revised to delete the requirement to perform a minimum of three BCAs annually. The target will remain at three for FY 2010 and FY 2011 as required, but the agency may not perform any additional BCAs. Additional guidance from the current administration is anticipated to clarify the future direction of the competitive sourcing program. The target may be revised once that clarification is obtained. Notification to OMB of the NRC's planned change in strategy in using BCAs was issued on September 8, 2009.

## Human Resources

### PERCENTAGE OF PROFESSIONAL HIRES RETAINED FOR A MINIMUM OF 3 YEARS AFTER INITIAL EMPLOYMENT

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	75%	85%	85%	85%	TBD	85%
Actual:	93%	82%	87%	89%		

## Financial Management

### MEET STATUTORY FEE COLLECTION REQUIREMENT

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	Achieve approximately 100% actual collections when compared with projected collections. Maintain past due accounts receivable at 1% or less of annual billings for the fiscal year.	Achieve approximately 100% actual collections when compared with projected collections. Maintain past due accounts receivable at 1% or less of annual billings for the fiscal year.	Achieve approximately 100% actual collections when compared with projected collections. Maintain past due accounts receivable at 1% or less of annual billings for the fiscal year.	Achieve approximately 100% actual collections when compared with projected collections. Maintain past due accounts receivable at 1% or less of annual billings for the fiscal year.	TBD	Achieve approximately 100% actual collections when compared with projected collections. Maintain past due accounts receivable at 1% or less of annual billings for the fiscal year.
Actual:	Target met.	98% collected. Maintained past due amounts receivable at less than 1% of annual billings.	98% collected. Maintained past due amounts receivable at less than 1% of annual billings.	Target met.		

### PERCENTAGE OF NONSALARY PAYMENTS MADE ELECTRONICALLY AND ACCURATELY WITHIN ESTABLISHED SCHEDULE

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	95%	98%	98%	98%	TBD	98%
Actual:	95%	99%	96%	98%		

## Information Technology and Management

### INFORMATION DISSEMINATION TIMELINESS. MEETS AGENCY TARGETS FOR KEY INFORMATION DISSEMINATION CHANNELS, INCLUDING PUBLIC MEETING NOTICES, FREEDOM OF INFORMATION ACT\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New measure in FY 2009		Timeliness targets met for FOIA responses, public meeting notices, and NRC documents made publicly available (see note)	Meet 3 out of 4 targets	TBD	Meet 3 out of 4 targets
Actual:			86%	4 out of 4		

\*(1) Percent of the time that the NRC responds to FOIA requests within 20 working days (75%), (2) percentage of Category 1, 2, and 3 meetings on regulatory issues for which the NRC posted a meeting notice on the public meeting notice Web site at least 10 days in advance of the meeting (90%), (3) percent of nonsensitive, unclassified regulatory documents generated by the NRC and sent to the agency's Document Processing Center that are released to the public by the sixth working day after the date of the document (90%), (4) percent of nonsensitive, unclassified regulatory documents received by the NRC that are released to the public by the sixth working day after the document is added to the ADAMS main library (90%).

### PERCENT OF THE TIME THAT KEY IT INFRASTRUCTURE SERVICES ARE AVAILABLE

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New measure in FY 2009		99.50%	100%	TBD	100%
Actual:			100%	99.9%		

### IT SECURITY RISK MANAGEMENT. PERCENT OF OPERATIONAL APPLICATIONS AND GENERAL SUPPORT SYSTEMS THAT HAVE MET THE NRC'S ANNUAL RISK MANAGEMENT ACTIVITIES REQUIREMENTS IN ACCORDANCE WITH GUIDANCE FROM THE CHIEF INFORMATION OFFICER\*

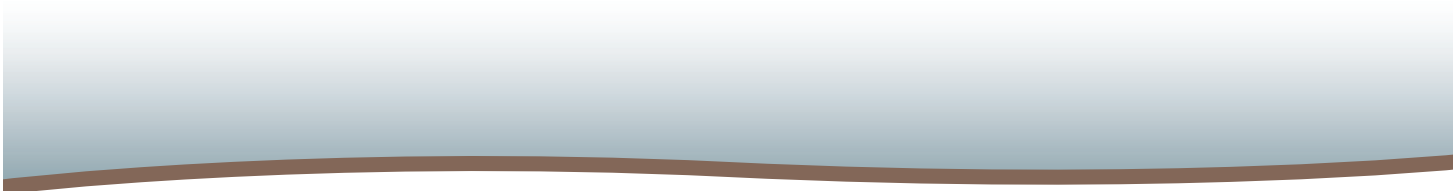
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New measure in FY 2010			95%	TBD	95%
Actual:				96%		

\*This measure replaces the output measure "Systems Certification and Accreditation—percent of major applications and general support that have been certified and accredited" from the FY 2011 budget. The measure includes certification and accreditation along with other risk management activities.

### IT INVESTMENT MANAGEMENT. AVERAGE SCORE ON A SCALE OF 1–10 FOR ALL NRC IT INVESTMENTS ON THE OMB IT DASHBOARD\*

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Target:	New measure in FY 2010			> 7.5	TBD	> 7.5
Actual:				6.38		

\*This measure replaces the output measure "OMB Exhibit 300 Score—Percent of major IT investments that are rated as 'acceptable' based on OMB's evaluation on NRC's Exhibit 300 submittal" from the FY 2011 budget. The OMB Exhibit 300 score measure has been replaced by the IT Dashboard score.



# APPENDIX III: REIMBURSABLE WORK



119	5,385,824	1,902
1,826,549	5,463,538	8,554,013
1,902	5,494	93,100
8,554,013	900	93,100
93,100	31,119	19,968
19,968	1,626,549	110,251
110,251	1,902	
9,040	8,554,013	
1,881,730		
1,706,600		
2,108,658		
5,386,824		
5,463,538		
5,494		
900		
31,119		
1,626,549		
1,902		
8,554,013		
93,100		
19,968		





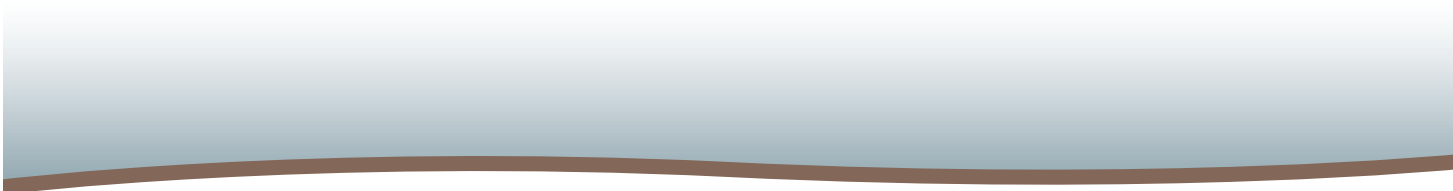
## Appendix III: Reimbursable Work

The U.S. Nuclear Regulatory Commission (NRC) performs services for other Federal agencies and non-Federal organizations on a reimbursable basis. Reimbursable work performed by the NRC is financed

with funds of the ordering organization and represents additional funding in excess of the NRC's directly appropriated funds.

### SUMMARY OF REIMBURSABLE WORK (NEW BUDGET AUTHORITY IN THOUSANDS OF DOLLARS)

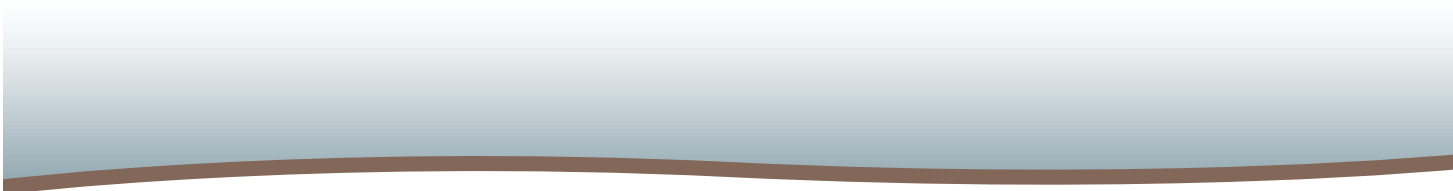
	FY 2010 Actual	FY 2012 Projection
<b>Technical Assistance to Other Federal Agencies</b>		
Employee Detail to Domestic Nuclear Detection Office (DHS)	280	174
Employee Detail to National Counterterrorism Center (NCTC)	191	162
Fuel Cycle Research and Development (DOE)	0	0
Gerald R. Ford Class Aircraft Carrier Safety Review (DOE)	40	810
Joint Funding of ICRP Activities (EPA)	30	70
Mars Science Laboratory Mission (NASA)	45	70
Navy Reviews (U.S. Navy)	10	12
Next Generation Nuclear Plant (NGNP) Cooperative Activities (DOE)	5,250	3,510
Review/Approval of Selected Foreign Certificates for Packages (Casks) (DOE)	0	100
Route Reviews (DOE)	0	10
Waste Actions for Hanford (DOE)	510	100
Waste Review for West Valley (DOE)	0	0
<b>International Assistance</b>		
International Invitational Travel (IAEA & various foreign governments and international organizations)	80	150
Invitational Travel—American Institute in Taiwan	21	20
Nuclear Safety Initiatives for the New Independent States (USAID)	1,050	0
<b>Cooperative Research</b>		
Foreign Cooperative Research Agreements (multiple)	2,511	1,675
<b>Security-Related Activities</b>		
Criminal History Program (licensees)	1,500	2,086
Information Access Authorization Program (licensees)	623	850
Material Access Authorization Program (licensees)	0	0
<b>Totals</b>	<b>\$12,141</b>	<b>\$9,799</b>



# APPENDIX IV: ESTIMATED FEE RECOVERY



119	5,385,824	1,902
1,626,549	5,463,538	8,554,013
1,902	5,494	93,100
8,554,013	900	93,100
93,100	31,119	19,968
19,968	1,626,549	110,251
110,251	1,902	
9,040	8,554,013	
1,881,730		
1,706,600		
2,108,658		
5,386,824		
5,463,538		
5,494		
900		
31,119		
1,626,549		
1,902		
8,554,013		
93,100		
19,968		



## Appendix IV: Estimated Fee Recovery

Assuming a full appropriation of the fiscal year (FY) 2012 requested budget, the projected impact on fees is shown below.

<b>ESTIMATED FEE RECOVERY (DOLLARS IN MILLIONS)</b>		
	<b>FY 2010 Final Fee Rule<sup>1</sup></b>	<b>FY 2012 Projection<sup>2</sup></b>
<b>Total Appropriation<sup>3</sup></b>	<b>\$1,066.9</b>	<b>\$1,038.1</b>
Less Non-Fee Items <sup>4</sup>	(53.3)	(27.4)
Base <sup>5</sup>	1,013.6	1,010.7
Fee Recovery Rate – 90% of Base	912.2	909.5
Billing & Carryover Adjustments	(1.1)	(1.1)
<b>Amount To Be Recovered through Fees</b>	<b>\$911.1</b>	<b>\$908.5</b>
<b>Estimated 10 CFR Part 170 Fees</b>	<b>\$357.2</b>	<b>\$356.1</b>
Percent of Total Recovered Amount	39.2%	39.2%
<b>Estimated 10 CFR Part 171 Annual Fees</b>	<b>\$553.9</b>	<b>\$552.4</b>
Percent of Total Recovered Amount	60.8%	60.8%
<b>Total Net Appropriated</b>	<b>\$154.7</b>	<b>\$128.6</b>

Numbers may not add due to rounding.

Note: The NRC is a fee-based agency, a reduction to the agency's base budget yields a 10-percent reduction in net budget authority for every dollar of those reductions.

1 Published in the *Federal Register* (75 FR 34219; June 16, 2010).

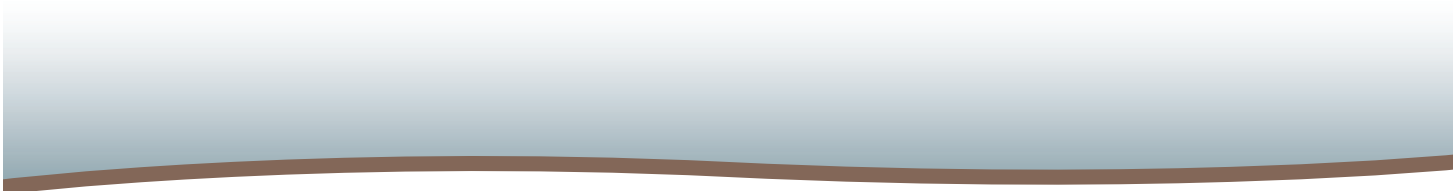
2 Assuming same rate as FY 2010 for adjustments and split between 10 CFR Parts 170 and 171.

3 Includes both salaries and expenses and Inspector General appropriations.

4 Non-Fee items.

Nuclear Waste Fund (NWF)	29.0	0.0
Waste Incidental to Reprocessing (WIR)	2.1	0.8
Generic Homeland Security	22.2	26.7
<b>Total Non-Fee Items</b>	<b>\$53.3</b>	<b>\$27.4</b>

5 Includes estimated unpaid invoices and payments of prior year invoices.



# APPENDIX V: REPORT ON DRUG TESTING



119	5,386,824	1,902
1,626,549	5,463,538	8,554,013
1,902	5,494	93,100
8,554,013	900	93,100
93,100	900	93,100
19,968	31,119	19,968
110,251	1,626,549	19,968
9,040	1,902	110,251
1,881,730	31,119	110,251
1,706,600	8,554,013	110,251
2,108,658	1,626,549	110,251
5,386,824	1,902	110,251
5,463,538	31,119	110,251
5,494	1,626,549	110,251
900	1,902	110,251
31,119	8,554,013	110,251
1,626,549	1,902	110,251
1,902	8,554,013	110,251
8,554,013	93,100	110,251
93,100	19,968	110,251
19,968	110,251	110,251





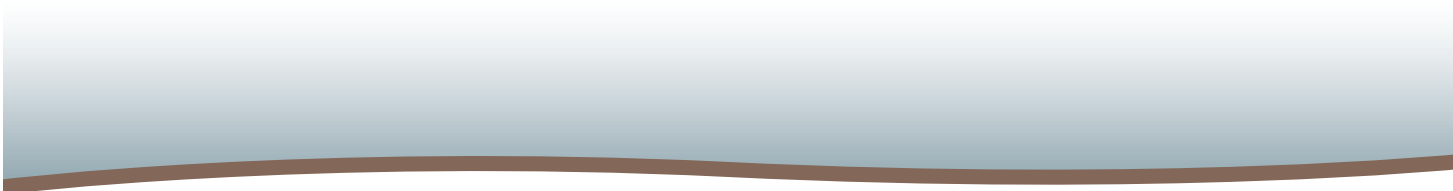
## Appendix V: Report on Drug Testing

Congress and the U.S. Department of Health and Human Services (DHHS) initially approved the U.S. Nuclear Regulatory Commission's (NRC's) Drug Testing Program in August 1988, and the agency subsequently updated the program in November 1997. The program was revised again and received approval from DHHS on August 23, 2007. 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 12564 includes random, applicant, voluntary, followup, reasonable suspicion, and accident-related drug testing. Testing was initiated for nonbargaining unit employees in November 1988 and for bargaining unit employees in December 1990, after an agreement was negotiated with the National Treasury Employees Union. On August 25, 2008, the NRC's testing program was expanded to designate all NRC positions for testing, and thereby all employees became subject to random drug testing.

During fiscal year 2010, the NRC conducted approximately 2,490 tests of all types between October 1, 2009, and September 30, 2010. There were two positive drug test results for marijuana. One employee completed an outpatient treatment program on August 17, 2009, and the other employee completed an outpatient treatment program on January 15, 2010. Both employees are subject to followup drug testing. One applicant tested positive for amphetamines and was not offered employment at the NRC.

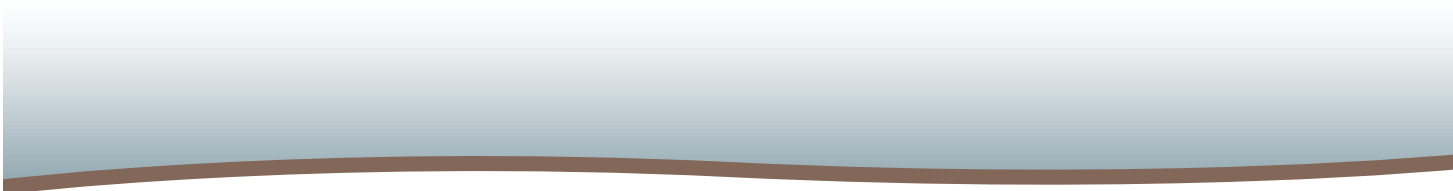
The NRC also completed internal quality control reviews during the past year to ensure that the agency's program continues to be administered in a fair, confidential, and effective manner.

The NRC's Drug Testing Program is based on the principles and guidance provided through Executive Order 12564, Public Law 100-71, DHHS guidelines, and Commission decisions.



# ACRONYM LIST





# Acronym List

- ACP.** American Centrifuge Plant.
- ADAMS.** Agencywide Documents Access and Management System.
- ADR.** Alternative Dispute Resolution.
- AEA.** Atomic Energy Act, as amended.
- AEC.** Atomic Energy Commission.
- AO.** Abnormal Occurrence.
- ASME.** The American Society of Mechanical Engineers.
- ASP.** Accident Sequence Precursor.
- B&W.** Babcock and Wilcox.
- BCA.** Business Case Analysis.
- C&A.** Certification and Accreditation.
- CIGIE.** Council of the Inspectors General on Integrity and Efficiency.
- CFR.** *Code of Federal Regulations.*
- COC.** Certificate of Compliance.
- COL.** Combined License.
- CPIC.** Capital Planning and Investment Control.
- DBT.** Design-Basis Threat.
- DC.** Design Certification.
- DHHS.** U.S. Department of Health and Human Services.
- DHS.** U.S. Department of Homeland Security.
- DLLW.** Decommissioning and Low-Level Waste program.
- DOE.** U.S. Department of Energy.
- DOT.** U.S. Department of Transportation.
- EA.** Environmental Assessment.
- EIS.** Environmental Impact Statement.
- ENS.** Emergency Notification System.
- e-OPF.** Electronic Official Personnel Folder.
- EPA.** U.S. Environmental Protection Agency.
- ESP.** Early Site Permit.
- EST.** Extended Storage and Transportation.

**FAIMIS.** Financial Accounting and Integrated Management Information System.

**FEMA.** Federal Emergency Management Agency.

**FICAM.** Federal Identity, Credential, and Access Management.

**FISMA.** Federal Information Security Management Act.

**FOF.** Force-on-Force.

**FOIA.** Freedom of Information Act.

**FTE.** Full-Time Equivalent.

**FY.** Fiscal Year.

**GE-Hitachi.** General Electric-Hitachi.

**GEIS.** Generic Environmental Impact Statement.

**GWd/MTU.** Gigawat-days/metric ton uranium.

**HAB.** Hostile-Action-Based Emergency Preparedness Drill.

**HLW.** High-Level Waste.

**HQ.** Headquarters.

**HSPD.** Homeland Security Presidential Directive.

**I&C.** Instrumentation and Control.

**IAEA.** International Atomic Energy Agency.

**IAM.** Identity and Access Management.

**ICAM.** Identity, Credential, and Access Management.

**ICRP.** International Commission on Radiological Protection.

**IM.** Information Management.

**IMPEP.** Integrated Materials Performance Evaluation Program.

**ISFSI.** Independent Spent Fuel Storage Installation.

**ISG.** Interim Staff Guidance.

**ISMP.** Integrated Source Management Portfolio.

**ISR.** In Situ Recovery.

**IT.** Information Technology.

**ITAAC.** Inspections, Tests, Analyses, and Acceptance Criteria.

**IV&V.** Independent Verification and Validation.

**KEPCO.** Korea Electric Power Corporation.

**LER.** Licensee Event Report.

**LES.** Louisiana Energy Services.

**LERSearch.** Licensee Event Report Search System.

**LLW.** Low-Level Waste.

**LVS.** License Verification System.

**MOX.** Mixed Oxide.

**NEA.** Nuclear Energy Agency.

**NFPA.** National Fire Protection Association.

**NFS.** Nuclear Fuel Services, Inc.

**NGNP.** Next Generation Nuclear Plant.

**NMED.** Nuclear Material Events Database.

**NMIP.** Nuclear Materials Information Program.

**NMMSS.** Nuclear Materials Management and Safeguards System.

**NMP.** National Materials Program.

**NRC.** U.S. Nuclear Regulatory Commission.

**NSTS.** National Source Tracking System.

**NUREG.** Nuclear Regulatory Commission Regulations and other publications.  
NUREGs are regulatory guides and publications issued by the U.S. Nuclear Regulatory Commission.

**NWF.** Nuclear Waste Fund.

**OE.** Office of Enforcement.

**OI.** Office of Investigations.

**OIG.** Office of the Inspector General.

**OMB.** Office of Management and Budget.

**PBPM.** Planning, Budget, and Performance Management.

**P.L.** Public Law.

**PSEG.** Public Service Enterprise Group.

**RIS.** Regulatory Information Summary.

**ROP.** Reactor Oversight Process.

**RTR.** Research and Test Reactor.

**S&E.** Salaries and Expenses .

**SAPHIRE.** System Analysis Programs for Hands-on Integrated Reliability Evaluation.

**SCOL.** Subsequent Combined License.

**SDP.** Significance Determination Process.

**SEIS.** Supplemental Environmental Impact Statement.

**SER.** Safety Evaluation Report.

**SGI.** Safeguards Information.

**SLES.** Secure Local Area Network and Electronic Safe.

**SMR.** Small Modular Reactor.

**SNM.** Special Nuclear Materials.

**USAID.** U.S. Agency for International Development.

**US-ABWR.** U.S. Advanced Boiling-Water Reactor.

**US-APWR.** U.S. Advanced Pressurized-Water Reactor.

**USEC.** U.S. Enrichment Corporation.

**US-EPR.** U.S. Evolutionary Power Reactor.

**US-ESBWR.** US-Economic Simplified Boiling-Water Reactor.

**VA.** U.S. Department of Veterans Affairs.

**WBL.** Web-Based Licensing.

**WIR.** Waste Incidental to Reprocessing.

**WVDP.** West Valley Demonstration Project.



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