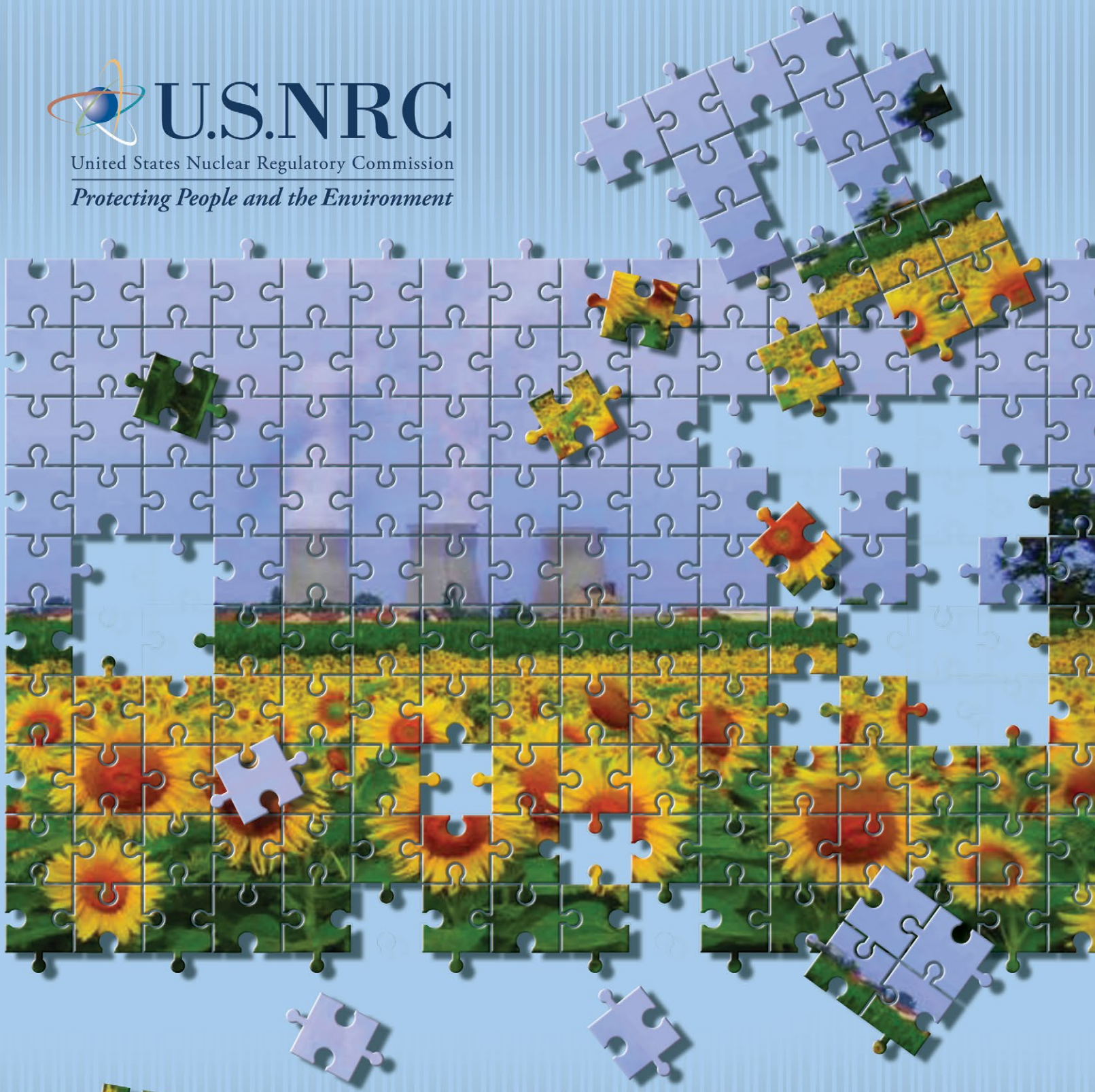
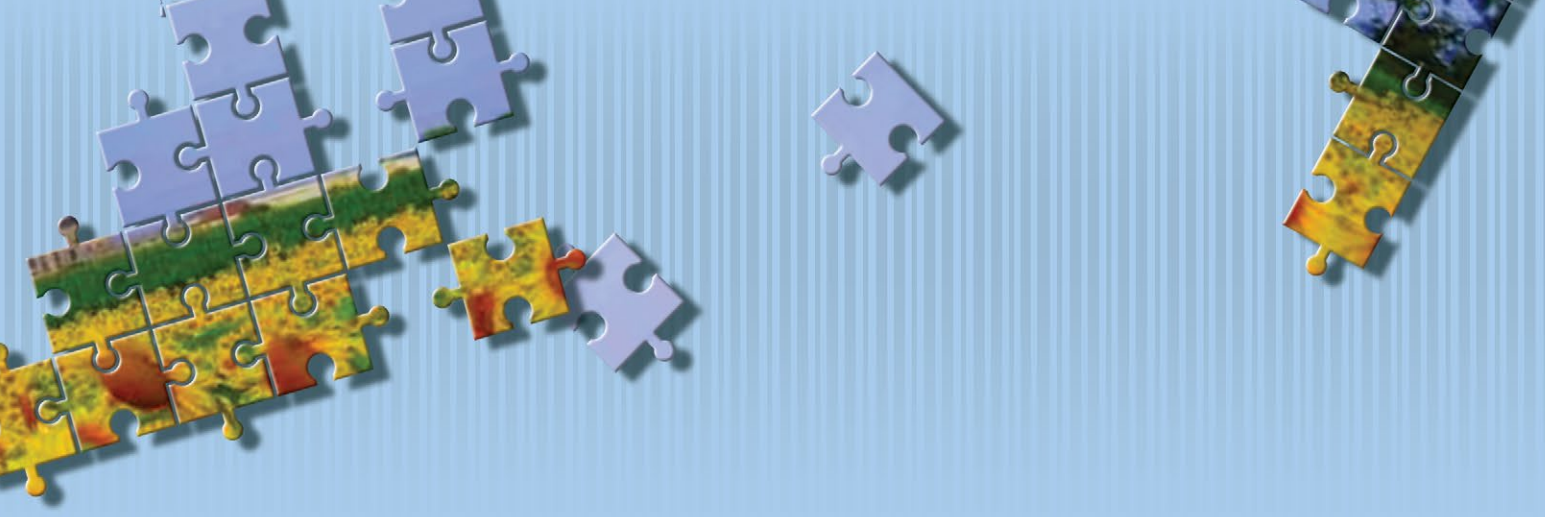
U.S.NRC

United States Nuclear Regulatory Commission

*Protecting People and the Environment*



# Fiscal Year 2013
# PERFORMANCE AND ACCOUNTABILITY REPORT



# MISSION

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.


**PAPERWORK REDUCTION ACT STATEMENT**

This NUREG contains and references information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). These information collection requirements were approved by the Office of Management and Budget, approval numbers 3150-0014, 3150-0035, 3150-0010, 3150-0130, 3150-0020, 3150-0011, 3150-0151, 3150-0135, 3150-0009, 3150-0008, 3150-0002, and 3150-0036.

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# Table of Contents



*This Performance and Accountability Report is available on the NRC's Web site at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1542/*


*Left to right: Commissioner William D. Magwood IV, Commissioner Kristine L. Svinicki, Chairman Allison M. Macfarlane, Commissioner George Apostolakis, and Commissioner William C. Ostendorff.*

The Fiscal Year 2013 Performance and Accountability Report provides performance results and audited financial statements that enable the President, Congress, and the public to assess the performance of the agency in achieving its mission and stewardship of its resources. The report contains a concise overview, Management's Discussion and Analysis, as well as performance and financial sections. Details of performance results and program evaluations can be found in the Program Performance section.

# A Message from the Chairman

I am pleased to present the U.S. Nuclear Regulatory Commission's (NRC's) Performance and Accountability Report (PAR) for Fiscal Year (FY) 2013. This report highlights the NRC's continuing success in achieving our mission to ensure the safe and secure use of radioactive materials for beneficial civilian purposes while protecting people and the environment. The report also provides key financial and performance information to Congress and the American people of how we used our resources during FY 2013. The report is available at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1542/.

NRC is an independent regulatory agency devoted to the effective and efficient oversight of the Nation's 100 operating nuclear reactors, 31 research and test reactors, and the four reactors that entered the decommissioning phase in FY 2013. The agency also reviews all safety aspects of new reactor designs, environmental siting, combined license applications, and provides oversight for the two nuclear power plants currently under construction. Further, the agency focuses on the safe and secure use of nuclear materials in the energy, medical and industrial sectors through effective oversight of fuel facilities, uranium recovery sites, decommissioning sites, and nuclear material user licensees. In FY 2013, the NRC met all of its strategic goals and performance measure targets.

The NRC developed three levels of recommendations following the 2011 Fukushima Dai-ichi accident in Japan. During FY 2013, the NRC monitored implementation of the highest priority new regulatory requirements for the Nation's nuclear power plants. These requirements have also been integrated into the new reactor licensing process. The second level recommendations, needing more technical study, and the third level recommendations, needing more information to support regulatory action, are expected to be completed in the next few years.

The NRC is committed to good governance and the prudent management of resources entrusted to it by the American people. The agency will continue to evaluate, test, and strengthen its internal controls, including those related to financial reporting and financial management systems, as required by the *Federal Managers' Financial Integrity Act of 1982* (FMFIA). Based on the FMFIA assessments, I have concluded that there is reasonable assurance that the agency is in substantial compliance with FMFIA, and the financial and performance data published in this report are complete, accurate, reliable, and timely, in accordance with the *Reports Consolidation Act of 2000* and Office of Management and Budget Circular A-136 requirements. Additionally, I have determined that the agency is in substantial compliance with the *Federal Financial Management Improvement Act of 1996* (FFMIA), based on the NRC's application of the FFMIA risk model.

I continue to be impressed by the performance and dedication of NRC employees in achieving the agency's safety and security goals and look forward to continuing the high-quality service the American people have come to expect from us.

Allison M. Macfarlane
Chairman
December 16, 2013


AGA

# CERTIFICATE OF EXCELLENCE IN ACCOUNTABILITY REPORTING®

**Presented to the**

## *U.S. Nuclear Regulatory Commission*

**In recognition of your outstanding efforts in preparing the agency's Performance and Accountability Report and Summary of Performance and Financial Information for the fiscal year ended September 30, 2012.**

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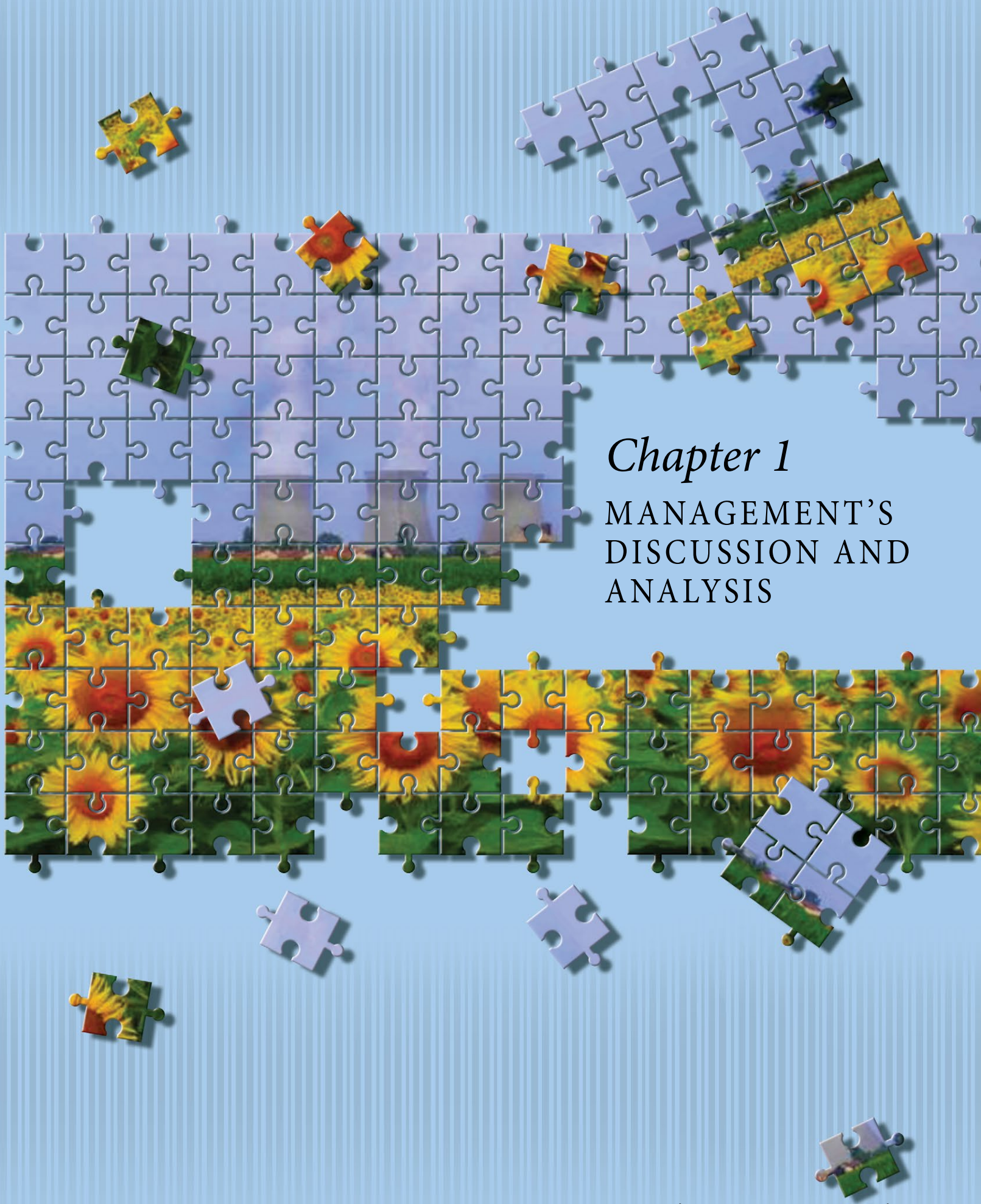
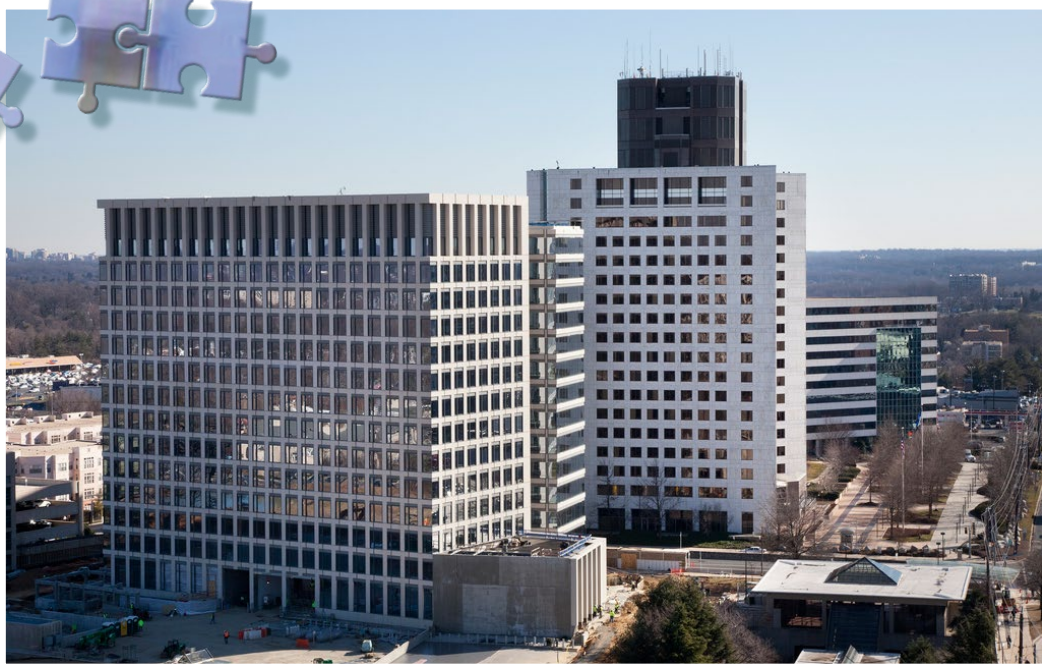
Chair, Certificate of Excellence
in Accountability Reporting Board

Relmond P. Van Daniker, DBA, CPA
Executive Director, AGA

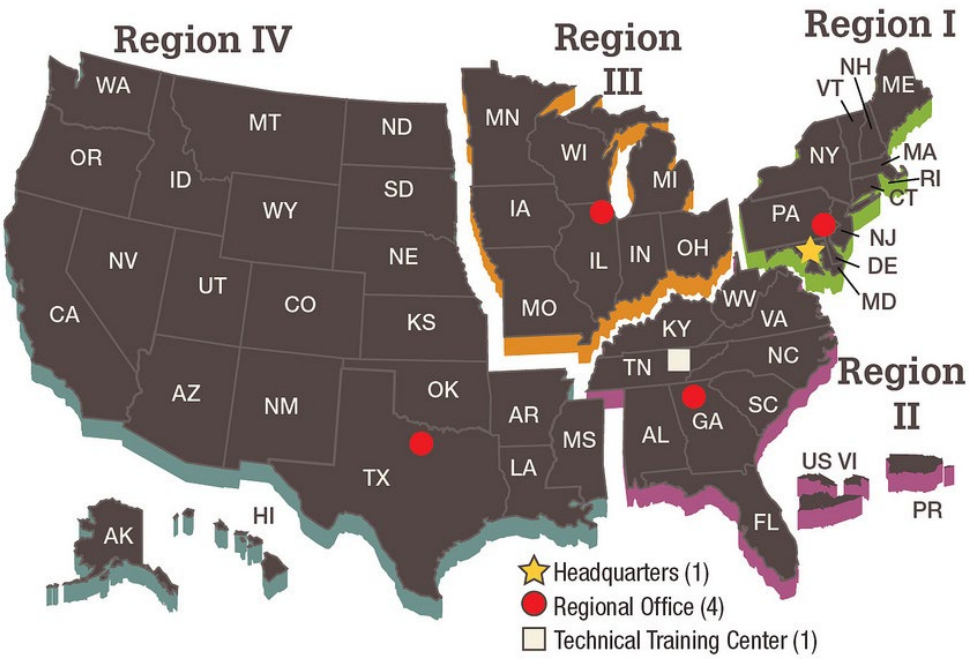


# *Chapter 1*

# MANAGEMENT'S DISCUSSION AND ANALYSIS



*The U.S. Nuclear Regulatory Commission (NRC) Headquarters*




*The U.S. Nuclear Regulatory Commission (NRC) Regions*

# INTRODUCTION

The U.S. Nuclear Regulatory Commission's (NRC's) Performance and Accountability Report is an account of the agency's effectiveness in achieving its mission during Fiscal Year (FY) 2013. The report describes the agency's program and financial management performance during FY 2013, which covers the period from October 1, 2012, to September 30, 2013.

The agency has two strategic goals: Safety and Security. The agency achieved both its Safety and Security goals and met all of its performance measure targets in FY 2013.

The agency's nuclear reactor and materials licensees maintained their excellent safety record. The agency also improved its operational activities by continuing to invest in its skilled workforce of engineers and scientists through knowledge transfer programs, recruiting a diverse workforce, and providing training opportunities.

The agency is in a sound financial position, having sufficient funds to meet programmatic needs and adequate control of these funds in place. The agency received an unqualified audit opinion on its financial statements by its auditors, with no instances of noncompliance with laws and regulations.

This report consists of four chapters. Chapter 1, "Management's Discussion and Analysis," provides an overview of the NRC and describes its programmatic and financial accomplishments during FY 2013. Chapter 2, "Program Performance," describes in detail the agency's success in meeting its goals and the programmatic activities that are the basis for accomplishing those goals. Chapter 3, "Financial Statements and Auditors' Report," describes the agency's financial position. Chapter 4, "Other Information," includes a report on management challenges, a summary of the financial statement audit, and other information. The NRC places a high priority on keeping the public informed of its activities. Visit the NRC's Web site at www.nrc.gov to access this report (http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1542/v19/) and learn more about who we are and what we do to serve the American public.

# ABOUT THE NRC

The U.S. Congress established the NRC on January 19, 1975, as an independent Federal agency regulating the commercial and institutional uses of nuclear materials. The *Atomic Energy Act of 1954*, as amended, and the *Energy Reorganization Act of 1974*, as amended, define the NRC's purpose. These acts provide the foundation for the NRC's mission to regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment. The agency regulates civilian nuclear power plants and other nuclear facilities, as well as other uses of nuclear materials. These other uses include nuclear medicine programs at hospitals; academic activities at educational institutions; research work; industrial applications, such as gauges and testing equipment; and the transport, storage, and disposal of nuclear materials and wastes.

The NRC is headed by a Commission composed of five members, with one member designated by the President to serve as Chairman. With the advice and consent of the Senate, the President appoints each member to serve a 5-year term. The Chairman is the principal executive officer and official spokesperson for the Commission. The Executive Director for Operations carries out program policies and decisions made by the Commission.

The NRC's Headquarters is located in Rockville, MD. The NRC has an Operations Center in the Headquarters building that coordinates communications with its licensees, State agencies, and other Federal agencies. This center is the focal point for assessing and responding to operating events in the industry. The NRC operations officers man the Operations Center 24 hours a day, seven days a week.

The agency also has four regional offices located in King of Prussia, PA; Atlanta, GA; Lisle, IL; and Arlington, TX. The regional offices allow the agency to work closely with its licensees to ensure safety. The NRC also employs at least two resident inspectors at each of the Nation's nuclear power reactor sites.

The NRC's new budget authority for FY 2013 was $985.6 million, with 3,951 full-time equivalent staff. The NRC is primarily supported by fees collected from its licensees.

U.S.NRC
United States Nuclear Regulatory Commission
*Protecting People and the Environment*

# THE NRC ORGA

**Commissioner**

**William D. Magwood, IV**

**Commissioner**

**Kristine L. Svinicki**

**Executive Director, Advisory Committee on Reactor Safeguards**

**Edwin M. Hackett**

**Chief Administrative Judge (Chairman), Atomic Safety and Licensing Board Panel**

**E. Roy Hawkens**

**Director, Office of Commission Appellate Adjudication**

**Brooke D. Poole**

**Director, Office of Congressional Affairs**

**Rebecca L. Schmidt**

**Director, Office of Public Affairs**

**Eliot B. Brenner**

**Deputy Executive Director for Reactor and Preparedness Programs**

**Michael R. Johnson**

**Regional Administrator Region I**

**Bill Dean**

**Regional Administrator Region II**

**Victor McCree**

**Regional Administrator Region III**

**Cynthia D. Pederson**

**Regional Administrator Region IV**

**Marc L. Dapas**

**Director, Office of New Reactors**

**Glenn M. Tracy**

**Director, Office of Nuclear Security and Incident Response**

**James T. Wiggins**

**Director, Office of Nuclear Reactor Regulation**

**Eric J. Leeds**

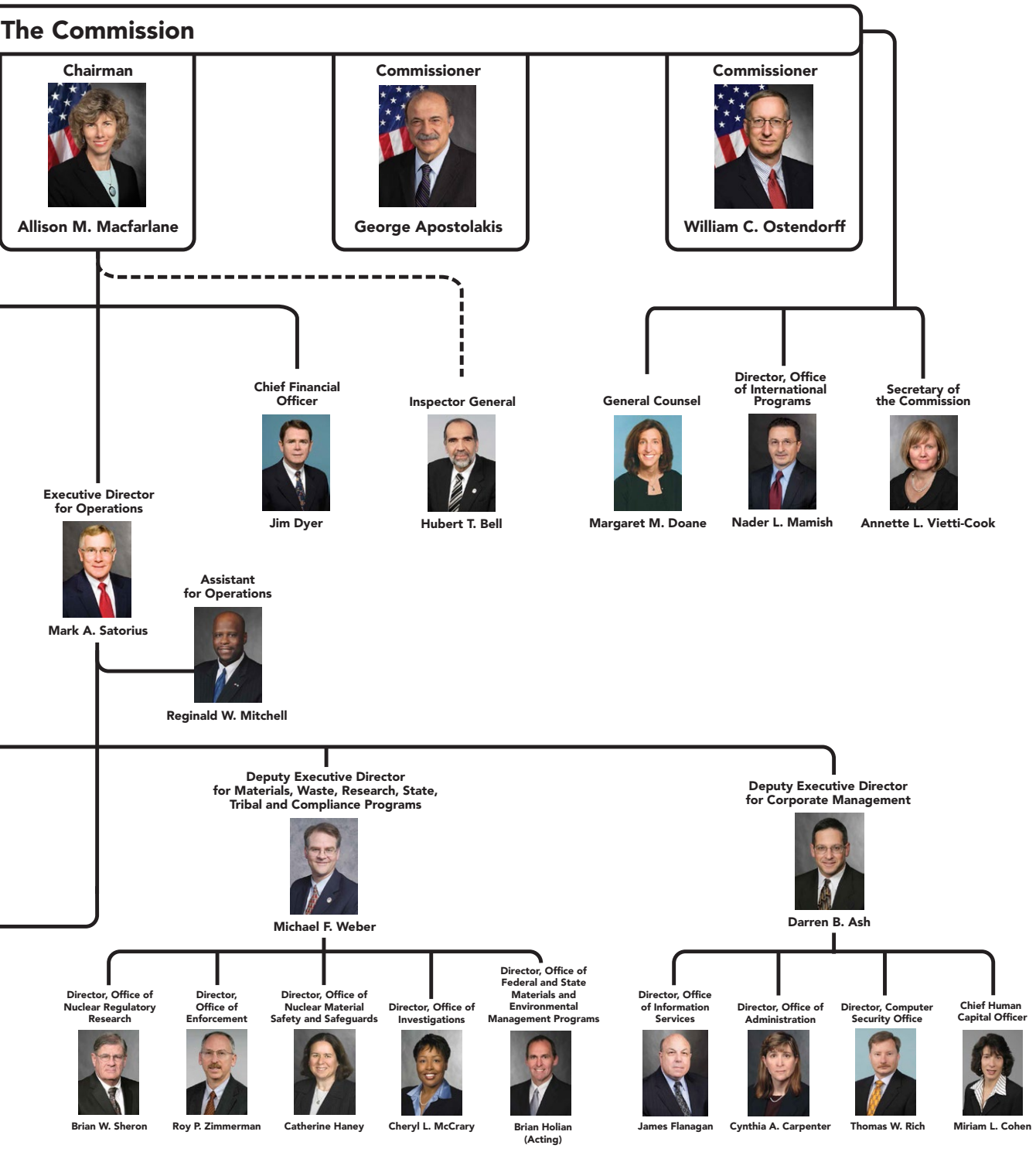
**Director, Office of Small Business and Civil Rights**

**Vonna L. Ordaz**

October 27, 2013

*The dotted line signifies that the Inspector General exercises a much higher degree of independence with the Chairman in carrying out his roles and responsibilities in comparison to other executives reporting to the Chairman.*

# NIZATIONAL CHART



# THE NRC'S REGULATORY ACTIVITIES

To fulfill its responsibility to protect public health and safety, the NRC performs five principal regulatory functions: developing regulations and guidance for applicants and licensees; licensing or certifying applicants to use nuclear materials, operate nuclear facilities, and decommissioning facilities; inspecting and assessing licensee operations and facilities to ensure that licensees comply with NRC requirements and taking appropriate follow-up or enforcement actions when necessary; evaluating operational experience of license facilities and activities; and conducting research, holding hearings, and obtaining independent reviews to support regulatory decisions (see Figure 1).

*Figure 1*
### How We Regulate

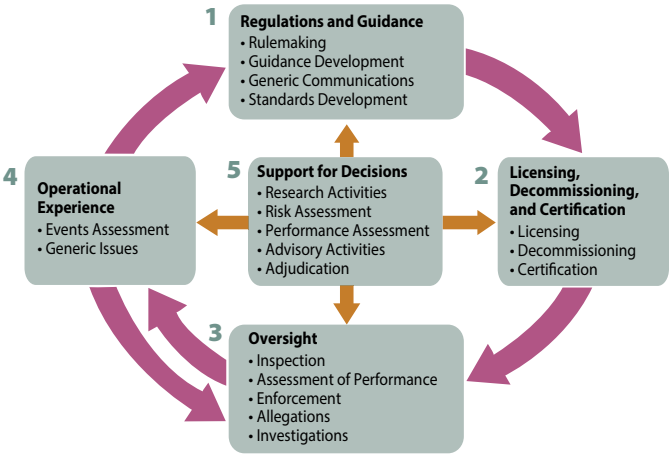



*Figure 1 provides an overview of the NRC's regulatory process, which has five main components:*

1. *Developing regulations and guidance for applicants and licensees*
2. *Licensing or certifying applicants to use nuclear materials, operate nuclear facilities, and decommission facilities*
3. *Inspecting and assessing licensee operations and facilities to ensure that licesees comply with NRC requirements and taking appropriate followup or enforcement actions when necessary.*
4. *Evaluating operational experience of licensed facilities and activities.*
5. *Conducting research, holding hearings, and obtaining independent reviews to support regulatory decisions.*

*Source: U.S. Nuclear Regulatory Commission*

The standards and regulations established by the agency set the rules that users of radioactive materials must follow. Drawing upon the knowledge and experience of the agency's scientists and engineers, these rules are the basis for protecting workers and the general public from the potential hazards associated with the use of radioactive materials.

With a few exceptions, any organization or individual intending to have or use radioactive materials must obtain a license. A license identifies the type and amount of radioactive material that may be held and used. NRC scientists and engineers evaluate the license application to ensure that the potential licensee's use of nuclear materials meets the agency's safety and security requirements.

The agency inspects all facilities that it licenses on a regular basis to ensure that they meet NRC regulations and are being operated safely and securely. NRC specialists conduct 10 to 25 routine inspections each year at each of the 100 operating nuclear power plants. In addition, the agency oversees approximately 2,900 licenses for medical, academic, industrial, and general uses of nuclear materials. The agency conducts approximately 1,000 health and safety inspections of its nuclear materials licensees annually. Under the NRC's Agreement State program, 37 States have assumed primary regulatory responsibility over the industrial, medical, and other users of nuclear materials within their States, accounting for approximately 18,900 licensees. The NRC works closely with these States to ensure that they maintain public safety through acceptable licensing and inspection procedures.

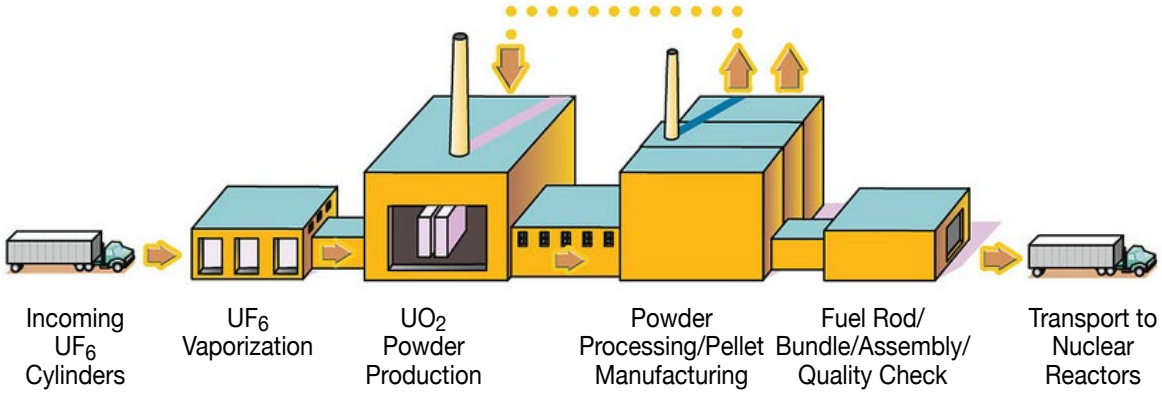
# THE NUCLEAR INDUSTRY

The NRC is responsible for regulating all aspects of the civilian nuclear industry. The industry can best be described by examining the nuclear material cycle. The nuclear material cycle begins with the mining and production of nuclear fuel or nuclear materials for medical, industrial, and other applications, continues with the use of nuclear fuel to power the Nation's 100 nuclear power plants, and ends with the safe transportation and storage of spent nuclear fuel and other nuclear waste. The NRC's regulatory programs ensure that radioactive materials are used safely and securely at every stage in the nuclear material cycle. To address safety and security issues, the NRC has developed regulatory practices, knowledge, and expertise specific to each activity in the nuclear material cycle.

## Fuel Facilities

The production of nuclear fuel begins at uranium mines, where milled uranium ore is used to produce a uranium concentrate called "yellow cake." At a special facility, the yellow cake is converted into uranium hexafluoride ($UF_6$) gas and loaded into cylinders. The cylinders are sent to a gaseous diffusion plant,

*Figure 2*
SIMPLIFIED FUEL FABRICATION PROCESS

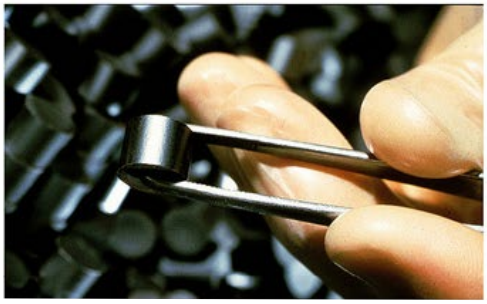



Fabrication of commercial light-water reactor fuel consists of the following three basic steps:

(1) the chemical conversion of $UF_6$ to uranium dioxide ($UO_2$) powder

(2) a ceramic process that converts $UO_2$ powder to small ceramic pellets

(3) a mechanical process that loads the fuel pellets into rods and constructs finished fuel assemblies



***Small ceramic fuel pellets***

where uranium is enriched for use as reactor fuel. The enriched uranium is then converted into oxide powder, fabricated into fuel pellets (each about the size of a fingertip), loaded into metal fuel rods about 3.5 meters long, and bundled into reactor fuel assemblies at a fuel fabrication facility. Assemblies are then transported to nuclear power plants, non-power research reactor facilities, and naval propulsion reactors for use as fuel (see Figure 2). The NRC licenses eight major fuel fabrication and production facilities and three enrichment facilities in the United States. Because they handle extremely hazardous material, these facilities take special precautions to prevent theft, diversion by terrorists, and dangerous exposures to workers and the public from this nuclear material.

## REACTORS

Power plants change one form of energy into another. Electrical generating plants convert heat energy, the kinetic energy of wind or falling water, or solar energy, into electricity. A nuclear power plant converts heat energy into electricity. Other types of heat-conversion plants burn coal, oil, or gas to produce heat energy that is then used to produce electricity. Nuclear energy cannot be seen. There is no burning of fuel in the usual sense. Rather, energy is given off by the nuclear fuel as certain types of atoms split in a process called nuclear fission. This energy is in the form of fast-moving particles and invisible radiation. As the particles and radiation move through the fuel and surrounding water, the energy is converted into heat. The radiation energy can be hazardous, and facilities take special precautions to protect people and the environment from these hazards.

Because the fission reaction produces potentially hazardous radioactive materials, nuclear power plants are equipped with safety systems to protect workers, the public, and the environment. Radioactive materials require careful use because they produce radiation, a form of energy that can damage human cells. Depending on the amount and duration of the exposure, radiation can potentially cause cancer. In a nuclear reactor (see Figure 3 and Figure 4), most hazardous radioactive substances, called fission byproducts, are trapped in the fuel pellets or in the sealed metal tubes holding the fuel. However, small amounts of these radioactive fission byproducts,

*Figure 3*
THE BOILING-WATER REACTOR (BWR)

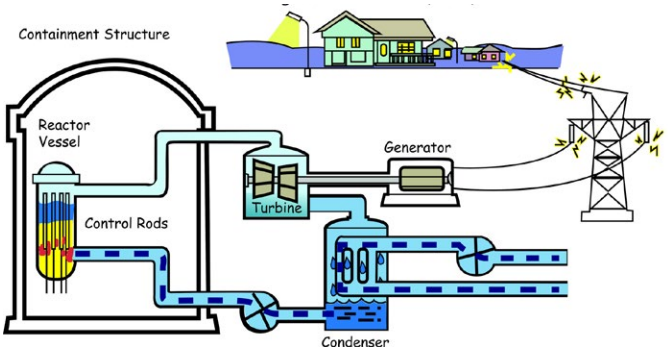
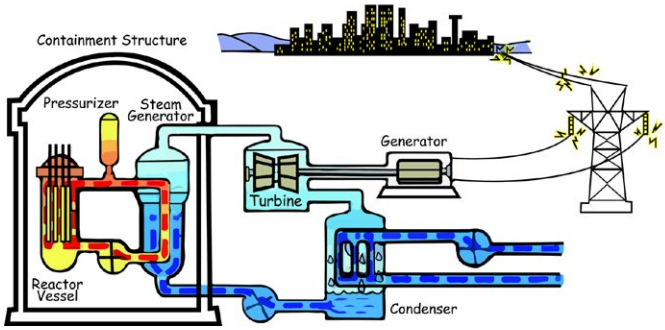



*Figure 4*
THE PRESSURIZED-WATER REACTOR (PWR)




principally gases, become mixed with the water passing through the reactor. Other impurities in the water also become radioactive as they pass through the reactor. The facility processes and filters the water to remove these radioactive impurities and then returns the water to the reactor cooling system.

## Materials Users

The medical, academic, and industrial fields all use nuclear materials. For example, about one-third of all patients admitted to U.S. hospitals are diagnosed or treated using radioisotopes. Most major hospitals have specific departments dedicated to nuclear medicine. In all, about 112 million nuclear medicine or radiation therapy procedures are performed annually, with the vast majority used in diagnoses. Radioactive materials used as a diagnostic tool can identify the status of a disease and minimize the need for surgery. Radioisotopes give doctors the ability to look inside the body and observe soft tissues and organs, in a manner similar to the way X-rays provide images of bones. Radioisotopes carried in the blood also allow doctors to detect clogged arteries or check the functioning of the circulatory system.

The same property that makes radiation hazardous can also make it useful in treating certain diseases like cancer. When living tissue is exposed to high levels of radiation, cells can be destroyed or damaged. Doctors can selectively expose cancerous cells (cells that are dividing uncontrollably) to radiation to either destroy or damage these cells.

Many of today's industrial processes also use nuclear materials. High-tech methods that ensure the quality of manufactured products often rely on radiation generated by radioisotopes. To determine whether a well drilled deep into the ground has the potential for producing oil, geologists use nuclear well-logging, a technique that employs radiation from a radioisotope inside the well, to detect the presence of different materials. Radioisotopes are also used to sterilize instruments, find flaws in critical steel parts and welds that go into automobiles and modern buildings, authenticate valuable works of art, and solve crimes by spotting trace elements of poison. Radioisotopes can also eliminate dust from film and compact discs and reduce static electricity (which may create a fire hazard) from can labels. In manufacturing, radiation can change the characteristics of materials, often giving them features that are highly desirable. For example, wood and plastic composites treated with gamma radiation resist abrasion and require low maintenance. As a result, they are used for some flooring in high-traffic areas of department stores, airports, hotels, and churches.

## Waste Disposal

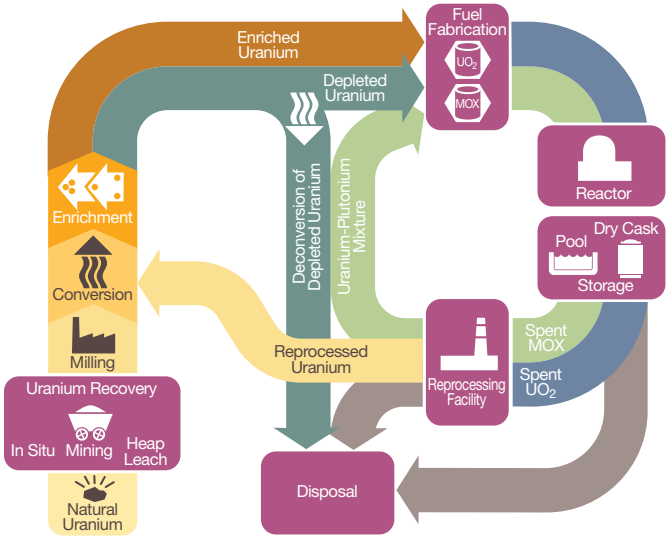
During normal operations, a nuclear power plant generates both high-level radioactive waste, which consists of spent fuel and low-level radioactive waste, which includes contaminated equipment, filters, maintenance materials, and resins used in purifying water for the reactor cooling system. Other users of radioactive materials also generate low-level waste.

Nuclear power plants handle each type of radioactive waste differently. They must use special procedures in the handling of the spent fuel because it contains the highly radioactive fission

byproducts created while the reactor was operating. Typically, the spent fuel from nuclear power plants is stored in water-filled pools at each reactor site or at a storage facility in Illinois. The water in the spent fuel storage pool provides cooling and adequately shields and protects workers from the radiation. Several nuclear power plants have also begun using dry casks to store spent fuel. These heavy metal or concrete casks rest on concrete pads adjacent to the reactor facility. The thick layers of concrete and steel in these casks shield workers and the public from radiation.

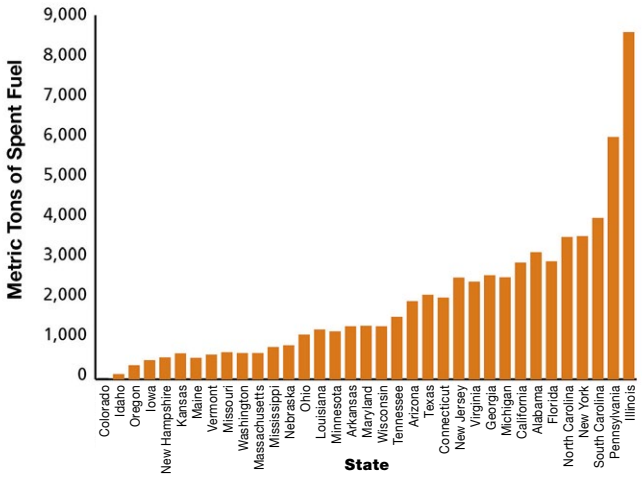
Currently most spent fuel in the United States remains stored at individual plants (see Figure 6). Permanent disposal of spent fuel from nuclear power plants will require a disposal facility that can provide reasonable assurance that the waste will remain isolated for thousands of years.

*Figure 5*
THE NUCLEAR FUEL CYCLE




Licensees often store low-level waste onsite until its radioactivity has decayed and the waste can be disposed of as ordinary trash, or until amounts are large enough for shipment to a low-level waste disposal site in containers approved by the U.S. Department of Transportation. The NRC has developed a waste classification system for low-level radioactive waste based on its potential hazards, and has specified disposal and waste form requirements for each of the following general classes of waste: Class A, Class B, and Class C waste. Generally, Class A waste contains lower concentrations of radioactive material than Class B and Class C wastes. There are two low-level disposal facilities that accept a broad range of low-level wastes. They are located in Barnwell, SC, and Richland, WA.

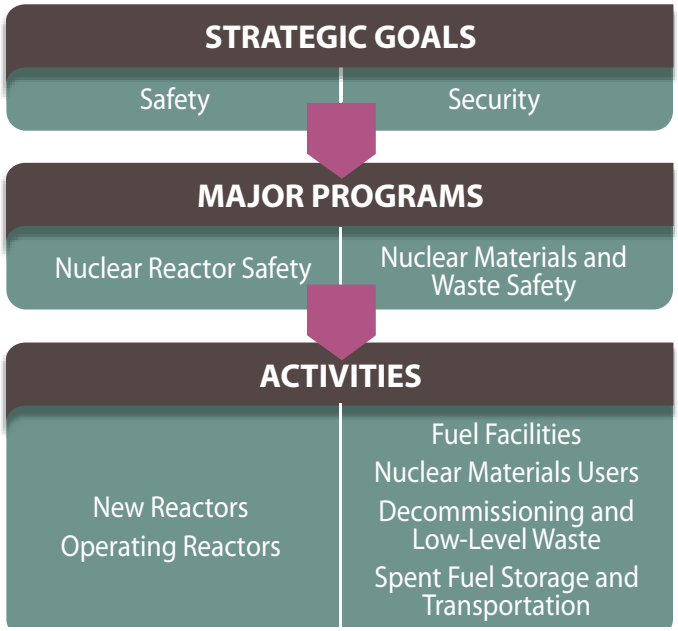
*Figure 6*
STORAGE OF COMMERCIAL SPENT FUEL BY STATE THROUGH 2012




Idaho is holding used fuel from Three Mile Island 2. The used Fuel Data are rounded up to the nearest 10 for CY 2011.
Source: Gutherman Technical Services and U.S. Department of Energy
Updated: April 2013

# FY 2013 PERFORMANCE RESULTS

The NRC's Strategic Plan describes the agency's mission, goals, and strategies. The Strategic Plan can be found on the NRC's Web site at www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1614/v5/index.html. The agency's two strategic goals are focused on Safety and Security. The Safety goal is to *Ensure adequate protection of public health and safety and the environment*. The Security goal is to *Ensure adequate protection in the secure use and management of radioactive materials.*




## STRATEGIC GOAL 1: SAFETY

Ensure Adequate Protection of Public Health and Safety and the Environment

Safety is the primary goal of the NRC. The agency achieves this goal by ensuring that the performance of licensees is at or above acceptable safety levels. NRC safety programs work in conjunction with its licensees in a partnership. The NRC licensees are responsible for designing, constructing, and operating nuclear facilities safely. The NRC is responsible for regulatory oversight of the licensees. The NRC safety goal activities are designed to achieve the following strategic outcomes.

## 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.

These strategic outcomes specify the conditions under which the Safety goal can be considered to have been met.

### FY 2013 Results

In FY 2013, the NRC achieved all five of its safety goal strategic outcomes. The NRC also uses six performance measures to determine whether it has met its Safety goal. The agency met all six performance measure targets in FY 2013 (see Table 1).

The first three performance measures focus on performance at individual nuclear power plants. Inspection results show that all of the nuclear power plants are operating safely. The fourth measure tracks the trends of several key indicators of nuclear power plant safety. This measure is the broadest measure of the safety of nuclear power plants, incorporating the performance results from all plants to determine industry average results. This measure shows that there were no statistically significant adverse trends in any of the indicators in FY 2013.

The last two safety performance measures track harmful radiation exposures to the public and occupational workers, and radiation exposures that harm the environment. Neither of these two measures exceeded their targets in FY 2013.

The cost of achieving the agency's Safety goal in FY 2013 was $995.1 million.

*Table 1*

## FY 2013 Safety Goal Performance Measures

1. Number of new conditions evaluated as red by the NRC's Reactor Oversight Process.[1]

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 3 |
| Actual | 0 | 0 | 0 | 1 | 1 | 0 |

*[1] This measure is the number of new red inspection findings during the fiscal year 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 Reactor Oversight Process (ROP) external Web page was updated to show the red indicator.*

2. Number of significant Accident Sequence Precursors [2] (ASPs) of a nuclear reactor accident

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

*[2] Significant Accident Sequence Precursor (ASP) events have a conditional core damage probability (CCDP) or ΔCDP of > 1x $10^{-3}$. Such events have a 1/1000 ($10^{-3}$) 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.*

3. Number of operating reactors with integrated performance that entered the multiple/repetitive degraded cornerstone column or the unacceptable performance column of the Reactor Oversight Process Action Matrix, or the Inspection Manual Chapter 0350 process is ≤ 3 with no performance leading to the initiation of an Accident Review Group.[3]

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | ≤ 4 | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 3 |
| Actual | 0 | 0 | 0 | 2 | 1 | 0 |

*[3] This measure is the number of plants that have entered the Inspection Manual Chapter (IMC) 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 Web Action Matrix Summary page, which provides a matrix of the five columns with the plants listed within their applicable column and notes the plants in the IMC 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).*

4. Number of significant adverse trends in industry safety performance is ≤1[4].

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | ≤ 1 | ≤ 1 | ≤ 1 | ≤ 1 | ≤ 1 | ≤ 1 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

*[4] Considering all indicators qualified for use in reporting.*

*Table 1*

## FY 2013 Safety Goal Performance Measures *(continued)*

5. Number of events with radiation exposures to the public or occupational workers that exceed Abnormal Occurrence Criterion I.A.3[5]

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Reactors Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |
| Materials Target | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |
| Waste Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

[5]*Releases for which a 30-day report under Title 10 of the Code of Federal Regulations (10 CFR) 20.2203(a)(3) is required.*

6. Number of radiological releases to the environment that exceed applicable regulatory limits[6]

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Reactors Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |
| Materials Target | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |
| Waste Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

[6]*With no event exceeding Abnormal Occurrence Criterion I.B.*

## Safety Goal Strategies

The agency used the following safety strategies from its strategic plan to guide its activities and achieve its safety goal in FY 2013:

1. Develop, maintain, implement, and improve licensing and regulatory programs for existing and new reactors, fuel cycle facilities, materials users, transportation and management of spent fuel, uranium recovery, waste disposal, and decommissioning activities to ensure the adequate protection of public health and safety.
2. Oversee the safe and secure operation of existing facilities and uses of nuclear material.
3. Oversee the construction of new power reactors.
4. Conduct NRC safety and security programs and emergency preparedness in an integrated manner.
5. Implement focused research programs to anticipate and support resolution of safety issues and address new technologies.
6. Use sound science and state-of-the-art methods to establish, where appropriate, risk-informed and performance-based regulations.
7. Promote awareness of the importance of a strong safety culture and individual accountability of those engaged in regulated activities.
8. Use domestic and international operating experience to inform decision-making.
9. Oversee licensee safety performance through inspections, investigations, enforcement, and performance assessment activities.
10. Respond to events at NRC-licensed facilities and other events of national and international interest, including maintaining and enhancing the NRC's emergency incident response and communication capabilities.
11. Respond to future national policy decisions regarding high-level nuclear waste and spent nuclear fuel management strategies recommended or adopted as the Nation's policy, and assess issues associated with long-term storage of spent fuel and high-level waste.

## Fukushima Regulatory Review

The NRC's efforts to implement the lessons learned from the Fukushima Dai-ichi accident in March 2011 continued during FY 2013. Nuclear power plants in the United States have made great progress in implementing the near-term actions to address natural disasters that may challenge the design bases of these plants. The agency oversaw implementation of new requirements to address hazards such as earthquakes and flooding. The NRC has also been using the insights from Fukushima to inform its licensing and oversight activities. The agency has been conducting technical studies and regulatory analyses to ensure the safe operation of existing reactors and to be applied to new reactors. A more complete discussion of the review and the subsequent actions taken by the NRC can be found in Chapter 2 under "Operating Reactors Oversight."

Additional information can be found on the agency's Web site at http://www.nrc.gov/reactors/operating/ops-experience/japan-info.html.

### STRATEGIC GOAL 2: SECURITY

Ensure Adequate Protection in the Secure Use and Management of Radioactive Materials

The NRC must remain vigilant in ensuring the security of nuclear facilities and materials in an elevated threat environment. The agency achieves its common defense and Security goal using licensing and oversight programs similar to those employed in achieving its Safety goal.

## Strategic Outcomes:

- Prevent instances where licensed radioactive materials are used domestically in a manner hostile to the security of the United States.
- Prevent unauthorized public disclosures of classified or Safeguards Information through quality measures.

These strategic outcomes specify the conditions under which the Security goal can be considered to have been met.

## FY 2013 Results

In FY 2013, the NRC achieved its Security goal strategic outcomes. The NRC also uses five Security goal performance measures to determine whether the agency has met its Security goal. The agency met all five performance measure targets in FY 2013 (see Table 2).

The first performance measure tracks unrecovered losses or thefts of risk-significant radioactive sources. The measure ensures that those radioactive sources that the agency has determined to be risk-significant to the public health and safety are accounted for at all times. The ability to account for these sources is critical to secure the nation from "dirty bomb" attacks or other means of radiation dispersal.

The second, third, and fourth performance measures evaluate the number of significant security events and incidents that occur at NRC-licensed facilities. These measures determine whether nuclear facilities maintain adequate protective forces to prevent theft or diversion of nuclear material or sabotage; whether systems in place at licensee plants accurately account for the type and amount of materials processed, used, or stored; and whether the facilities account for special nuclear material at all times with no losses of this material. There were no events that met the conditions for these measures in FY 2013.

The last security measure tracks significant unauthorized disclosures of classified and/or Safeguards Information that may cause damage to national security or public safety. This measure focuses on whether classified information or Safeguards Information is stored and used in such a way as to prevent its disclosure to the public, terrorist organizations, other nations, or personnel without a need to know. Unauthorized disclosures can harm national security or compromise public health and safety. The measure also focuses on whether controls are in place to maintain and secure the various devices and systems (electronic or paper-based) that the agency and its licensees use to store, transmit, and use this information. There were no documented disclosures of this type of information during FY 2013.

The cost of achieving the agency's Security goal was $68.0 million in FY 2013.

*Table 2*

## FY 2013 Security Goal Performance Measures

1. Unrecovered losses of risk-significant[1] radioactive sources.

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 1[2] | 0 | 0 |

*[1] "Risk-significant" is defined as any unrecovered lost or abandoned sources that exceed the values listed in Appendix P to 10 CFR 110 – Category 1 and 2 Radioactive Material. 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 locations (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. (This includes licenses under the Agreement States.)*
*[2] There were no losses and one theft of radioactive nuclear material that the NRC considered to be risk-significant during FY 2011.*

2. Number of substantiated[3] cases of actual theft or diversion of licensed, risk-significant radioactive sources or formula quantities[4] of special nuclear material or attacks that result in radiological sabotage[5]

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

*[3] "Substantiated" means a situation where an indication of loss, theft, or unlawful diversion cannot be refuted following an investigation and requires further action on the part of the agency or other proper authorities.*
*[4] A formula quantity of special nuclear material is defined in 10 CFR 70.4, "Definitions."*
*[5] "Radiological sabotage" is defined in 10 CFR 73.2, also titled "Definitions."*

3. 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 by substantial breakdown of the Accountability System.

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

*Table 2*

## FY 2013 Security Goal Performance Measures *(continued)*

4. Number of substantial breakdowns[6] of physical security or material control (i.e., access control, containment, or accountability systems) that significantly weakened the protection against theft, diversion, or sabotage.

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | ≤ 1 | ≤ 1 | ≤ 1 | ≤ 1 | ≤ 1 | ≤ 1 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

[6] *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.*

5. Number of significant unauthorized disclosures[7] of classified and/or Safeguards Information.

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

[7] *"Significant unauthorized disclosure" is defined as a disclosure that harms national security or public health or safety.*

## Security Goal Strategies

The agency used the following security strategies from its Strategic Plan to guide its activities and achieve its Security Goal in FY 2013:

1. Conduct oversight of licensee security performance.
2. Use relevant intelligence information and security assessments to maintain realistic and effective security requirements and mitigation measures.
3. Share security information with appropriate stakeholders and international partners.
4. Control the handling and storage of sensitive security information and the communication of information to licensees and Federal, State, local and Tribal governments.
5. 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 governments.
6. Use risk-informed approaches to inform regulatory controls for security.
7. Maintain the programs for controlling the security of radioactive sources and strategic special nuclear material commensurate with their risk, including actions required by the *Energy Policy Act of 2005*.
8. Promote U.S. national security interests and nuclear nonproliferation policy objectives for NRC-licensed imports and exports of byproduct source and special nuclear materials and nuclear equipment.
9. Manage the risk to information and systems to ensure the integrity of cyber security at regulated facilities.
10. Prevent instances of significant unauthorized public disclosures of classified or Safeguards Information.

# FUTURE CHALLENGES

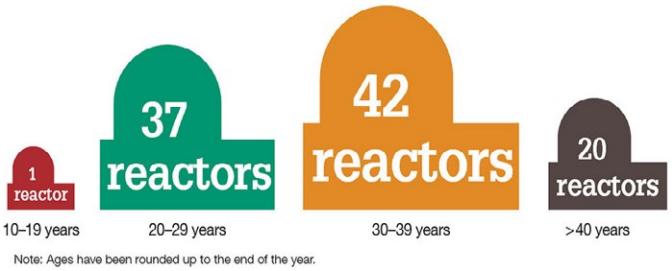
The nuclear industry has maintained an excellent safety record at nuclear power plants over the past two decades as both the nuclear industry and the NRC have gained substantial experience in the operation and maintenance of nuclear power facilities. However, despite the excellent safety record of the industry, the agency cannot rest on its achievements. The key challenges that the agency faces as the regulator of nuclear materials are to ensure that the new generation of nuclear power plants are built and operated safely and to safely dispose of nuclear waste.

## Oversight of an Aging Fleet of Operating Reactors

Nuclear reactors in the United States have been operating longer than most other reactors in the world. The NRC faces the difficult task of ensuring that the plant structures, systems, and components at nuclear power plants are adequate for safe operation. Managing the aging of structures, equipment, and

materials is a dynamic process that the licensees will have to diligently address and that will require monitoring by the agency's licensing, oversight, and research staff. The NRC will also need to focus on the decommissioning of five nuclear reactors that will be discontinuing operation, one of which continues to operate but will cease operations in the near future.

*Figure 7*
U.S. Commercial Nuclear Power Reactors–Years of Operation by the End of 2013




## Licensing a New Generation of Nuclear Power Plants

Currently, the agency has nine active Combined License (COL) applications for sites across the country. The NRC is overseeing construction activities for four reactors at two sites and conducts inspections of vendors supplying the components for these new plants. The agency's primary challenge is to license new reactors to ensure that they will operate safely as they provide electricity required by the Nation for economic growth. Some of the proposed new reactors under consideration are small modular reactors. In any case, before licensing any new nuclear reactor, the agency requires a detailed analysis of new reactor designs. This analysis includes a study of the reactor's vulnerability to accidents and security compromises. It also includes the development of inspection procedures, tests, analyses, and acceptance criteria for construction. The NRC is also evaluating commercial gas centrifuge facilities that use new methods of enriching nuclear fuel for reactors.

## Safe Disposal of High-Level Waste

Current law specifies that high-level radioactive waste will be disposed of underground in a deep geologic repository. On August 13, 2013, the U.S. Court of Appeals for the District of Columbia granted a writ of mandamus directing the agency to "promptly continue the legally mandated licensing process."

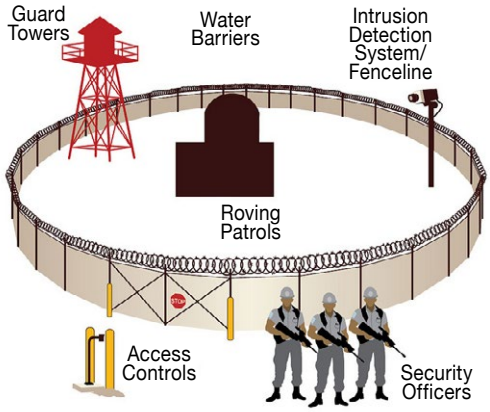
In June 2012, the U.S. Appeals Court for the District of Columbia Circuit struck down a provision in NRC regulations known as the "Waste Confidence Rule." Waste Confidence is a generic finding that spent nuclear fuel can be stored safely for decades at reactor sites in either spent fuel pools or dry storage casks and that a repository will be available for final disposal of the spent fuel. It does not authorize extended storage of spent fuel at reactor sites, but it allows the NRC to proceed with environmental reviews of new reactors or reactor license renewal without considering the site-specific effects of spent fuel storage in the environmental analysis.

The NRC released drafts of the rule and report for public comment in September 2013. The rule and the report are due by September 2014. Meanwhile, the Commission said the NRC will make no final licensing decisions on new reactors or reactor license renewals until the agency finishes the Waste Confidence work.

## Security at Nuclear Facilities

The security of nuclear materials is of paramount importance to the Nation. Nuclear facilities are among the most secure facilities in the Nation. The NRC, in concert with other Federal agencies, constantly monitors intelligence to determine the level of threat faced by nuclear facilities. The agency continues to improve the regulatory requirements to better ensure the security of nuclear materials and facilities. The threat faced by the Nation from those seeking to steal classified information has become more urgent in recent years. Nuclear facilities have implemented increased security measures, including "force-on-force" training exercises, to help ensure protection of this vital national infrastructure.

*Figure 8*
Security Components




*Protecting nuclear facilities requires all the security features to come together and work as one.*

The agency has also focused on security concerns related to radioactive sources typically employed by radiation medicine and other non-power applications of nuclear technology. The sheer number of radioactive sources – numbering thousands in the United States alone – creates challenges in securing these sources. Moreover, these sources are widely spread geographically and used for a broad range of purposes. The agency will continue to evaluate ways to enhance its ability to account for these sources.

Finally, many nations around the world have demonstrated an interest in developing and expanding their use of peaceful applications of nuclear technology. The agency works across a broad range of international organizations, such as the International Atomic Energy Agency (IAEA) and in bilateral activities, to provide assistance to these countries to put in place measures to focus attention on key security issues. As the world's largest nuclear regulatory authority, the NRC's experience places it in a strong position to take a leadership role in extending this type of assistance. The agency anticipates that its assistance to other countries will continue to promote the secure use of nuclear materials.

During FY 2013, an updated version of Management Directive and Handbook 12.5, "NRC Cyber Security Program," was issued to ensure its information and information technology systems are protected from unauthorized access, use, disclosure, disruption, modification, and destruction.

# DATA COMPLETENESS AND RELIABILITY

The NRC considers the data contained in this report to be complete, reliable, and relevant. The data are complete because the agency reports actual performance data for every performance goal and indicator in the report. In addition, all of the data are reported for each measure. The agency also considers the data in this report reliable and relevant, because they have been validated and verified. "Verification and Validation of NRC's Performance Measures and Metrics" contains the processes the agency uses to collect, validate, and verify performance data in this report. This report can be found in the Performance Measurement section of the NRC's FY 2013 Congressional Budget Justification located on the NRC's Web site at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1100/v28/.

# FINANCIAL PERFORMANCE OVERVIEW

The NRC prepared its financial statements in accordance with the accounting standards codified in the Statements of Federal Financial Accounting Standards (SFFAS) and the Office of Management and Budget (OMB) Circular A-136, "Financial Reporting Requirements."

As of September 30, 2013, the financial condition of the NRC was sound with respect to having sufficient funds to meet program needs and the NRC had adequate control of these funds in place to ensure obligations did not exceed budget authority.

## Sources of Funds

The NRC has two appropriations, Salaries and Expenses and the Office of the Inspector General. The new FY 2013 budget authority was $985.6 million, which included $975.2 million for the Salaries and Expenses appropriation and $10.4 million for the Office of the Inspector General.

The new appropriated funding for both appropriations remained the same as the prior year ($1,027.2 million for the Salaries and Expenses appropriation and $10.9 million for the Office of the Inspector General). The new budget authority for FY 2013 decreased $52.5 million compared to the FY 2012 budget authority due to the FY 2013 sequestration and rescission of funds returned to the U.S. Treasury (Treasury) [$52.0 million for the Salaries and Expenses appropriation and $0.5 million for the Office of the Inspector General].

### Budget Authority (In Millions)

| Appropriation | FY 2013 | FY 2012 |
|---|---|---|
| Salaries and Expenses | $ 1,027.2 | $ 1,027.2 |
| Less: Sequestration | (51.7) | - |
| Less: Rescission | (.3) | - |
| Budget Authority | 975.2 | 1,027.2 |
| Office of the Inspector General | 10.9 | 10.9 |
| Less: Sequestration | (.5) | - |
| Less: Rescission | - | - |
| Budget Authority | 10.4 | 10.9 |
| **Total NRC Budget Authority** | **$ 985.6** | **$ 1,038.1*** |

*The Statement of Budgetary Resources for FY 2012 shows appropriations of $1,038.2 million, which includes $0.1 million in license fees collected at the end of FY 2012 and transferred to the NRC appropriated accounts in FY 2013.

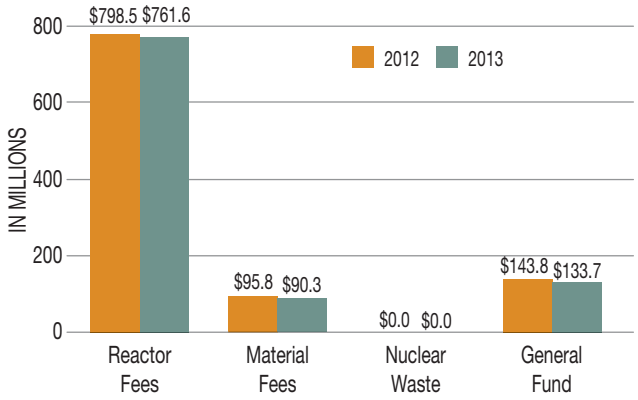
Funds available for the NRC to obligate in FY 2013 were $1,069.8 million and include $985.6 million of new budget authority, $40.5 million of prior-year appropriations, $11.9 million of prior-year funding for reimbursable work, $14.9 million of recoveries of prior-year unpaid obligations, $6.4 million of FY 2013 reimbursable work performed for other Federal agencies and commercial customers, and $10.5 million of prior-year funding for resources received from the U.S. Department of Energy (DOE) to fund NRC activities associated with the *Nuclear Waste Policy Act of 1982*, as amended. Funds available to obligate in FY 2013 decreased $38.7 million from the FY 2012 amount of $1,108.1 million.

The *Omnibus Budget Reconciliation Act of 1990* (OBRA-90), as amended, requires the NRC to collect fees to offset approximately 90 percent of its new budget authority, less the amount appropriated to the NRC from the Nuclear Waste Fund, amounts appropriated for waste incidental to reprocessing and generic homeland security. Fees collected are returned to the Treasury to offset the NRC's two appropriations.

The Salaries and Expenses new budget authority is offset by approximately 90 percent from the collection of fees from licensees and is available for obligation until expended. The new budget authority for the Office of the Inspector General is a two-year (FY 2013/2014) appropriation that expires at the end of FY 2014. Ninety percent of the new budget authority for the Office of the Inspector General appropriation is recoverable from the collection of fees and retained in a separate no-year account, which is available for obligation until expended.

The approximate amount projected to be recovered from fees in FY 2013 was $864.0 million, which included $859.6 million from FY 2013 reactor and materials fees and $4.4 million from other fees (unpaid current-year invoices and terminated reactors' FY 2013 annual fee collections, offset by payments of prior-year invoices in FY 2013). The NRC collected fees totaling $851.9 million in FY 2013 which is 98.6 percent of the approximately $864.0 million projected to be recovered (see Figure 9). Fee collections decreased $42.4 million in FY 2013 compared to the FY 2012 amount of $894.3 million, mainly due to the FY 2013 sequestration and rescission.

*Figure 9*
SOURCES OF FUNDS FOR BUDGET AUTHORITY

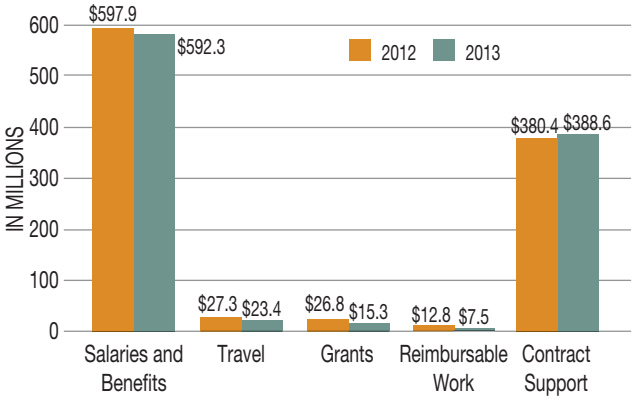



## USES OF FUNDS BY FUNCTION

The NRC incurred obligations of $1,027.1 million in FY 2013, which represented a decrease of $18.1 million from the FY 2012 amount of $1,045.2 million (see Figure 10). Approximately 58 percent of obligations in FY 2013 were used for salaries and benefits. The NRC used the remaining 42 percent to obtain technical assistance for the NRC's principal regulatory programs, to conduct confirmatory safety research, to fund operating expenses (e.g., building rentals, transportation, printing, security services, supplies, office automation, and training), and to pay for staff travel.

The unobligated budget authority available at the end of FY 2013 was $42.8 million, which was a $20.1 million decrease from the FY 2012 amount of $62.9 million. Of the $42.8 million unobligated balance at the end of FY 2013, $9.0 million was for reimbursable work, $11.0 million was for the Nuclear Waste Fund, and $22.8 million was available to fund critical NRC needs in FY 2014. The $62.9 million unobligated balance at the end of FY 2012 included $11.9 million for reimbursable work, $10.5 million for the Nuclear Waste Fund, and $40.5 million for funding of critical NRC needs in FY 2013.

*Figure 10*
USES OF FUNDS BY FUNCTION (OBLIGATIONS)



## Audit Results

The NRC received an unqualified audit opinion on its FY 2013 financial statements and internal controls. The auditors found no reportable instances of noncompliance with laws and regulations during the FY 2013 audit.

A summary of the financial statement audit results is included in the "Other Information" section of this report.

## Limitations on the Financial Statements

The financial statements have been prepared to report the financial position and results of operations of the NRC, pursuant to the requirements of 31 U.S.C. 3515 (b). While the statements have been prepared from the books and records of the NRC in accordance with Generally Accepted Accounting Principles (GAAP) for Federal entities and the formats prescribed by OMB, the statements are in addition to the financial reports used to monitor and control budgetary resources, which are prepared from the same books and records. The statements should be read with the realization that they are for a component of the U.S. Government, a sovereign entity.

## Financial Statement Highlights

The NRC's financial statements summarize the agency's financial activity and position. The financial statements, footnotes, and required supplementary information are included in Chapter 3, "Financial Statements and Auditors' Report." The following is an analysis of the financial statements.

## Analysis of the Balance Sheet

*ASSET SUMMARY (In Millions)*

| As of September 30, | 2013 | 2012 |
|---|---|---|
| Fund Balance with Treasury | $ 318.2 | $ 357.5 |
| Accounts Receivable, Net | 91.8 | 100.6 |
| Property & Equipment, Net | 107.8 | 100.0 |
| Other | 5.0 | 11.8 |
| **Total Assets** | **$ 522.8** | **$ 569.9** |

**Assets.** The NRC's total assets were $522.8 million as of September 30, 2013, representing a decrease of $47.1 million from the FY 2012 year-end total of $569.9 million. Changes in major categories include decreases of $39.3 million in the Fund Balance with Treasury, $8.8 million in Accounts Receivable, Net, and $6.8 million in Other Assets, offset by an increase of $7.8 million in Property & Equipment, Net.

The Fund Balance with Treasury was $318.2 million as of September 30, 2013, which accounts for 61 percent of total assets. This account represents appropriated funds and other funds maintained at the Treasury to pay for current liabilities and to finance authorized purchase commitments. The $39.3 million decrease in the fund balance from the prior year was primarily the result of decreases of $37.1 million in the beginning balance and $52.5 million in funding for new budget authority; offset by a $50.3 million decrease in gross outlays (disbursement activity). The decrease in gross outlays, which results in increasing the fund balance, was comprised primarily of decreases of $11.0 million in salaries and benefits disbursements, $3.5 million in travel costs, and $36.3 million in contract support services; offset by an increase of $0.5 million in grant disbursements.

Accounts receivable primarily consists of amounts that other Federal agencies and the public owe to the NRC for license fees. Accounts Receivable, Net, as of September 30, 2013, was $91.8 million, which included an offsetting allowance for doubtful accounts of $1.8 million. For FY 2012, the year-end Accounts Receivable, Net, balance was $100.6 million, including an offsetting allowance for doubtful accounts of $1.6 million.

Property and Equipment consist primarily of typical office furnishings, leasehold improvements, nuclear reactor simulators, and computer hardware and software. (The NRC has no real property. The land and buildings in which the NRC operates are leased from the General Services Administration.) At the end of FY 2013, net property and equipment was $107.8 million, an increase of $7.8 million from the FY 2012 amount of $100.0 million. The increase is primarily due to an increase of $8.6 million in leasehold improvements, mainly for improvements to the NRC Headquarters buildings; offset by a decrease of $0.8 million in IT software. Leasehold improvements were $87.5 million in FY 2013 and $78.9 million in FY 2012 and include improvements to the NRC's leased buildings for Headquarters, including the new Three White Flint North building, and regional offices. IT software was $18.8 million in FY 2013 compared to $19.6 million in FY 2012."

*LIABILITIES SUMMARY (In Millions)*

| As of September 30, | 2013 | 2012 |
|---|---|---|
| Accounts Payable | $ 38.0 | $ 43.2 |
| Federal Employee Benefits | 7.0 | 7.2 |
| Other Liabilities | 74.5 | 74.2 |
| **Total Liabilities** | **$ 119.5** | **$ 124.6** |

**Liabilities.** Total liabilities were $119.5 million as of September 30, 2013, representing a decrease of $5.1 million from the FY 2012 year-end balance of $124.6 million. Accounts Payable, Federal Employee Benefits, and Other Liabilities remained approximately the same as the prior year. At the end of FY 2013, Other Liabilities included $46.8 million in accrued annual leave; $10.4 million in accrued funded salaries and benefits; $6.6 million in grants payable; $5.3 million in advances received by the NRC for services that will be provided; $2.5 million in funded employee benefit contributions; $1.7 million in accrued workers' compensation; and $1.2 million in contract holdbacks, capital lease liability, and miscellaneous liabilities.

Total Liabilities included liabilities not covered by budgetary resources, which represent expenses recognized in the financial statements that will be paid from future appropriations. The liabilities not covered by budgetary resources were $55.5 million for FY 2013 compared to $56.9 million for FY 2012, a $1.4 million decrease. As of September 30, 2013, the liabilities not covered by budgetary resources represented 46 percent of total liabilities and included $46.8 million in unfunded accrued annual leave that has been earned but not yet taken, $1.7 million in accrued workers' compensation included in Other Liabilities, and $7.0 million as an actuarial estimate of accrued future workers' compensation expenses included in Federal Employee Benefits.

*NET POSITION SUMMARY (In Millions)*

| As of September 30, | 2013 | 2012 |
|---|---|---|
| Unexpended Appropriations | $ 242.7 | $ 285.1 |
| Cumulative Results of Operations | 160.6 | 160.2 |
| **Total Net Position** | **$ 403.3** | **$ 445.3** |

**Net Position.** The difference between Total Assets and Total Liabilities, Net Position, was $403.3 million as of September 30, 2013, which is a decrease of $42.0 million from the FY 2012 year-end balance. Net Position is comprised of two components: Unexpended Appropriations, the amount of spending authority that remains unused at the end of the year, and Cumulative Results of Operations, the cumulative excess of financing sources over expenses. Unexpended Appropriations were $242.7 million at the end of FY 2013, a decrease of $42.4 million from the end of FY 2012. Cumulative Results of Operations increased by $0.4 million from $160.2 million in FY 2012 to $160.6 million in FY 2013.

## Analysis of the Statement of Net Cost

The Statement of Net Cost represents the gross cost of the NRC's two programs (Nuclear Reactor Safety and Security and Nuclear Materials Safety and Security) as identified in the NRC Annual Performance Plan, offset by earned revenue. The purpose of this statement is to link program performance to the cost of programs. The NRC's Net Cost of Operations for the year ended September 30, 2013, was $210.9 million, representing an increase of $63.1 million over the FY 2012 net cost of $147.8 million. This includes an increase of gross costs of $11.0 million and a decrease in earned revenues of $52.1 million, which offset gross costs.

*NET COST OF OPERATIONS (In Millions)*

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| Nuclear Reactor Safety and Security | $ 70.8 | $ 8.4 |
| Nuclear Materials and Waste Safety and Security | 140.1 | 139.4 |
| **Net Cost of Operations** | **$ 210.9** | **$ 147.8** |

**Gross Costs.** The NRC's total gross costs were $1,063.1 million for FY 2013, an increase of $11.0 million from the prior-year amount of $1,052.1 million. The Nuclear Reactor Safety and Security program gross costs for FY 2013 were $831.1 million compared to FY 2012 gross costs of $824.1, an increase of $7.0 million, and the Nuclear Materials and Waste Safety and Security program gross costs were $232.0 million compared to FY 2012 gross costs of $228.0 million, an increase of $4.0 million.

The cost of achieving the agency's Safety and Security goals for the agency's programs for FY 2013 is the gross cost presented in the Statement of Net Cost. The total cost for achieving the agency's Safety goal was $995.1 million and the cost of achieving the agency's Security goal was $68.0 million (see Figure 11).

*Figure 11*
GROSS COSTS *(IN MILLIONS)*
*For the year ended September 30, 2013*


**Earned Revenue.** Total earned revenue as of September 30, 2013, was $852.2 million, a decrease of $52.1 million from the September 30, 2012, earned revenue of $904.3 million. The Nuclear Reactor Safety and Security program had revenues in FY 2013 of $760.3 million compared to FY 2012 revenues of $815.7 million, a decrease of $55.4 million primarily due to decreases in operating reactor annual fees of $43.7 million and full-cost new reactor fees of $22.0 million, offset by an increase in full-cost operating reactor fees of $10.3 million. The Nuclear Materials and Waste Safety and Security program had revenues from license fees in FY 2013 of $91.9 million in FY 2013 compared to $88.6 million in FY 2012, an increase of $3.3 million.

Fees collected (earned primarily in FY 2013) were $851.9 million compared to $894.4 million for FY 2012 (see Figure 9, page 18). The decrease was the result of reduced budget authority in FY 2013 which reduced the amount of fees from licensees that the NRC was required to collect. The NRC is required to collect approximately 90 percent of its new budget authority through license fee billing. Fees for reactor and materials licensing and inspections are collected in accordance with 10 CFR Part 170, "Fees for Facilities, Materials, Import and Export Licenses, and Other Regulatory Services under the *Atomic Energy Act of 1954*, as amended," and 10 CFR Part 171, "Annual Fees for Reactor Licenses and Fuel Cycle Licenses and Materials Licenses, Including Holders of Certificates of Compliance, Registrations, and Quality Assurance Program Approvals and Government Agencies Licensed by the NRC."

## ANALYSIS OF THE STATEMENT OF CHANGES IN NET POSITION

The Statement of Changes in Net Position reports the change in net position for the reporting period. Net position is affected by changes in its two components: Cumulative Results of Operations and Unexpended Appropriations. The decrease in Net Position in FY 2013 of $42.0 million, compared to FY 2012, was due to an increase of $0.4 million in Cumulative Results of Operations, offset by a decrease of $42.4 million in Unexpended Appropriations.

The increase in Cumulative Results of Operations of $0.4 million was primarily comprised of increases in the beginning balance of $55.0 million and financing sources of $7.1 million, offset by a reduction in the net cost of operations of $63.1 million. The net cost of operations decrease was due an increase in gross costs of $11.0 million and a decrease in earned revenue of $52.1 million.

A change in unexpended appropriations results primarily from appropriations received being more, or less, than appropriations used and adjustments (e.g., sequestration, rescission) during the fiscal year. In FY 2013, unexpended appropriations decreased $42.4 million from FY 2012. Appropriations received of $186.2 million consisted primarily of the NRC's total appropriation of $1,038.1 million, reduced by $851.9 million in fee collections. Adjustments to unexpended appropriations were due to the sequestration and rescissions totaling $52.5 million. In financing the $1,028.1 million cost of current year operations, the NRC consumed $851.9 million of license fees collected and $176.2 million in appropriations.

## ANALYSIS OF THE STATEMENT OF BUDGETARY RESOURCES

The Statement of Budgetary Resources provides information on budgetary resources available to the NRC and their status at the end of the period.

The Total Budgetary Resources for FY 2013 were $1,069.8 million, which was $38.3 million less than the $1,108.1 million available for FY 2012. The decrease was primarily due to the FY 2013 sequestration and rescission, which totaled $52.5 million, offset by an increase in the net unobligated balance from the prior-year budget authority of $14.9 million.

The Status of Budgetary Resources accounts for operational activities funded with the NRC's budgetary resources during the fiscal year. The NRC obligations at the end of FY 2013 totaled $1,027.1 million, a decrease of $18.1 million from the prior-year amount of $1,045.2 million. Budgetary resources not obligated at the end of the year were $42.7 million, a decrease of $20.2 million from the prior-year balance of $62.9 million.

Agency Outlays, Net, represents the gross outlays (funds disbursed during the year for current and prior-year expenses), reduced by offsetting collections (primarily for reimbursable work), and distributed offsetting receipts (funds collected from licensees to finance current-year operations). For FY 2013, the NRC's net outlays were $173.0 million compared to the FY 2012 outlays of $180.9 million, a decrease of $7.9 million. Net outlays were comprised of gross outlays, which decreased $50.3 million from the prior year ($1,036.6 million in FY 2013 compared to $1,086.9 million in FY 2012); offset by an increase in offsetting collections of $0.1 million ($11.7 million in FY 2013 compared to $11.6 million in FY 2012), and a decrease of $42.5 million for receipts for fees collected ($851.9 million in FY 2013 compared to $894.4 million in FY 2012).

# MANAGEMENT ASSURANCES, SYSTEMS, CONTROLS, AND LEGAL COMPLIANCE

This section provides information on NRC's compliance with the *Federal Managers' Financial Integrity Act of 1982* (Public Law 97-255), OMB Circular A-123, *Management's Responsibility for Internal Control, and the Federal Financial Management Improvement Act of 1996*.

## Federal Managers' Financial Integrity Act

The *Federal Managers' Financial Integrity Act of 1982* (Integrity Act) mandates that agencies establish internal control to provide reasonable assurance that the agency complies with applicable laws and regulations; safeguards assets against waste, loss, unauthorized use, or misappropriation; and properly accounts for and records revenues and expenditures. The Integrity Act encompasses program, operational, and administrative areas, as well as accounting and financial management. It also requires the Chairman to provide an assurance statement on the adequacy of internal controls and on the conformance of financial systems with Government-wide standards, shown below.

**U.S. NUCLEAR REGULATORY COMMISSION**

**FISCAL YEAR 2013**

**FEDERAL MANAGERS' FINANCIAL INTEGRITY ACT STATEMENT**

The U.S. Nuclear Regulatory Commission (NRC) managers are responsible for establishing and maintaining effective internal control and financial management systems that meet the objectives of the *Federal Managers' Financial Integrity Act* (Integrity Act). The NRC conducted its assessment of internal control over programmatic operations in accordance with Office of Management and Budget (OMB) Circular A-123, *Management's Responsibility for Internal Control* (A-123) guidelines. Based on the results of this evaluation, NRC can provide reasonable assurance that its internal control over programmatic operations is in compliance with applicable laws and guidance, and no material weaknesses were found as of September 30, 2013.

In addition, NRC conducted its assessment of the effectiveness of internal control over financial reporting, which includes safeguarding of assets and compliance with applicable laws and regulations, in accordance with the requirements of Appendix A of A-123. Based on the results of the evaluation, NRC can provide reasonable assurance that its internal control over financial reporting as of June 30, 2013, was operating effectively, and no material weaknesses were found in the design or operation of the internal control over financial reporting.

The NRC can also provide reasonable assurance that its financial systems substantially comply with applicable Federal accounting standards as required by the *Federal Financial Management Improvement Act of 1996*.

Allison M. Macfarlane
Chairman
U.S. Nuclear Regulatory Commission
December 16, 2013

## Programmatic Internal Control

Internal control is the organization, policy, and procedures that help managers achieve intended results and safeguard the integrity of their programs. NRC managers are responsible for designing and implementing effective internal control in their areas of responsibility. Each NRC business and corporate support product line manager prepares an annual assurance certification that identifies any control weaknesses requiring the attention of the NRC Executive Committee on Internal Control (ECIC). These certifications are based on internal control activities such as probabilistic risk assessments, as well as

other activities, such as Integrated Regulatory Review Service self-assessments, Construction and Reactor Oversight Process, Integrated Materials Performance Evaluation Program, Waste Confidence, Fukushima Dai-ichi Task Force Lessons Learned, Agency Action Review Meeting outcomes, financial statement audits, Inspector General and U.S. Government Accountability Office audits and reports, and other information provided by the congressional committees of jurisdiction.

The ECIC consists of senior executives from the Office of the Chief Financial Officer and the Office of the Executive Director for Operations. The agency's General Counsel and Inspector General participate as advisors.

The ECIC met to review the reasonable assurance certifications provided by the NRC business and corporate support product line managers. The ECIC then informed the Chairman as to whether the NRC had any internal control deficiencies serious enough to require reporting as a weakness or noncompliance.

The NRC's programmatic and financial internal control programs require that internal control deficiencies be documented and reported in business line quarterly performance reports and internal control plans. Together, both ensure that key issues receive senior management attention. Combined with the individual assurance statements discussed previously, the internal control information in these plans provides the framework for monitoring and improving the agency's internal control on an ongoing basis.

## FY 2013 Integrity Act Results

In FY 2013, the Chief Financial Officer (CFO) and the Executive Director for Operations (EDO) issued agency-wide programmatic internal control and reasonable assurance guidance that provided information on the planned implementation of an updated programmatic internal control framework. The updated framework, led by the agency's Branch Chief for Programmatic Internal Control and Planning, addressed the five GAO Standards for Internal Control, as well as GAO's Risk Assessment Monitoring Tool, and the Committee of Sponsoring Organizations of the Treadway Commission, Internal Control – Integrated Framework. The updated framework streamlined the agency's programmatic internal control processes, reduced administrative requirements on program and technical staff, better leveraged existing programmatic internal control activities across business lines, and significantly improved communication channels between the business lines, partner offices, and the corporate support offices.

As part of the FY 2013 guidance, NRC business and corporate support product lines were asked to certify that there was reasonable assurance that internal control was in place to achieve the following objectives:

- programs achieved their intended results, and are protected from waste, fraud, abuse, and mismanagement;
- resources were used consistently with the agency's mission;
- information systems were authorized and appropriately secured;
- laws and regulations were followed; and
- reliable and timely information was obtained, maintained, reported, and used for sound decision-making.

The NRC evaluated its updated programmatic internal control framework for the fiscal year ending September 30, 2013. Based on this evaluation, the NRC is able to provide a statement of assurance that its programmatic internal control met the objectives of the Integrity Act. The NRC has reasonable assurance that its internal control is effective and conforms to Government-wide standards.

## Office of Management and Budget Circular A-123, "Managements Responsibility for Internal Control"

### Internal Control Over Financial Reporting (Appendix A)

In FY 2006, the NRC implemented the requirements of the revised OMB Circular A-123, which defined and strengthened management's responsibility for internal control in Federal agencies. The revised circular included updated internal control standards. Appendix A requires Federal agencies to assess the effectiveness of internal controls over financial reporting and to prepare a separate annual statement of assurance as of June 30, 2013.

The NRC adopted a 3-year rotational testing plan for internal control over financial reporting. The agency determined that three of the nine key processes (financial reporting, revenue, and IT) were significant enough to include in the testing each year of the 3-year cycle. The remaining six key processes were to be tested once in the 3-year cycle, two each year. In FY 2013, the NRC continued its assessment of internal control

over financial reporting. The agency reevaluated its scope of financial reports, materiality values, risk assessments, key processes, and key controls. Based on the results of this evaluation, the NRC can provide reasonable assurance that its internal control over financial reporting was operating effectively as of June 30, 2013, and that the evaluation found no material weaknesses in design or operation of the internal controls over financial reporting.

## Requirements for Effective Measurement and Remediation of Improper Payments (Appendix C)

In FY 2011, OMB revised Appendix C, Parts I and II of OMB Circular A-123. Appendix C "Requirements for Effective Measurement and Remediation of Improper Payments," as amended, implemented the *Improper Payments Information Act* (IPIA) of 2002 and the *Improper Payments Elimination and Reporting Act* (IPERA) of 2010. The purpose of this guidance was to reduce improper payments, hold agencies accountable for reducing improper payments, and increase penalties for contractors who fail to timely disclose improper payments. The NRC complied with this guidance by incorporating improper payments testing into the FY 2011 OMB Circular A-123, Appendix A, assessment.

The FY 2011 testing yielded an estimated improper payment rate of 0.02 percent and an estimated improper payment amount of less than $27,000. These results fall below the IPERA thresholds of 2.5 percent of program outlays and $10 million, of all program or activity payments made, or $100 million. Therefore, after discussions with OMB, it was determined that the NRC would conduct this testing every 3 years, in accordance with the IPERA and OMB guidance. The next review is scheduled for FY 2014.

## Federal Financial Management Improvement Act

The *Federal Financial Management Improvement Act of 1996* (FFMIA) requires each agency to implement and maintain systems that comply substantially with (1) Federal financial system requirements, (2) applicable Federal accounting standards, and (3) the standard general ledger at the transaction level. FFMIA requires the Chairman to determine whether the agency's financial management system complies with FFMIA and to develop remediation plans for systems that do not comply.

## FY 2013 FFMIA Results

As of September 30, 2013, the NRC evaluated its financial systems and found that they comply with applicable Federal requirements and accounting standards required by FFMIA. In making this determination, the agency considered all available information, including the report from the ECIC on the effectiveness of internal control, Office of the Inspector General audit reports, and the result of the agency's financial management system reviews.

## Financial Management Systems Strategies

During FY 2013, the NRC continued to make substantial progress in modernizing its financial systems. System performance, data integrity, business processes, user expertise, and reporting were all enhanced for the Financial Accounting and Integrated Management Information System (FAIMIS) Core Financial System (CFS). The NRC specifically implemented additional user system training, developed a reporting dashboard and an interactive reporting tool, and further standardized job codes. Also, the NRC successfully developed both the NRC Strategic Acquisition System (STAQS) and STAQS software integration with FAIMIS. Both STAQS and the STAQS integration with FAIMIS will be implemented in FY 2014. This completes a major milestone in automating, streamlining, and integrating the NRC acquisition processes and fully automating the system with the agency's CFS. The agency also began implementing plans to move to the E-Gov Travel Service 2 (ETS2) system, which will be completed in FY 2014. Upgrades are planned in FY 2014 for both the FAIMIS and Time and Labor Modernization (TLM) system to address legislative requirements, strengthen controls, and further automate system processes. In addition, the Budget Formulation System (BFS) will be implementing a Spend Plan Tool to automate and enhance the agency's current funds utilization process. Also, the NRC is pursuing implementation of the FAIMIS Momentum software Invoice Approval Processing functionality within the CFS to improve the current approval process.

## Prompt Payment

The *Prompt Payment Act of 1982*, as amended, requires Federal agencies to make timely payments to vendors for supplies and services, to pay interest penalties when payments are made after the due date, and to take cash discounts when they are economically justified. In FY 2013, the NRC paid 97 percent of the 8,759 invoices subject to the Prompt Payment Act on time.

## Debt Collection

The *Debt Collection Improvement Act of 1996* enhances the ability of the Federal Government to service and collect debts. The agency's goal is to maintain the level of delinquent debt owed to the NRC at year end to less than 1 percent of its annual billings. The NRC met this goal. At the end of FY 2013, delinquent debt was $7.5 million or 1 percent of annual billings. The NRC was able to refer 97.4 percent of all eligible debt over 180 days delinquent to the Treasury for collection. This success was due to an extensive cleanup effort resulting from the deployment of a new accounting system and process changes. The NRC hopes to continue this success through FY 2014.

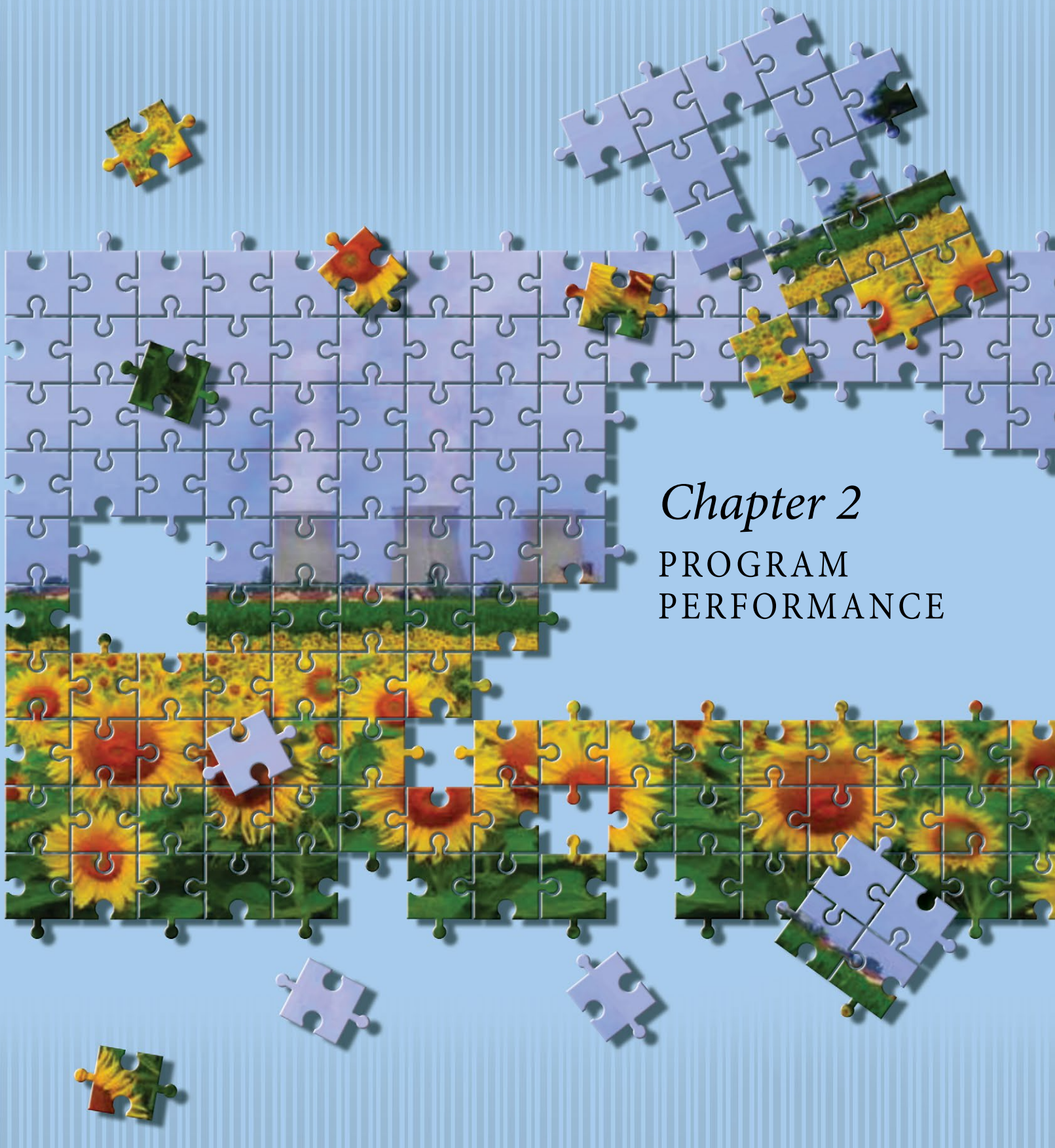
## Biennial Review of User Fees

The *Chief Financial Officers Act of 1990* requires agencies to conduct a biennial review of fees, royalties, rents, and other charges imposed by agencies and to make revisions to cover program and administrative costs incurred. Each year, the NRC revises the hourly rates for license and inspection fees and adjusts the annual fees to meet the fee collection requirements of *OBRA-90,* as amended, which requires the NRC to recover through fees approximately 90 percent of its budget authority in FY 2013, not including amounts appropriated for Waste Incidental to Reprocessing (WIR) and amounts appropriated for generic homeland security activities.

On July 1, 2013, the NRC issued a final rule in the *Federal Register* amending the licensing, inspection, and annual fees charged to its applicants and licensees. Based on the *Consolidated and Further Continuing Appropriations Act of 2013*, the NRC's required fee recovery amount for the FY 2013 budget was projected at approximately $864.0 million. After accounting for billing adjustments, the total amount to be billed as fees to licensees was $859.6 million. The NRC Fee Recovery Schedules for FY 2013 is located at http://www.gpo.gov/fdsys/pkg/FR-2013-07-01/pdf/2013-15529.pdf

## Inspector General Act of 1978

The NRC has established and continues to maintain an excellent record in resolving and implementing Office of the Inspector General open audit recommendations.



# *Chapter 2*

# PROGRAM PERFORMANCE

*Crystal River Nuclear Generating Plant, Crystal River, FL*

# MEASURING AND REPORTING

This chapter presents detailed information on the performance of the U.S. Nuclear Regulatory Commission (NRC) in achieving its mission during FY 2013. It describes the NRC's performance results and program achievements in accomplishing its two strategic goals of Safety and Security.

The NRC mission is to license and regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure the adequate protection of public health and safety, promote the common defense and security, and to protect the environment. The agency's Safety goal is to ensure adequate protection of public health and safety and the environment. The agency achieves this goal by ensuring that the performance of licensees is at or above acceptable safety levels. The agency's Security goal is to ensure adequate protection in the secure use and management of radioactive materials. The NRC is vigilant in ensuring the security of nuclear facilities and materials. The agency achieves its Security goal using licensing and oversight programs for licensees similar to those employed in achieving its Safety goal. The NRC's safety and security activities are carried out through two major programs: Nuclear Reactor Safety, consisting of the Operating Reactors and New Reactors business lines; and Nuclear Materials and Waste Safety, consisting of the Fuel Facilities, Nuclear Material Users, Spent Fuel Storage and Transportation, and Decommissioning and Low-Level Waste business lines.

The NRC's safety research program evaluates and resolves safety issues for nuclear power plants and other facilities and materials that the agency regulates. The agency conducts its research program to evaluate existing and potential safety issues; supply independent expertise, information, and technical judgments to support timely and realistic regulatory decisions; reduce uncertainties in risk assessments; and develop technical regulations and standards. When appropriate to support its regulatory mission, the agency engages in cooperative research with other Government agencies, the nuclear industry, universities, and international partners.

In addition, this chapter describes the agency's progress in achieving its Organizational Excellence Objectives of Openness, Effectiveness, and Operational Excellence. It also presents information on data sources, data quality, and the completeness and reliability of performance data.

## STRATEGIC GOAL 1: SAFETY

Ensure Adequate Protection of Public Health and Safety and the Environment

### Strategic Outcomes

The strategic outcomes specify the conditions under which an assessment can be made about whether the NRC has met its Safety goal. The NRC's Safety goal has five strategic outcomes that determine whether the agency has achieved its objective of ensuring adequate protection of public health and safety and the environment:

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

In FY 2013, the NRC achieved all of its Safety goal strategic outcomes.

### Performance Measures

The NRC also uses annual performance measures to assess whether the agency met its Safety goal. Performance measures are aligned at a lower risk level than the strategic outcomes. As such, not fully achieving a performance measure may not cause harm to the public or environment. Missing an annual performance measure signals that safety levels might be deteriorating at the agency strategic outcomes level. If the NRC misses a performance measure, the agency will take corrective actions to bring the measure back into the target range. Table 3 below shows the agency's annual safety performance measures and results from FY 2008 - 2013.

*Table 3*

## FY 2013 Safety Goal Performance Measures

1. Number of new conditions evaluated as red by the NRC's Reactor Oversight Process.[1]

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 3 |
| Actual | 0 | 0 | 0 | 1 | 1 | 0 |

*[1]This measure is the number of new red inspection findings during the fiscal year 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 Reactor Oversight Process (ROP) external Web page was updated to show the red indicator.*

2. Number of significant accident sequence precursors[2] (ASPs) of a Nuclear Reactor Accident.

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

*[2]Significant Accident Sequence Precursor events have a conditional core damage probability (CCDP) or ΔCDP of > 1x $10^{-3}$. Such events have a 1/1000 (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.*

3. Number of operating reactors with integrated performance that entered the multiple/repetitive degraded cornerstone column or the unacceptable performance column of the Reactor Oversight Process Action Matrix, or the Inspection Manual Chapter 0350 process is ≤ 3 with no performance leading to the initiation of an Accident Review Group.[3]

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | ≤ 4 | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 3 |
| Actual | 0 | 0 | 0 | 2 | 1 | 0 |

*[3]This measure is the number of plants that have entered the Inspection Manual Chapter (IMC) 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 Web Action Matrix Summary page, which provides a matrix of the five columns with the plants listed within their applicable column and notes the plants in the IMC 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).*

4. Number of significant adverse trends in industry safety performance is ≤1[4].

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | ≤ 1 | ≤ 1 | ≤ 1 | ≤ 1 | ≤ 1 | ≤ 1 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

*[4]Considering all indicators qualified for use in reporting.*

*Table 3*

## FY 2013 Safety Goal Performance Measures *(continued)*

5. Number of events with radiation exposures to the public or occupational workers that exceed Abnormal Occurrence Criterion I.A.3[5].

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Reactors Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |
| Materials Target | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |
| Waste Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

[5]*Releases for which a 30-day report under Title 10 of the Code of Federal Regulations (10 CFR) 20.2203(a)(3) is required.*

6. Number of radiological releases to the environment that exceed applicable regulatory limits[6].

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Reactors Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |
| Materials Target | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 | ≤ 2 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |
| Waste Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

[6]*With no event exceeding Abnormal Occurrence Criterion I.B.*

# FY 2013 Safety Performance Measures Results

### *1. Reactor Oversight Process*

The NRC reactor inspection program monitors nuclear power plant performance in three areas: (1) reactor safety, (2) radiation safety, and (3) security. Analysis of plant performance is based on many performance indicators and inspection findings. Each finding is then sorted into one of four categories in order of increasing significance: green, white, yellow, or red. A red finding signals a significant reduction in the safety margin in the area measured by the performance indicator and is considered unacceptable. There were no new red findings in FY 2013.

### *2. Reactor Significant Precursors*

This statistical measure of risk determines the likelihood of an event adversely affecting safety. A significant precursor is an event that has a probability of 1 in 1,000 (or greater) of leading to substantial damage to the reactor fuel. As of November 20, 2013, no significant precursors have been identified for FY 2013.

### *3. Reactor Performance*

The conditions in this measure indicate whether the NRC finds significant performance issues in a plant during an inspection or based on performance indicators under the Reactor Oversight Process (ROP). A degraded cornerstone for a reactor is one for which two or more white conditions or one yellow condition are identified. A multiple degraded cornerstone is one for which two or more cornerstones are degraded in any one quarter. A repetitive degraded cornerstone is one for which three or more white conditions or one white and one yellow condition are identified for more than four consecutive quarters. If any of the conditions in this measure occur, the NRC will take action to ensure that plant safety is improved. More information on the ROP can be found at http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html. There has been a recent increase in findings of degraded cornerstones over previous years, though the totals

have remained less than the threshold, and no new plants entered the multiple/degraded cornerstone column of the ROP Action Matrix or the IMC 0350 process in FY 2013. Appropriate regulatory actions dictated by the ROP Action Matrix have been initiated for these plants. The NRC continues to carefully monitor and assess the performance at these facilities.

### *4. Reactor Safety Trends*

This measure tracks trends for several key indicators of industry safety performance. These indicators provide insights into major areas of reactor performance, including reactor safety, radiation safety, and emergency preparedness. Statistical analysis techniques are applied to each indicator to calculate long-term trends. These trends represent industry averages rather than individual plant performance. No statistically significant adverse trends were identified in FY 2013.

### *5. Radiation Exposures from Nuclear Material*

This measure tracks the number of instances in which the public and occupational workers have been exposed to radiation that exceeds Abnormal Occurrence (AO) Criterion I.A.3, which is defined as those events that produce unintended permanent functional damage to an organ or a physiological system, as determined by a physician. This measure tracks both nuclear reactors and other nuclear material users, such as hospitals and industrial users. There were no events identified that met AO Criterion I.A.3 during FY 2013.

### *6. Nuclear Material Releases to the Environment*

This measure indicates the effectiveness of the NRC's nuclear material environmental regulatory programs. Exceeding the applicable regulatory limits is defined as a release of radioactive material that causes a total effective radiation dose equivalent to individual members of the public greater than 0.1 roentgen equivalent man (rem) in a year, exclusive of dose contributions from background radiation. There were no nuclear material releases to the environment that exceeded regulatory limits in FY 2013.

## STRATEGIC GOAL 2: SECURITY

**Ensure Adequate Protection in the Secure Use and Management of Radioactive Materials**

## Strategic Outcomes

The NRC has the following strategic outcomes associated with its goal of ensuring the secure use and management of radioactive materials:

- Prevent any instances where licensed radioactive materials are used domestically in a manner hostile to the security of the United States.
- Prevent unauthorized public disclosures of classified or Safeguards Information through quality measures.

The strategic outcomes specify the conditions that must be met for the agency to achieve its Security goal. In FY 2013, the NRC achieved its Security goal strategic outcomes.

## Performance Measures

The NRC also uses annual performance measures to assess whether the agency met its Security goal. Performance measures are aligned at a lower risk level than the strategic outcomes. As a result, not fully achieving a performance measure may not represent an adverse security impact on the public or environment. Missing an annual performance measure signals that security levels might have deteriorated at the agency strategic outcomes level. If the agency misses a performance measure, the agency will take corrective actions to bring the measure back into the target range. Table 4 shows the agency's annual Security performance measures and results from FY 2008 - 2013.

*Table 4*

## FY 2013 Security Goal Performance Measures

1. Unrecovered losses of risk-significant[1] radioactive sources.

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 1[2] | 0 | 0 |

[1] *"Risk-significant" is defined as any unrecovered lost or abandoned sources that exceed the values listed in Appendix P to 10 CFR 110 – Category 1 and 2 Radioactive Material. 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 locations (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. (This includes licenses under the Agreement States.)*

[2] *There were no losses and one theft of radioactive nuclear material that the NRC considered to be risk-significant during FY 2011.*

2. Number of substantiated[3] cases of actual theft or diversion of licensed, risk-significant radioactive sources or formula quantities[4] of special nuclear material; or attacks that result in radiological sabotage[5].

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

[3] *"Substantiated" means a situation where an indication of loss, theft, or unlawful diversion cannot be refuted following an investigation and requires further action on the part of the agency or other proper authorities.*

[4] *A formula quantity of special nuclear material is defined in 10 CFR 70.4, "Definitions."*

[5] *"Radiological sabotage" is defined in 10 CFR 73.2, also titled "Definitions."*

3. 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 by substantial breakdown of the Accountability System.

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

*Table 4*

## FY 2013 Security Goal Performance Measures *(continued)*

4. Number of substantial breakdowns[6] of physical security or material control (i.e., access control, containment, or accountability systems) that significantly weakened the protection against theft, diversion, or sabotage.

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | ≤ 1 | ≤ 1 | ≤ 1 | ≤ 1 | ≤ 1 | ≤ 1 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

[6]*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.*

5. Number of significant unauthorized disclosures[7] of classified and/or Safeguards Information.

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|---|---|---|---|---|---|---|
| Target | 0 | 0 | 0 | 0 | 0 | 0 |
| Actual | 0 | 0 | 0 | 0 | 0 | 0 |

[7]*"Significant unauthorized disclosure" is defined as a disclosure that harms national security or public health or safety.*

## FY 2013 Security Performance Measures Results

### *1. Unrecovered Losses or Thefts*

This measure tracks any loss or theft of radioactive nuclear sources that the NRC has determined to be of significant risk. The measure tracks the agency's performance in ensuring the proper accounting for radioactive sources of significant risk that could be used for malicious purposes. There were no losses or thefts of radioactive nuclear material that the NRC determined to be risk-significant during FY 2013.

### *2. Thefts or Diversion*

This measure tracks whether NRC-licensed facilities maintain adequate protective capabilities to prevent theft or diversion of nuclear material or sabotage that could result in substantial harm to the public health and safety. No incidents of this nature took place during FY 2013.

### *3. Loss or Inventory Discrepancy*

This measure tracks whether special nuclear material is accounted for and whether losses of this material do not occur that could lead to the creation of an improvised nuclear device or other type of nuclear device. The measure also tracks whether the systems in place at NRC-licensed facilities maintain accurate inventories of the special nuclear material that the facilities process, use, or store. In FY 2013, no losses of formula quantities of special nuclear material occurred.

### *4. Substantial Breakdowns of Physical Security*

This measure tracks any breakdowns in access control, containment, or accountability systems that significantly weakened the protection against theft, diversion, or sabotage for nuclear materials the agency has determined to be of significant risk. No substantial breakdowns in physical security took place in FY 2013.

### *5. Significant Unauthorized Disclosures*

This measure includes significant unauthorized disclosures of classified or Safeguards Information that cause damage to national security or public safety. This measure tracks whether information that can harm national security (classified information) or cause damage to the public health and safety (Safeguards Information) has been stored and used in ways that will prevent its disclosure to the public, terrorist organizations, other nations, or personnel without a need to know. No incidents of this nature happened during FY 2013.

# NUCLEAR REACTOR SAFETY PROGRAMS

The NRC engages in a comprehensive regulatory program that oversees the activities of its licensees. The core of its regulatory program is its licensing, oversight, research, rulemaking, and international activities. Following is a description of the safety and security activities during FY 2013 that resulted in achievement of the Safety and Security goals, strategic outcomes, and performance measure targets for the Operating Reactors and New Reactors business line activities.

## Operating Reactors

### Operating Reactors Licensing

#### *Licensing Activity*

The agency's nuclear reactor licensing activity ensures that civilian nuclear power reactors and test and research reactors are operated in a manner that adequately protects public health and safety and the environment while safeguarding radioactive material used in nuclear reactors. Licenses establish specific technical and operating standards for individual licensees. In FY 2013, the NRC completed 668 licensing actions.

Licensees are performing updated assessments of the flooding hazards for their sites in response to the lessons learned from the Fukushima Dai-ichi event and the NRC's March 11, 2012, 10 CFR 50.54(f) letter (ADAMS ML12053A340). By March 12, 2013, licensees at 22 sites provided their updated flooding hazard assessments. The industry has stated that up to half of the 22 sites could identify flooding hazards in excess of their current licensing basis. Licensees who determine that their updated flooding hazard is more severe than the flooding hazard accounted for in their facility's design/licensing basis will propose interim actions to adequately protect the facility from the updated flooding hazard. These interim actions will be implemented while the licensees perform a more detailed integrated assessment to evaluate the facility's capability to respond to the reevaluated hazard. The NRC is reviewing the updated information provided. The balance of the reactor sites will provide their updated flooding hazard assessments before March 12, 2015.

In FY 2013, the NRC completed the review of licensee responses and summarized the information in the summary report, Bulletin 2012-01, "Design Vulnerabilities in Electric Power Systems." Bulletin 2012-01 discusses a condition where a loss of a single phase of offsite power may cause some plant equipment to trip, but the power loads are not transferred to the emergency diesel generators because the station continues to receive power through the other two phases. The review concluded that the design vulnerability exists at all plants, including the new reactors at the Vogtle and V.C. Summer sites, and recommended that the NRC take further regulatory actions to address the design vulnerability. The NRC is working with the industry to address this issue.

The agency conducted reviews related to National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light-Water Reactor Electric Generating Plants," during the fiscal year. The first non-pilot reviews were completed, and 19 reviews were underway. While the NRC leverages efforts from lessons learned from the pilot applications, the complexities of resolving items, such as new site-specific issues and unapproved methodologies, has precluded efficiencies from being achieved in the first non-pilot reviews completed in FY 2013. The NRC plans to resolve the unapproved methodologies, enabling more efficient completion of the remaining reviews. The volume of the NFPA 805 work will peak in early FY 2014.

During FY 2013, the NRC issued Final Interim Staff Guidance Augmenting NUREG-1537, "Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors," for licensing radioisotope production facilities and aqueous homogeneous reactors. This guidance will assist in the preparation and review of license applications for medical isotope production facilities. The agency also published NUREG-1022, rev 3, "Event Reporting Guidelines 10 CFR 50.72 and 50.73; Final Report," updated for the first time since 2000. The update resolved several longstanding misinterpretations of and clarifications to Revision 2 of the document.

On March 26, 2013, SHINE Medical Technologies submitted part one of the two-part construction permit application for a medical radioisotope facility, which primarily consisted of an

environmental report. In support of the SHINE environmental review, NRC staff conducted a public scoping meeting and site audit in July 2013. On May 31, 2013, SHINE Medical Technologies, Inc. submitted the second and final part of its two-part construction permit application. Following the formal acceptance and docketing of part two of SHINE's construction permit application, NRC staff will begin a detailed technical evaluation of the preliminary safety analysis report. This is the first application submitted to the NRC for a facility intending to produce molybdenum-99 (Mo-99) using low-enriched uranium technology. Letters of intent for facilities to produce Mo-99 have also been received from Coqui Radiopharmaceuticals, Northwest Medical Isotopes, Eden Radioisotopes, University of Missouri Research Reactor, and Flibe Energy. On August 9, 2013, Northwest Medical Isotopes requested and exemption from NRC regulations to allow them to submit a construction permit application in two parts.

## *Power Uprates*

The NRC also evaluates nuclear reactor power uprate applications, which allow licensees to safely increase the power output of their plants. The NRC review focuses on the potential impacts of the proposed power uprate on overall plant safety and confirms that plant operation at the increased power level is safe.

The NRC approved two power uprates in FY 2013. These projects added 116 megawatts electric (MWe) to the Nation's electric generating capacity. This brings the total number of power uprates approved since 1977 to 148, resulting in a combined increase of about 20,586 MWt (6,862 MWe) to the Nation's electric generating capacity. These were measurement uncertainty recapture (MUR) actions. No extended power uprates (EPUs) or stretch power uprates (SPUs) were issued in FY 2013.

## *License Renewal*

The NRC grants reactor operating licenses for 40 years, which can be renewed for additional 20-year periods. The review process for renewal applications is designed to assess whether a reactor can continue to be operated safely during the extended period. To renew a license, the utility must demonstrate that aging will not adversely affect passive, long-lived structures or components important to safety during the renewal period. Additionally, the agency assesses the potential impacts of the extended period of operation on the environment. Inspectors travel to the nuclear reactor facility to verify the information in the licensee renewal application and confirm that aging management programs have been or are ready to be implemented. Following the safety review, the NRC prepares and makes available to the public a safety evaluation report.

The Indian Point license renewal review, due to a number of complex contentions that are pending in the license renewal adjudication (the most contentions ever filed in a license renewal proceeding), has resulted in a review schedule extending beyond the initial period of operation for Indian Point, Unit 2. Therefore, as of September 29, 2013, Indian Point, Unit 2, entered "timely renewal." Timely renewal for license renewal occurs when a licensee (in this case, Entergy) has filed a sufficient application for renewal of either an operating license or a combined license at least 5 years before the expiration of the existing license. Entergy filed an application for renewal of the operating license for Indian Point, Units 2 and 3, on April 30, 2007. The existing license will not be deemed to have expired until the application has been finally determined, consistent with 10 CFR 2.109. Since Entergy filed a timely license renewal application, the licenses will remain in effect until the NRC has made a decision on the license renewal application. Under "timely renewal," Entergy is obliged to operate Indian Point, Unit 2, under the terms of its existing license. All applicable NRC requirements, including those imposed by the operating license, continue to apply during the pendency of the license renewal review. Additionally, Entergy informed the NRC that the Indian Point, Unit 2, aging management commitments were implemented prior to entering timely renewal.

The NRC had previously issued the Waste Confidence Decision and Rule, representing the generic determination by the NRC that spent nuclear fuel can be stored safely and without significant environmental impacts for a period of time after the end of the licensed life of a nuclear power plant. The Decision was used as part of the generic basis for reactor license renewals. On June 8, 2012, the U.S. Court of Appeals for the DC Circuit found that some aspects of the 2010 Decision did not satisfy the NRC's National Environmental Policy Act obligations and vacated and remanded the Decision and Rule. The agency developed revised template language for its Supplemental Environmental Impact Statement (SEIS) for license renewals for nuclear power plants to ensure that

environmental reviews continue as required by Commission Order (CLI-12-16), Memorandum and Order on Waste Confidence. This template language was included in the draft license renewal SEIS for South Texas Project, which was issued for public comment on December 5, 2012. The Order indicates that all licensing reviews and proceedings should continue to move forward. It also indicates that the Commission will not issue final licenses dependent upon the Waste Confidence Decision until the court's remand is appropriately addressed. Therefore, no new license renewals will be issued until the Waste Confidence Generic Environmental Impact Statement and rule are issued. The NRC published draft versions of these documents for public comment in September 2013. The final Waste Confidence documents are expected to be published in August 2014.

## Operating Reactors Oversight

### *Nuclear Reactor Inspection*

The NRC provides continuous oversight of nuclear reactors through the ROP to verify that nuclear plants are operated safely and in accordance with the agency's rules and regulations. The NRC performs a rigorous program of inspections at each plant and might perform supplemental inspections and take additional actions to ensure that the plants address significant safety issues. The NRC has at least two full-time resident inspectors at each nuclear power plant site to ensure that facilities are meeting NRC regulations. Inspectors from NRC regional offices and Headquarters are also used in the inspection program. The NRC has full authority to take action to protect public health and safety, up to and including shutting a plant down. The NRC also conducts public meetings with licensees to discuss the results of the agency's assessments of their safety performance.

ROP enhancements, including an independent review of the ROP's objectives and implementation, have been a focus area for FY 2013 and beyond. Specifically, the agency is evaluating the Baseline Inspection Program to determine if and how it can better meet ROP objectives. The independent review of the ROP will include review of the relative roles of the NRC's headquarters and the regions interactions with industry over performance indicator assessments and the effectiveness of NRC's assessment of substantive cross-cutting issues.

Browns Ferry Unit 1 remains in the multiple/repetitive degraded cornerstone column of the action matrix since transitioning in the 1st quarter of FY 2011 because of one red finding involving the failure to establish adequate testing programs to ensure that motor-operated valves remain capable of performing their safety functions. Because its testing program was inadequate, the licensee failed to detect a valve failure that rendered one loop of the low-pressure coolant injection system incapable of fulfilling its safety function. Additional inspections at Browns Ferry have continued into FY 2013.

Having been placed into the unacceptable performance column of the ROP Action Matrix in FY 2011, the Fort Calhoun Station has been under enhanced NRC oversight since the beginning of FY 2012 under Inspection Manual Chapter (IMC) 350, "Oversight of Reactor Facilities in a Shutdown Condition Due to Significant Performance and/or Operational Concerns." A condition evaluated as red was also noted in FY 2012 but became moot when the station was placed under the IMC 0350 process. In November 2012, the NRC issued the "U.S. Nuclear Regulatory Commission Manual Chapter 0350 Panel Fort Calhoun Station Restart Checklist Basis Document." The outcome of the licensee's actions described in the basis document will be used by the IMC 0350 Panel to assess the plant's readiness for restart. The NRC conducted a public meeting in Omaha, NE to discuss the status of Fort Calhoun's recovery activities.

By February 28, 2013, licensees, with the exception of Crystal River, Unit 3, which was granted a schedule relaxation, provided the integrated plans required by the NRC's March 12, 2012, Tier 1, orders resulting from the NRC's Near Term Task Force recommendations in response to the Fukushima Dai-ichi accident in March 2011. The NRC has targeted completion of all draft safety evaluations with open items, if necessary, by November 29, 2013. The review schedules are staggered by licensee refueling outages, with those having spring 2013 outages being reviewed first.

During the 2nd quarter of FY 2013, the agency was advised that Crystal River and Kewaunee would be permanently shut down and decommissioned. The NRC informed licensees Dominion Energy and Progess Energy respectively, that the NRC was terminating the ROP for Kewaunee and Crystal River and beginning the decommissioning inspection program.

*San Onofre Nuclear Generating Station, San Clemente, CA*

Units 2 and 3 of the San Onofre Nuclear Generating Station (SONGS) have been in an extended shutdown since January 2012. On June 7, 2013, Southern California Edison Co. announced it will permanently shut down the station.

On August 27, 2013, it was announced that the Vermont Yankee nuclear power reactor would become the fifth reactor to permanently cease operations.

As Kewaunee, Crystal River, SONGS, and Vermont Yankee transition from operations into the decommissioning process, the NRC will continue safety and security oversight of the plants to ensure protection of workers and the public.

## *Investigations and Enforcement*

The NRC will not permit licensees to continue to conduct licensed activities if they cannot achieve and maintain adequate levels of safety. A total of 102 investigations of wrongdoing related to operating reactors were opened during FY 2013. In addition, the NRC processed 26 escalated enforcement cases for operating reactor facilities.

In February 2013, the president of Pentas Controls, Inc. (a nuclear vendor), admitted he made material false statements to the NRC's Office of Investigations while under oath. Because of the egregiousness of the actions of the vendor in this case, the Department of Justice (DOJ) decided to prosecute. He pled guilty, was convicted of a felony, and sentenced in Federal court. In exchange for his guilty plea, the president of Pentas Controls will serve five years of probation during which time he will complete several conditions that the NRC developed that were included in DOJ's global settlement agreement and which the NRC will monitor.

During FY 2013, the NRC received special deputization authority from the U.S. Marshals Service for the agency's criminal investigators.

## *The Industry Trends Program*

In addition to its annual performance measures, the NRC measures the effectiveness of its Nuclear Reactor Safety program based on its Industry Trends program. The results of this program provide stakeholders with a long-term view of the agency's performance. The NRC compiles data on overall safety performance using several industry-level performance indicators, a number of which are described below. These trends, which are derived through statistical analysis of the indicators, show significant improvement for safety performance of nuclear power plants over the long term. An increase or decrease in an indicator from one year to the next does not necessarily affect the long-term statistical trend. Plant operating experience data have yielded a steady stream of improvements in the reliability of plant systems and components, plant operating procedures, training of power plant operators, and regulatory oversight. All the charts in this section display data since 1993.

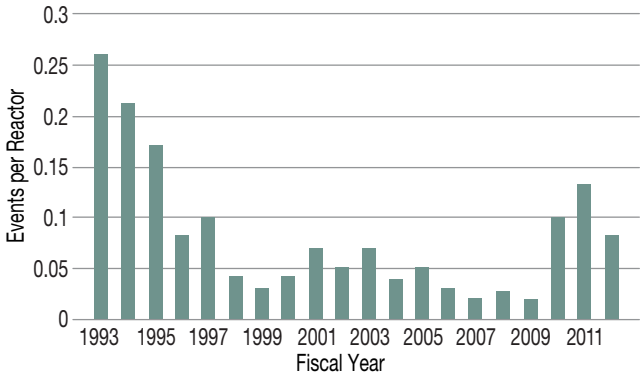
The industry safety indicators are derived through engineering and scientific analyses by the agency. Because of the time needed to complete the analyses, the industry trends that reflect the FY 2013 results will not be available until the spring of calendar year 2014. The performance indicator results are subject to minor variations as licensees submit revisions to the source data and may differ slightly from data reported in previous years as a result of refinements in data quality. The results of these analyses are reported annually to both the Commission and to Congress.

The latest analysis, "Fiscal Year 2012 Results of the Industry Trends Program for Operating Power Reactors," can be found on the NRC's public Web site: http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2013/2013-0038scy.pdf. Except for the Precursor Occurrence Rate, the data shown are from FY 1993 through FY 2012.

## Significant Events

Significant events meet specific criteria such as degradation of important safety equipment. The agency reviews operating events and assesses their safety significance. The number of significant events has been on a long-term downward trend since 1993.

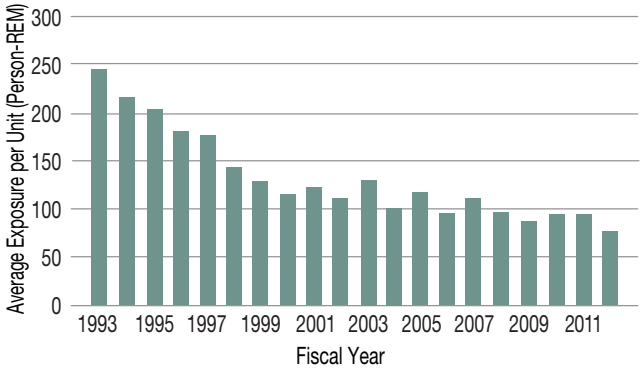
*Figure 12*
SIGNIFICANT EVENTS




## Radiation Exposure

The total (collective) radiation dose received by workers is an indication of the radiological challenges of maintaining and operating nuclear power plants. The trend shows a reduction in collective dose and demonstrates the effectiveness of the controls on radiation exposure implemented to meet these challenges.

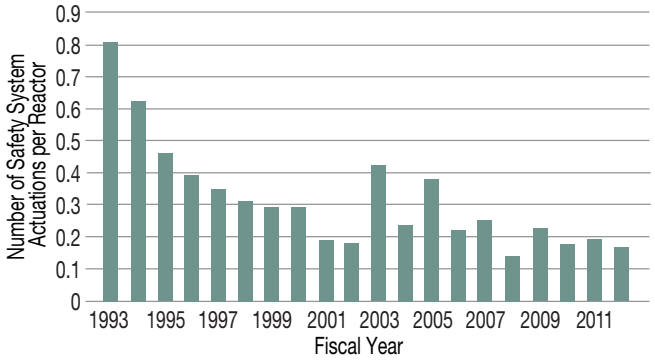
*Figure 13*
RADIATION EXPOSURE




## Safety System Actuations

Safety systems mitigate off-normal events, such as the widespread power blackout in August 2003, by providing reactor core cooling and water addition. Actuations of safety systems that are monitored include certain emergency core cooling and emergency electrical power systems. Actuations can occur as a result of "false alarms" (such as testing errors) or in response to actual events. Despite a leveling off in the actuation rates since 2008, the long-term statistical trend has been declining.

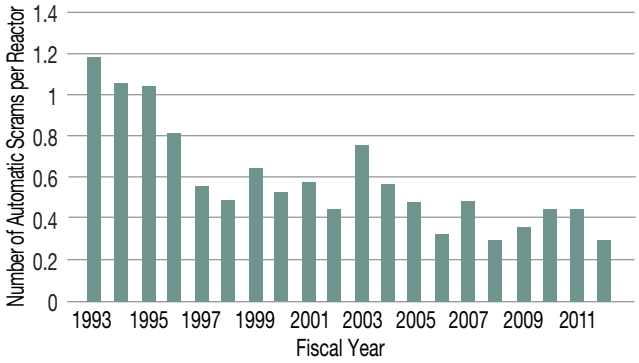
*Figure 14*
SAFETY SYSTEM ACTUATIONS




## Automatic Scrams

A scram is a basic reactor protection safety function that shuts down the reactor by inserting control rods into the reactor core. Scrams can result from events that range from relatively minor incidents to precursors of accidents. The massive power blackout in August 2003 accounts for most of the increase in FY 2003, but it has not affected the long-term statistical trend for number of scrams, which has been declining steadily despite spikes within a fiscal year.

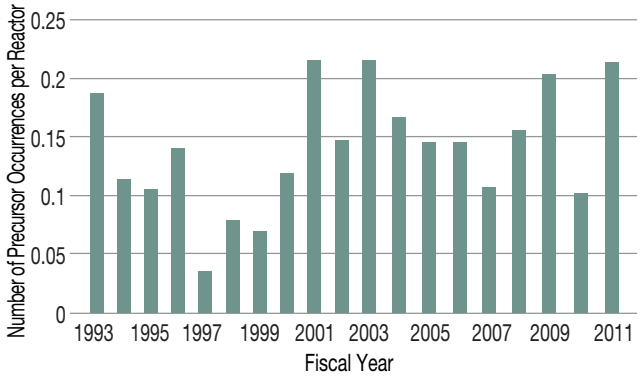
*Figure 15*
AUTOMATIC SCRAMS



### Precursor Occurrence Rate

A precursor event is an event that has a probability of greater than 1 in 1 million of leading to substantial damage to the reactor fuel. There is no statistically significant adverse trend in the occurrence rate of precursor events since 1993, the baseline year for the statistical analysis. In addition, no statistically significant trend is detected for all precursors during the FY 2001–2011 period. Due to the complexities associated with evaluating precursor events, the data always lag behind other indicators. Thus, data for FY 2012 will not be available until the spring of 2014.

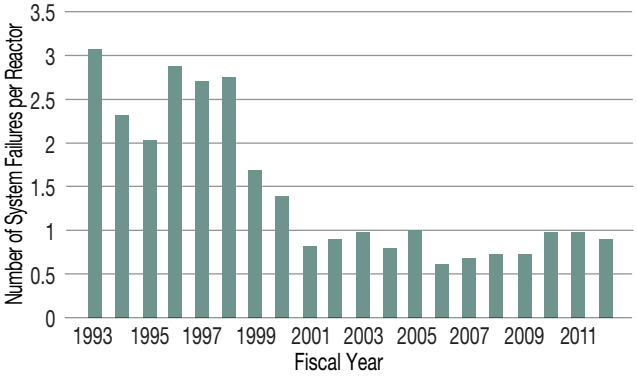
*Figure 16*
PRECURSOR OCCURRENCE RATE




### Safety System Failures

Safety system failures include any events or conditions that could prevent a safety system from fulfilling its safety function. The statistical trend for the number of safety system failures across the industry has been declining.

*Figure 17*
SAFETY SYSTEM FAILURES




*Seismic Hazards Inspection*

## *Fukushima Regulatory Review*

After the accident at Japan's Fukushima Dai-ichi in March 2011, the NRC conducted a systematic and methodical review of NRC processes and regulations to determine whether the agency should make additional improvements to its regulatory system and to provide recommendations to the Commission for its policy direction. The NRC's Near-Term Task Force developed recommendations related to lessons learned from the Fukushima Dai-ichi event and published its report on July 12, 2011. Following the issuance of this report, the NRC staff prioritized the report's recommendations and provided this prioritization for Commission approval in two Commission papers dated September 9 and October 3, 2011. The Commission approved the NRC staff's prioritization by Staff Requirement Memoranda dated October 18 (SECY-11-0124) and December 15, 2011(SECY-11-0137).

The NRC issued a letter to operating reactor licensees that addresses the impacts of the Fukushima-related activities on the operating reactor regulatory and licensing reviews. The agency also issued key products during FY 2013 to sustain progress on Fukushima Lessons Learned. For flooding and seismic reevaluations, the agency issued (1) JLD-ISG-2012-04, "Guidance on Performing a Seismic Margin Assessment in Response to the March 2012 Request for Information Letter," (2) JLD-ISG-2012-05, "Performance of the Integrated Assessment for External Flooding," (3) JLD-ISG-2012-06, "Guidance for Performing a Tsunami, Surge or Sieche Hazard Assessment," and (4) JLD-ISG-2013-01,

"Guidance for Assessment of Flooding Hazards Due to Dam Failure." The agency also endorsed the Electric Power Research Institute's (EPRI's) report, "Seismic Evaluation Guidance: Screening, Prioritization and Implementation Details (SPID) for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic." The SPID provides one method for nuclear power plant licensees to provide the information requested in the March 12, 2012, 10 CFR 50.54(f) letter on seismic hazard reevaluations. Additionally, the NRC performed on-site flooding and seismic audits to evaluate licensees' walkdowns and provide further information for the upcoming safety assessment.

Licensees are performing updated assessments of the flooding hazards for their sites in response to NRC's March 2012 letters. By March 12, 2013, licensees at 22 sites had provided their updated flooding hazard assessments. The industry has stated that up to half of the 22 sites could identify flooding hazards in excess of their current licensing basis. Licensees who determine that their updated flooding hazard is more severe than the flooding hazard accounted for in their facilities' design/licensing basis are expected to propose interim action to adequately protect the facility from the updated flood hazard. Interim action will be implemented while the licensee performs a more detailed integrated assessment to evaluate the facility's capability to respond to the reevaluated hazard. The NRC is in the process of reviewing the updated information provided. The balance of the reactor sites will provide their updated flooding hazard assessments before March 12, 2015.

The NRC issued Order EA-13-109, "Issuance of Order to Modify Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation under Severe Accident Conditions," and developed a review template for responses to the letters issued under 10 CFR 50.54(f) concerning the Near-Term Task Force Tier 1 emergency planning items.

## Operating Reactors Rulemaking

In FY 2013, the NRC completed one amendment and proposed two amendments to the regulations.

Effective in June 2013, the NRC amended its environmental protection regulations governing environmental impact reviews for nuclear power plant operating license renewals to accomplish three objectives: (1) to update the Commission's 1996 findings on the environmental effect of renewing the operating license of a nuclear power plant, (2) to redefine the number and scope of the environmental impact issues that must be addressed by the NRC during license renewal environmental reviews, and (3) to incorporate lessons learned and knowledge gained from license renewal environmental reviews conducted by the NRC since 1996.

The NRC also proposed two amendments to the regulations related to the use of enhanced weapons and the use of standard codes by NRC-licensed facilities. In January 2013, the NRC supplemented a 2011 proposed amendment to the regulations, which implements NRC authority under Section 161A of the *Atomic Energy act of 1954*, as amended. The proposed regulations relate to the use of enhanced weapons at and the security event notifications by NRC licensed facilities. In June 2013, the NRC proposed to amend its regulations involving the incorporation by reference of several standard codes from the American Society of Mechanical Engineers.

## Operating Reactors Research

The mission of the NRC research program is to evaluate and resolve safety issues for nuclear power plants and other facilities and materials regulated by the agency. In support of the licensing and oversight of operating reactors, research includes evaluating existing and potential safety issues; supplying independent expertise, information, and technical judgments to support timely and realistic regulatory decisions; reducing uncertainties in risk assessments; and developing technical regulations and standards. In FY 2013, substantive research work was performed in the following technical areas.

### *Fire Safety Research*

The NRC has continued conducting collaborative research to develop state-of-the-art tools, methods, and data in support of regulatory activities related to fire protection and fire risk analyses. In FY 2013, key fire research included: testing and expert elicitation to develop state-of-the-art advancements for determining the probability of circuit hot shorting as a result of unwanted fires in commercial nuclear power plants; evaluation of fire protection compensatory measures used in nuclear power plants; publication of a framework for conducting

fire probabilistic risk assessment (PRA) at low power and shutdown conditions; improvements and advancements in fire PRA and human reliability analysis; fire modeling development and advancing the verification and validation of select fire modeling, continued study of electrical cable combustion, and Very Early Warning Fire Detection Systems testing; performing experiments to better understand the Heat Release Rate from electrical enclosures; and leading a High Energy Arcing Fault project with the international community under a program with the Organisation for Economic and Cooperative Development.

### Radiation Protection Research

The ongoing radiation protection research program seeks to serve as an agencywide resource for technical and regulatory health physics information, including development of implementation tools for state-of-the-art techniques in radiation protection and for recommendations on health physics policy. This research supports the agency in the areas of radiation protection, dose assessment, and assessment of human health effects for reactor licensing, emergency preparedness, and nuclear security activities.

### Materials Degradation Research

The NRC continues to research materials degradation issues for currently licensed reactors and waste and decommissioning facilities. The purpose of this research is to identify susceptible materials and assess component-specific degradation mechanisms in existing reactors as well as waste and decommissioning facilities. The agency is also performing research on reactor internals to determine the effects of neutron fluence and thermal effects on the physical properties of reactor internal materials. The long-term performance of concrete and soil materials that are used to contain or restrict the movement of radioactive contaminants have been the research focus for decommissioning facilities. Cooperative work with the U.S. Department of Energy (DOE) and the National Institute of Standards and Technology (NIST) has been particularly effective in improving the understanding of degradation mechanisms in concrete, and work with the U.S. Geological Survey has proved invaluable in addressing degradation in covers on waste disposal sites.

### Nondestructive Examination Research

In accordance with 10 CFR 50.55(a), "Domestic Licensing of Production and Utilization Facilities," licensees must inspect structures, systems, and components to ensure that the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) are met and that structures, systems, and components can continue to perform their safety functions. The NRC conducts research on nondestructive examination (NDE) of light-water reactor (LWR) components and structures and provides the technical basis for regulatory decisionmaking related to these requirements. The NRC performs some of this work under cooperative agreements to help defray costs and to gain access to the expertise of other organizations. For example, the NRC program at Pacific Northwest National Laboratory (PNNL) is evaluating the ability to detect and characterize primary water stress-corrosion cracking in light-water reactor components. Under its current program at PNNL, the NRC is directing research on the inspection of coarse-grained austenitic alloys and welds. NDE of these components is especially difficult because of signal attenuation and reflections. In these materials, grain boundaries and other microstructural features appear similar to cracks. Research findings will support appropriate inspection requirements for these components to ensure safety. The NRC is performing some of this work under cooperative agreements with the EPRI and France's L'Institut de Radioprotection et de Surete Nucleaire. This includes work on NDE of dissimilar metal welds and the use of modeling as a validation tool to ensure adequate examination of component welds.

### Digital Instrumentation and Control Research

The NRC's research supports the licensing of new digital instrumentation and control systems intended for use in retrofits to operating reactors and for use in new and next-generation reactors. The research involves identifying digital system failure modes and assessing digital system safety, including the use of hazard analysis for safety assurance.

### Electrical Engineering Research

NRC electrical engineering research supports specific technical issues that are of interest to the licensing offices. Ongoing research is investigating the reliability of onsite and offsite

power systems, including station blackout mitigation, vital direct current system performance, and Fukushima-related topics. Research into the limitations of electrical cable condition monitoring and qualification was initiated to support license renewal and the potential for extended license renewal.

### Probabilistic Risk Assessment Research

The NRC continues to research the development of advanced models, methods, and tools for PRA activities that support risk-informed regulatory decisionmaking. Specific examples include the application of dynamic simulation methods, improved calculational approaches for PRA software, and characterization of key sources of uncertainty in PRAs. The agency is also investigating methods to incorporate new digital instrumentation and control systems (hardware and software) into nuclear power plant risk assessments. In FY 2013, the NRC continued to work on a multiyear project to develop a new integrated site PRA study that will estimate the consequences of severe accidents for all modes of operation, all significant hazard categories, and all significant radiological sources on site (i.e., reactors and spent fuel in pool and dry cask storage). The agency also continues to support PRA standards to support risk-informed regulatory activities for both operating and new reactors.

### Natural Hazards Research

The NRC is researching seismic hazard issues to support the siting of new reactors and the evaluation of the seismic safety of existing nuclear facilities. In cooperation with academic institutions, other Federal and State agencies, and industry, the NRC is conducting a program to develop and update earthquake source zone models, ground motion propagation models, and techniques to estimate the influence of near-surface materials on ground shaking at nuclear facilities. The occurrence of recent earthquakes (e.g., the 2011 Japanese event that impacted the Fukushima Dai-ichi nuclear power plant) and the acquisition of a variety of new types of data have resulted in the need to develop new and updated seismic source and ground motion and site response models. This is especially true in the central and eastern United States, where the majority of the operating reactors are located and the level of previously existing data are the least robust. For example, due to the paucity of existing empirical ground motion data in this portion of the United States, the addition of a relatively small number of recordings (such as those from the 2011 Mineral, VA earthquake that affected the North Anna Power Station) can lead to significant changes in existing ground motion models. Advanced work is needed to incorporate new data and improve the confidence in the predictive models.

The NRC is also conducting a study of potential tsunami sources and the resulting potential hazards to NRC-regulated facilities in collaboration with the U.S. Geological Survey and the National Oceanographic and Atmospheric Administration. The agency is using the results of this research to inform licensing decisions and update risk assessments.

The agency is also conducting research on flooding events, including estimating the severity and frequency of natural events such as coastal storm surge from hurricanes; local inland flooding from extreme precipitation events; or combinations of precipitation, dam breaks, or seasonal snow melt.

### Thermal-Hydraulics Research and Analysis

The NRC plans, develops, and manages research programs that create computer codes, models, and experimental databases for evaluating coupled neurotic and thermal-hydraulic transient behavior of nuclear reactor and plant systems under normal, abnormal, and accident conditions for current, new, and advanced reactors. The agency also performs analytical analyses of thermal-hydraulic and computational fluid dynamics to support regulatory decisionmaking and safety assessments. The results of thermal-hydraulic research are also used to quantify margins, reduce unnecessary burden, and lessen uncertainties for areas of potentially high risk or safety significance. By working in partnerships with universities, laboratories, and other national and international research centers, the agency is able to leverage resources in this area.

### Severe Accident and Consequence Research Analysis

The NRC plans, develops and manages research programs that create computer codes, models, and experimental databases for evaluating nuclear reactor and plant systems under severe accident conditions for current, new, and advanced reactors.

State-of-the-art analytical techniques are used to develop realistic best estimates of the potential effects (consequences) to the public of low-likelihood nuclear power plant and spent fuel storage and transportation accidents, which could release radioactive material into the environment. Two major projects in this area are detailed below.

Through the State-of-the-Art Reactor Consequence Analyses (SOARCA) project, the NRC has developed an updated body of knowledge on the realistic outcomes of selected important severe reactor accidents for two pilot plants, Peach Bottom and Surry (NUREG-1935). To complement the SOARCA project, NRC also conducted an uncertainty analysis (UA) of one of the SOARCA scenarios, the Peach Bottom unmitigated long-term station blackout. The UA supports the overall SOARCA results and conclusions for this accident scenario. A draft version of this analysis, NUREG/CR-7155 (ML13189A145), is available and expected to be finalized in 2014.

The "Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor" was provided to the Commission via an information paper on October 11, 2013 (ML13256A334). The purpose of this study was to examine if faster removal of older, colder spent reactor fuel from pools to dry cask storage significantly reduces risks to public health and safety. Based on previous research showing earthquakes present the dominant risk for spent fuel pools, the draft study evaluated how a potential pool leakage from an unlikely severe earthquake might cause the used fuel to overheat and release radioactive material to the environment. This study's results are consistent with earlier research conclusions that spent fuel pools are robust structures that are likely to withstand severe earthquakes without leaking. The NRC continues to believe, based on this study and previous studies, that spent fuel pools provide adequate protection of public health and safety. The insights from this study informed a broader regulatory analysis of the spent fuel pools at all U.S. operating nuclear reactors as part of the NRC's Japan Lessons Learned Tier 3 Plan. These analyses will help inform the Commission's evaluation of whether expedited movement of spent fuel from spent fuel pools to dry storage sooner than current practice provides a substantial increase in safety. The report received a number of public comments and Appendix E was added to the report to capture those comments and the staff's responses. The report will be subsequently published as a NUREG.

### *Human Reliability Analysis Research*

The NRC continues to conduct research to improve human reliability analysis (HRA) methods, data, and models. Based on research insights, the NRC is developing an improved single HRA model for agency use and a standard agencywide expert elicitation process.

### *Generic Issues Program*

The NRC's Generic Issues Program enables the public and NRC staff to raise issues with significant generic safety or security implications to ensure that those potential safety and security issues are considered through an effective, collaborative, and open process and that pertinent information is disseminated. The agency is currently addressing four active and three proposed generic issues. In FY 2013, the NRC concluded that safety concerns associated with Generic Issue 189, "Susceptibility of Ice Condenser and Mark-III Containments to Early Failure from Hydrogen Combustion during a Severe Accident," had been addressed and closed this issue.

### *Risk Management Regulatory Framework*

The NRC issued NUREG-2150, "A Proposed Risk Management Regulatory Framework," in April 2012. This report includes (1) a recommendation for the issuance of a Risk Management Regulatory Framework (RMRF) policy statement and (2) specific recommendations for the various regulatory program areas in implementing an RMRF. In December 2012, an intra-agency working group was formed to review NUREG-2150 and provide a paper to the Commission that identified options and made recommendations, including the potential development of a Commission policy statement. The RMRF working group is developing a draft RMRF policy statement that will establish Commission expectations regarding a risk management regulatory decisionmaking process, including defense-in-depth, safety, and security for each program area. The RMRF working group held one public meeting and worked toward issuing a preliminary draft RMRF policy statement and defense-in-depth decision criteria for an initial public review and comment period in late 2013.

*Security Barriers at Operating Nuclear Power Plant*

## Operating Reactors Event Response

The NRC's emergency preparedness and incident response activities ensure that adequate measures can and will be taken to mitigate plant events, to minimize possible radiation doses to members of the public, and to ensure that the agency can respond effectively to events at licensee sites.

In FY 2013, the NRC focused much of its attention on the implementation of lessons-learned from the response-related efforts during the Fukushima Dai-ichi accident and the resulting recommendations from the NRC's Near Term Task Force. The NRC prioritized the lessons-learned identified from the Fukushima Dai-ichi response efforts and worked to update the agency's response program. The NRC also requested information from all licensees to better understand the existing site capabilities and plans for staffing and emergency communications that would be available during a response to a multiunit, beyond-design-basis natural event. The NRC engaged stakeholders in a series of public meetings to inform the development of responses to the requests for information letters and has been evaluating the responses to these letters, which were submitted in June 2013.

The NRC prepared for and responded to several events in FY 2013. Two notable examples were Hurricane Sandy and a lockout at Grand Gulf Nuclear Power Plant. The agency staffed the Headquarters Operations Center and Regional response centers for Hurricane Sandy in October 2012. Hurricane Sandy, the second-largest Atlantic storm on record, affected the East Coast from Florida to Maine and impacted several nuclear power plants. The response required the full support of the agency and numerous other Federal Government partners. Additionally, the agency responded to a security officer lockout at the Grand Gulf Nuclear Power Plant through development and implementation of a strike contingency plan. The NRC augmented oversight during the lockout and recovery through additional onsite staffing and periodic conference calls among Headquarters, Region IV, and onsite NRC inspection staff to closely monitor the situation throughout the lockout. The agency actively participated in several exercises during FY 2013, including the annual continuity-of-operations exercise (Eagle Horizon 13) for Federal executive branch departments and agencies. The NRC also participated in several exercises with NRC-licensed facilities, other Federal departments and agencies, and State and local response organizations as part of NRC's ongoing response readiness program.

In FY 2013, the NRC and FEMA continued their multiyear initiative to revise NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," one of the principal guidance documents for developing and evaluating onsite and offsite emergency plans for nuclear power plants and emergency plans for State and local governments. Extensive opportunities for stakeholder involvement will be provided throughout the revision process to obtain stakeholder input on emergency planning guidance topics and issues that should be addressed in the revised document.

In keeping with its policy to provide States with potassium iodide as requested, the NRC continued to work with States to replenish potassium iodide supplies to be used as a supplement to public protective actions within the 10-mile emergency planning zones around nuclear power plants.

## Operating Reactor Security

The NRC conducts a robust security inspection program within the security cornerstone of the agency's ROP. The security cornerstone focuses on five key attributes of licensee performance: 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 agency determines whether licensees comply with NRC requirements and can provide high assurance of adequate protection against the design-basis threat for radiological sabotage. There were no substantial breakdowns of physical security at any commercial nuclear power plant during FY 2013.

The NRC carries out force-on-force inspections at commercial operating nuclear power plants at least once every three years as part of its comprehensive security program. The agency uses these inspections to evaluate the effectiveness of security programs to prevent radiological sabotage. Force-on-force inspections assess the ability of nuclear facilities to defend against the applicable design-basis threat, which characterizes the adversary and against which licensees must design appropriate defenses, such as physical protection systems and response strategies. A force-on-force inspection includes tabletop drills and simulated combat between a mock commando-type adversary force and the site security force. During the attack, the adversary force attempts to reach and simulate damaging key safety systems and components at a nuclear power plant. In FY 2013, the agency completed 23 force-on-force inspections at nuclear power plants.

### *Integrated and Coordinated Security Activities*

The agency completed integrated response tabletop and limited exercises at Davis Besse in the 3rd quarter of FY 2013, using a new streamlined integrated response framework. This framework included four core elements: (1) Contingency Response Tool (CRT) development, (2) Integrated Response Plan (IRP) development, (3) Tabletop exercises, and (4) limited exercises. Tabletop exercises validate the CRT and IRP. Limited exercises focus on mission understanding, communications, and self-guided navigation by law enforcement responders within the site's protected area. To date, the agency has completed and delivered CRTs at 15 sites with four in various stages of CRT development.

During FY 2013, the NRC completed the issuance of Order EA-13-092, designating 10 nuclear facilities in New York, Maryland, Virginia, and California as eligible to apply for authority to permit their security forces to possess and use firearms and related devices in the performance of their official duties, regardless of local, State, and certain Federal firearms laws that may prohibit such possession and use. The Order describes how the designated facilities would apply for preemption authority and how the NRC would review applications. It also requires the designated facilities to perform and complete background checks that verify their security personnel are not prohibited from carrying firearms by state law within 180 days from the effective date of the Order.

### *Cyber Security*

In 2009, the NRC promulgated cyber security regulations for nuclear power reactors. The NRC worked with affected licensees to establish schedules to fully implement this regulation at each nuclear power reactor site, which included completing a series of interim measures by December 31, 2012. In 2012, the NRC enhanced its reactor oversight program to include cyber security and issued its cyber security roadmap in SECY-12-0088. In FY 2013, the NRC began inspecting the implementation of these interim measures at reactor sites. Deficiencies identified during the inspections are being addressed by licensees through their Corrective Action Programs.

## New Reactors

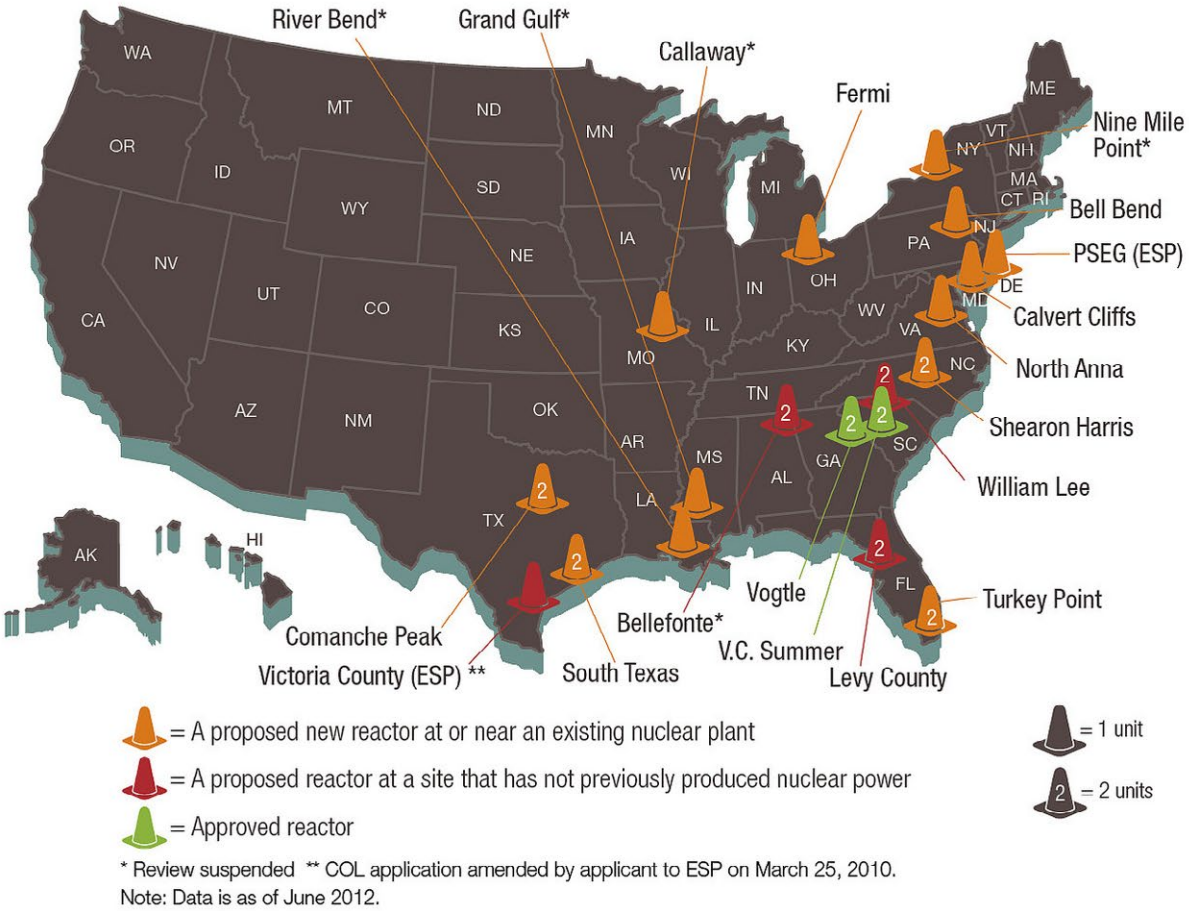
The NRC reviews applications for standard design certifications (DCs), early site permits (ESPs), limited work authorizations (LWAs), combined licenses (COLs), construction permits, and operating licenses (OLs). The current and anticipated applications for new reactors involve both large, light-water reactor facilities and small modular reactor facilities in a variety of projected locations throughout the United States. The NRC oversees construction activities for commercial nuclear power plants that include licensee performance assessment, investigation of allegations, and enforcement activities. This also includes the NRC's Vendor Inspection Center of Expertise, which develops and implements quality assurance and vendor inspection programs for both new and operating reactors.

## New Reactors Licensing

### *New Reactor Design Certification*

The NRC reviews applications for standard DCs using 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear

*Figure 18*
LOCATIONS OF NEW NUCLEAR POWER REACTORS APPLICATIONS




* Review suspended ** COL application amended by applicant to ESP on March 25, 2010.
Note: Data is as of June 2012.

Power Plants" (see Figure 18). By issuing a DC, the NRC approves a nuclear power plant design independent of an application to construct or operate a plant. A DC is valid for 15 years from the date of issuance but can be renewed for an additional 10 to 15 years.

During FY 2013, the NRC continued reviewing DC applications for the General Electric Economic Simplified Boiling-Water Reactor design, the AREVA Evolutionary Power Reactor (EPR) design, and Mitsubishi's U.S. Advanced Pressurized-Water Reactor (US-APWR) design. In addition, the NRC has received DC renewal applications from both Toshiba and General Electric-Hitachi to renew the Advanced Boiling-Water Reactor DC. On September 30, 2013, the NRC received a DC application from Korea Hydro and Nuclear Power Company for the APR-1400 standard plant design.

The NRC issued revised schedule letters for the Mitsubishi US-APWR and the AREVA EPR DC application reviews in February and March 2013, respectively. Since that time, the NRC has issued a letter informing AREVA that the NRC has determined that AREVA has not demonstrated sufficient independence and diversity in its current U.S. EPR digital instrumentation and controls (I&C) design to meet the regulatory requirements. The NRC will re-establish a schedule for the EPR DC application review after AREVA addresses the agency's digital I&C concerns.

## *Early Site Permits*

As part of the licensing process, the NRC can issue an ESP to approve a site for a domestic nuclear power plant independent of an application for a COL. ESPs are valid for 10 to 20 years and can be renewed for an additional 10 to 20 years.

During FY 2013, the NRC continued its safety and environmental review of one ESP application submitted by PSEG Power, LLC for a site adjacent to the operating Salem and Hope Creek Generating Stations in Salem County, NJ.

## *Combined License*

A COL authorizes a licensee to both construct and operate a nuclear power plant at a specific site. The application for a COL must contain essentially the same information required in applications for a construction permit and an operating license under the licensing process in 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities." The COL application must also describe the Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) that are necessary to ensure that the plant has been properly constructed and will operate safely.

The NRC is actively reviewing nine COL applications to build and operate 14 new reactors at sites throughout the United States, including: Bell Bend, Calvert Cliffs, Comanche Peak, Fermi, Levy County, North Anna, South Texas Project, Turkey Point, and Lee Station. In May 2013, Duke Energy requested that the NRC suspend review of the COL application for Shearon Harris Units 2 & 3.

The NRC issued the agency's Final Environmental Impact Statement (FEIS) in January 2013 for the Fermi Nuclear Power Plant Unit 3 COL application. During FY 2013, the NRC approved eleven license amendment requests (LARs) for Vogtle Units 3 and 4 and approved eight LARs for V.C. Summer Units 2 and 3.

## *Construction Permits and Operating Licenses*

The NRC has continued the extensive inspection and licensing effort associated with the reactivation of construction at the Tennessee Valley Authority (TVA) Watts Bar Unit 2 Nuclear Power Plant. The NRC completed the environmental review related to the operating license in FY 2013. The current schedule calls for the NRC to complete its safety review efforts in 2014.

## *Guidance*

In FY 2013, NRC published several guidance documents pertaining to new reactors. One of these was NUREG-0711, Rev. 3, "Human Factors Engineering Program Review Model." This publication directly supports licensing actions for new and advanced reactor control rooms by updating the human factors engineering review guidance to account for lessons-learned in previous reviews and to account for upgrades to control room technologies and plant concepts of operations. The agency also published the final NUREG/CR-7134, "The Estimation of Very-Low Probability Hurricane Storm Surges for Design and Licensing of Nuclear Power Plants in Coastal Areas." The agency has also published 43 draft and final Standard Review Plan sections and seven Interim Staff Guidance (ISG) documents. The NRC also issued the New Reactor Licensing Process Lessons Learned Report and SECY-13-0033, "Allowing Interim Operation under Title 10 of the Code of Federal Regulations Section 52.103."

## *Small Modular Reactors and Advanced Reactors*

The NRC continued to see growing commercial interest in the development and deployment of small modular reactors (SMRs). The NRC continued its efforts to prepare for the future reviews of SMR design and licensing applications. These preparation efforts include pre-application activities with vendors, development of the regulatory framework to support reviews of these new designs, and extensive outreach to external stakeholders. The NRC published the mPower Design Specific Review Standards in the *Federal Register*, as just one step to provide infrastructure to those applying for a license.

The NRC made significant progress towards developing the regulatory framework to support SMR reviews. During this fiscal year, the NRC issued papers outlining approaches to resolve policy issues facing SMRs: (1) "New Reactor Licensing Lessons Learned," (2) SECY-13-0033 on interim operation when an ITAAC is in hearing, (3) "Staff Assessment of the Manufacturing License Requirements Issue for Small Modular Reactors," and (4) "Mechanistic Source Term." The NRC will continue its efforts to support timely resolution of these issues.

During FY 2013, the NRC held pre-application meetings with SMR vendors to discuss technical topics associated with these designs. The NRC also conducted reviews of both technical and topical reports submitted by SMR vendors. The NRC

*Plant Vogtle 3 and 4 construction site with Vogtle 1 and 2 in the background*

expects that these activities will continue as vendors move closer to finalizing and submitting SMR applications for review, which could begin as early as next year.

In FY 2013, the NRC completed technical reviews of three Next Generation Nuclear Plant (NGNP) products, which is a generation IV version of the very-high-temperature reactor. These products were: (1) "Summary Feedback on Four Key Licensing Issues," (2) "Assessment of White Paper Submittals on Fuel Qualification and Mechanistic Source Terms," and (3) "Assessment of White Paper Submittals on Defense-in-Depth; Licensing-Basis Event Selection, and Safety Classification of Structures, Systems, and Components." A public meeting on NGNP was held on November 14, 2012.

The NRC issues Regulatory Issue Summaries to communicate and clarify its technical or policy positions on regulatory matters that have not been communicated or are not well understood. In December 2012, the agency issued Regulatory Issue Summary (RIS) 2012-12, "Licensing Submittal Information and Design Development Activities for Small Modular Reactor Designs." This RIS is a forward-looking planning tool that allows the industry to show its intent to submit an application to the NRC. This is just one of many tools the NRC attempts to align resources with the expected workload.

## NEW REACTORS OVERSIGHT

The NRC continues to execute construction inspection activities for Vogtle Units 3 and 4 and V.C. Summer Units 2 and 3, primarily through the Region II office located in Atlanta, GA. This year, construction activities were focused on the nuclear island basemats and the fabrication of primary containment and structural modules. Findings included the identification of inadequately designed details in critical wall sections. The agency continues to improve its construction inspection program by updating procedures to incorporate inspector feedback and lessons learned, aligning the construction inspector qualification program with agency standards and demonstrating the use of two recently developed information technology systems to generate inspection reports and to ITAAC Closure Notifications.

The agency received the first ten ITAAC Closure Notifications and processed them in accordance with the recently developed infrastructure. *Federal Register* Notices were published to document the NRC staff's verification of the completion of the first ITAAC Closure Notifications, demonstrating the effectiveness of this first-of-a kind process. The agency continues to refine the processes and guidance for ITAAC Closure, including facilitating several public workshops to solicit input, exchange views, and reach consensus on issues such as developing additional examples of ITAAC Closure Notifications.

In December 2012, the agency completed a 12-month pilot of the Construction Reactor Oversight Process (cROP) at the four new reactor units under construction. During and after the pilot, data were solicited from internal and external sources to inform a self-assessment of the program. The final report concluded the cROP pilot was successful, and full implementation of the new cROP began on July 1, 2013. The agency completed the initial assessment of a potentially greater than green finding in accordance with the construction Significance Determination Process.

The NRC continues the implementation of the Vendor Inspection Program, including conducting 35 vendor or quality assurance implementation inspections supporting both new and existing reactor licensees. Five of the inspections were international, including one in Italy for first-of-a-kind AP 1000 reactor coolant system piping. The inspections focused on the design, qualification and testing of safety-related structures, systems, components, and services, and findings were reported in portions of 10 CFR Part 21, "Reporting of Defects and Non-Compliance" and commercial grade dedication.

### *Investigations and Enforcement*

Just as was the case for operating reactors, the NRC will not permit applicants for new licenses, nor their contractors and vendors, to continue to conduct licensed activities if they cannot achieve and maintain adequate levels of safety. In FY 2013, the NRC processed two escalated enforcement cases (1) a Confirmatory Order to a vendor involving a violation of NRC's worker protection regulation and (2) a notice of violation (NOV) with a proposed civil penalty in the amount of $70,000 to a separate new license applicant.

## New Reactors Rulemaking

During FY 2013, the NRC worked on developing a regulatory basis for a new rule under 10 CFR Part 21 and held two public meetings in May and June of 2013. The agency is also in the process of a new DC rule for the ESBWR.

## New Reactors Research

Much of the technical work and research described earlier for operating reactors applies to new reactors as well. Over the past several years, the NRC has focused its new reactor regulatory research efforts on potential new light-water reactor facilities to prepare for and evaluate standard DCs. The NRC research program addressed key areas that support the agency's safety mission. Some of the more important issues addressed include: radiation protection research; evaluation of digital systems to analyze failure modes; development of advanced tools for probabilistic risk assessment activities that support risk-informed regulatory decisionmaking; research on hazards from natural events, including seismic, flooding, and tsunami events; thermal-hydraulic research and analysis; severe accident and consequence research and analysis; and human factors research. Research related to SMRs concepts focuses on identifying phenomenological differences from large reactors and developing and validating tools for analyses to support potential licensing reviews.

## New Reactors Security

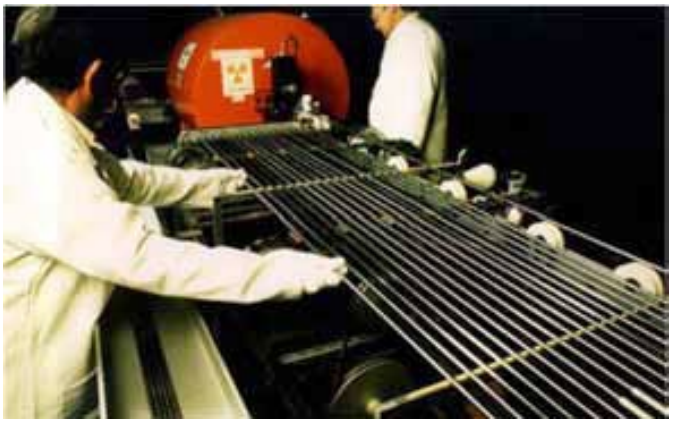
During FY 2013, using results from a physical security COL review self-assessment of the security licensing process, the NRC established a Security Review Plan (SRP) Working Group. The working group is revising the current COL SRP and Physical Security ITAAC SRP templates in an effort to improve the physical security licensing framework and standardization of the physical security COL review process.

# NUCLEAR MATERIALS AND WASTE SAFETY PROGRAMS

The following sections describe the safety and security programs the NRC undertook during FY 2013 that resulted in achievement of its Safety and Security goals for the Fuel Facilities, Nuclear Materials Users, Spent Fuel Storage and Transportation, and Decommissioning and Low-Level Waste business line activities.

## Fuel Facilities

The NRC licenses and inspects all commercial nuclear fuel facilities that process and fabricate uranium concentrates into the reactor fuel that powers the Nation's nuclear reactors. Licensing activities include detailed health, safety, safeguards, and environmental licensing reviews of licensee programs, procedures, operations, and facilities to ensure safe and secure operations.



*Fuel Rod Assembly*

## Fuel Facilities Licensing

The NRC issued a license under 10 CFR Part 40, "Domestic Licensing of Source Material," to International Isotopes Fluorine Products, based in part on an integrated safety analysis (ISA), for a first-of-a-kind commercial depleted uranium deconversion facility, on October 2, 2012. The

agency completed the indirect transfer of the Construction Authorization for construction of a Mixed Oxide (MOX) Fuel Fabrication Facility (MFFF) at the DOE Savannah River Site in Aiken, SC from Shaw AREVA to Chicago Bridge and Iron. A Safety Evaluation Report and Confirmatory Order related to the transfer were issued on January 31, 2013. The license transfer from USEC Inc. to American Centrifuge Operating, LLC, for the Lead Cascade and American Centrifuge Plant was completed on February 8, 2013.

Four complex licensing actions missed the timeliness target (completing in less than one and half year). One complex licensing action (a Babcock & Wilcox Nuclear Operations Group (B&W NOG) licence amendment)was completed in the first quarter and three others (Honeywell Pond Closure Request, special nuclear material license renewals for NIST and Purdue University were completed in the fourth quarter. The agency will evaluate lessons learned from the licensing actions that missed the timeliness metric to inform the planning of future complex licensing action activities.

## Fuel Facilities Oversight

The NRC's fuel cycle oversight process consists of both planned and reactive inspections with enforcement and periodic assessments based on the findings of these inspections.

On September 30, 2011, the NRC issued Temporary Instruction (TI) 2600/015, "Evaluation of Licensee Strategies for the Prevention and/or Mitigation of Emergencies at Fuel Facilities." The agency completed TI-related inspection activities at seven operating fuel cycle facilities, licensed under 10 CFR Part 40, "Domestic Licensing of Source Material," 10 CFR Part 70, "Domestic Licensing of Special Nuclear Materials," and 10 CFR Part 76, "Certification of Gaseous Diffusion Plants," during the period from December 2011 through May 2012. The inspection results were documented in facility-specific inspection reports.

The purpose of these inspections was to assess the effectiveness of plant-specific mitigation strategies at each facility. The inspection team considered hazards from natural phenomena, including seismic, flooding, and high winds (due to hurricanes or tornadoes). Onsite fires and extended loss of power and water were also evaluated.

The NRC concluded that the established strategies and other measures to deal with emergencies resulting from credible natural events were generally effective and, if properly implemented, would likely continue to be effective.

The inspections also identified some unresolved items involving adherence to requirements of 10 CFR 70.61, "Performance Requirements," and 10 CFR 70.62, "Safety Program and Integrated Safety Analysis," and the need for analyses/data to support hazard analysis associated with seismic and high-wind events to demonstrate compliance with 10 CFR Part 70.62. The NRC is considering developing a generic letter to address the generic issues identified.

The agency determined that Honeywell might not have appropriately evaluated and considered the range of credible natural event scenarios during completion of its hazards analysis. The NRC's actions with regard to Honeywell are described in the next section of this report.

In FY 2013, the NRC took steps to enhance the effectiveness its Fuel Cycle Program by strengthening the program functions and infrastructure and implementing the Revised Fuel Cycle Oversight Process (RFCOP) Project Plan. The NRC is implementing Phase I, "Corrective Action Program, Issue Characterization, and Inspection Program Improvements," of the RFCOP Project Plan. The objective of Phase I of the RFCOP Project Plan is to delineate the actions needed to provide credit to licensees for maintaining effective corrective action programs (CAPs) in accordance with NRC requirements. An effective CAP is a foundational element of the RFCOP.

### *Investigation and Enforcement*

As discussed above, the agency conducted inspections at Honeywell. As a result of the inspections, the NRC identified the potential for a large release of uranium hexafluoride and hydrogen fluoride during a credible seismic event. In FY 2013, the NRC issued a Confirmatory Order that documented Honeywell's agreement to implement the corrective actions identified in the Order before authorizing restart. Honeywell must also submit a revised ISA summary to meet the conditions of the Order. The NRC will continue to engage Honeywell and provide appropriate guidance for completing the terms of the Order.

Just as was the case for operating reactor facilities, the NRC will not permit fuel cycle licensees to continue to conduct licensed activities if they cannot achieve and maintain adequate levels of safety. In FY 2013, the NRC processed five escalated enforcement cases at fuel cycle facilities, which included the Confirmatory Order issued to Honeywell discussed above. All escalated enforcement actions issued to fuel cycle licensees during FY 2013 met the external timeliness goals.

## Fuel Facility Security

The NRC regularly carries out force-on-force inspections that are designed to evaluate and improve the licensees' security force and ability to defend against a design-basis threat at Category I fuel facilities as part of its comprehensive security program. The agency uses these inspections to evaluate the effectiveness of security programs to prevent theft or diversion of Category I material. The agency conducts force-on-force inspections at least once every three years at each Category I fuel facility. A force-on-force inspection includes tabletop drills and simulated combat between a mock commando-type adversary force and the site security force. During the mock attack, the adversary force attempts to reach and simulate stealing material at a Category I fuel facility. The results of the force-on-force inspections are used by the licensees to improve their security posture and by the NRC to enhance the inspection program. In FY 2013, the NRC issued a Commission Notation paper to advise the Commission on the assessment of and conclusions about certain threat scenarios at Category 1 fuel facilities.

In June 2013, the NRC issued an order designating an interim class of fuel cycle and operating power reactor facilities as eligible to apply for authorization to use preemption authority, under Section 161A of the Atomic Energy Act, to possess and use enhanced weapons as part of a facility's protective strategy. Just as was the case for operating reactor facilities, the NRC issued Orders to fuel cycle facilities authorizing preemption authority for application to use enhanced weapons in security activities.

The cyber security staff has worked to complete assessments for what is needed to protect fuel cycle facilities from potential cyber attacks. The staff is developing options for the Commission to consider as it decides on a path forward. Additionally, the staff issued an Information Assessment Team Advisory on September 17, 2013, for "Reporting Cyber Events for Fuel Cycle Facilities." The advisory provided critical, time-sensitive, threat-related information to fuel cycle licensees and requested that recipients execute certain voluntary precautionary or protective actions.

## Nuclear Materials Users

The NRC licenses and inspects the commercial use of nuclear materials for industrial, medical, and academic purposes. Commercial uses of nuclear materials include medical diagnosis and therapy, medical and biological research, academic training and research, industrial gauging and nondestructive testing, production of radiopharmaceuticals, and fabrication of commercial products (such as smoke detectors) and other radioactive sealed sources and devices. The agency currently regulates about 2,900 specific licensees for the use of radioactive materials. Under the NRC's Agreement State program, 37 States have assumed regulatory responsibility over approximately 18,900 licenses for the industrial, medical, and other users of nuclear materials in their States. The agency reviews the Agreement State programs, as well as certain NRC licensing and inspection programs, through the integrated materials performance evaluation program. An issue regarding the status of the State of Georgia as an Agreement State will be discussed further in the Nuclear Materials State and Tribal Programs areas of this report.


*Radiography Camera*

Detailed health and safety reviews of license applications, as well as inspections of licensee procedures, operations, and facilities, provide reasonable assurance of safe operations and the production of safe products. The NRC routinely inspects nuclear materials licensees to ensure that they are using nuclear materials safely, maintaining accountability and security for those materials, and protecting public health and safety. The agency also analyzes operational experience from NRC and Agreement State licensees and regularly evaluates the safety significance of events reported by licensees and Agreement States.

During FY 2013, the agency completed a 3-year effort to revise the NRC IMC on the training and qualification of materials license reviewers and inspectors.

## Nuclear Materials Users Licensing

The NRC completed 2,000 materials licensing actions in FY 2013. The agency maintained its high standards with timely reviews of nuclear materials licensing actions and sealed source and device reviews. The agency completed 97 percent of new applications and license amendments reviews within 90 days of receipt and 97 percent of license renewals and sealed-source and device design reviews within 180 days of receipt. The agency also developed and issued 10 CFR Part 35, "Medical Use of Byproduct Material," licensing guidance for the safe use of RaCl2 (radium-223 chloride) in clinical trials for prostate cancer patients with bone metastases. The NRC also published for public comment the draft NUREG-1556, Volume 3, Revision 2, "Applications for Sealed Source and Device Evaluation and Registration," in May 2013.

The agency deployed the License Verification System on schedule on May 31, 2013. This system provides secure access to valid NRC and Agreement State licensees that are authorized to possess Category 1 and 2 radiation sources, and resolves a 2007 Government Accountability Office finding.

## Nuclear Materials Users Oversight

The agency completed 900 routine health and safety inspections during FY 2013.

The NRC concluded the Integrated Materials Performance Evaluation Program (IMPEP) review for Region III. No recommendations were identified by the team, and the Management Review Board found the program to be adequate for the third consecutive review and extended the period of the next IMPEP to five years for the second time.

During FY 2013, the NRC completed enhanced oversight of safety improvements (i.e., enhanced procedures and training) implemented by Gamma Irradiator Service in response to a Confirmatory Action Letter regarding the cessation of self-shielded calibrator source reloads and exchanges in the NRC's jurisdiction.

### *Investigations and Enforcement*

During FY 2013, the agency opened 30 investigations of potential wrongdoing involving the use of nuclear materials. The investigations were initiated after information concerning potential wrongdoing impacting public health and safety was received by the NRC either through allegations from sources outside the NRC or as a result of inspections performed by agency personnel.

Just as was the case for operating reactor facilities, the NRC will not permit materials licensees to continue to conduct licensed activities if they cannot achieve and maintain adequate levels of safety. In FY 2013, the NRC processed 36 escalated enforcement cases at materials licensee facilities. Of these cases, five involved monetary civil penalties totaling $29,700. All escalated enforcement actions issued to nuclear materials licensees during FY 2013 met the external timeliness goals.

Of particular note, the NRC issued an escalated enforcement action to a hospital for two separate medical events that occurred while they were treating a patient with a high-dose-rate remote afterloader. The Severity Level II violation was for poor performance in preventing the second medical event; the base civil penalty was doubled based on enforcement discretion.

The NRC identified several security-related issues at operators of panoramic wet-source irradiators, which resulted in escalated enforcement actions being issued to each facility.

## Nuclear Materials Users Rulemaking

The NRC continued to amend its regulations that govern the licensing and distribution of byproduct materials aimed at making regulations clearer, more risk-informed, and up to date. The agency published the final rule 10 CFR Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material," in the *Federal Register* on March 19, 2013. The comprehensive security rule was effective on May 20, 2013, and the compliance date is March 19, 2014. The rule codifies the security requirements for Category 1 and Category 2 quantities of radioactive material. Agreement States will have until March 19, 2016, to establish compatible requirements. The implementation guidance for the 10 CFR Part 37 rule was issued as NUREG-2155 in February 2013. The Part 37 Implementation Working Group activities (including order rescission, training, inspection, enforcement, etc.) began in November 2012.

The NRC also amended 10 CFR 40.22, "Small Quantities of Source Material," by publishing the final, "Distribution of Source Material to Exempt Persons and to General Licensees and Revision of General License and Exemptions," and its associated guidance. This rule, effective on August 27, 2013, requires specific licenses for the initial distribution of source material to exempt persons. The NRC also completed draft rulemaking guidance to accompany the draft 10 CFR Part 35 rule, "Medical Use of Byproduct Material," under an accelerated schedule.

## Nuclear Materials State and Tribal Programs

The agency conducted Tribal outreach activities in FY 2013 to advance efforts to develop an agency Tribal Policy Statement in accordance with SRM-COMWDM12-0001, "Tribal Consultation Policy Statement and Protocol." Outreach included publication of a *Federal Register* notice requesting public comment on the draft Tribal Protocol Manual and Policy Statement development efforts and dissemination of information at four conferences widely attended by Tribes.

The Arkansas Agreement State Program was placed on Heightened Oversight in 2007 due to significant staff losses that contributed to a license renewal and inspection backlog. While Arkansas' managers and staff were strengthening their Program, the NRC provided support to Arkansas through multiple training opportunities: inspector accompaniments, reporting requirements, performance-based inspection techniques, and licensing. The Arkansas Agreement State Program showed improved performance at its IMPEP in 2011. Heightened Oversight was discontinued, and the Program showed sustained, improved performance. Following a periodic meeting in FY 2013, a Management Review Board directed that monitoring could cease. The Program's next full IMPEP occurred in October 2013.

A review team comprised of technical staff from the NRC, North Carolina, and Florida evaluated the Georgia program in October 2012. The team identified significant deficiencies throughout the program that, if left uncorrected, have the potential to impact public health and safety. Overall, the team identified a decline in performance since Georgia's last evaluation in 2008. The Commission placed the State of Georgia's radiation control program on probation on August 1, 2013, following its IMPEP review. The letter from the Chairman to the Governor was sent August 1, 2013. The program review determined Georgia's program remained compatible with the NRC's regulatory program, but found several unsatisfactory performance indicators. In accordance with the State of Georgia's request, the NRC assumed regulatory responsibility for evaluation of sealed source and device reviews, which will allow Georgia to focus additional resources on performance issues.

The NRC staff will provide support to Georgia including bimonthly calls to assess the progress made in addressing NRC recommendations and in strengthening the program. The weaknesses identified in Georgia's Program do not immediately threaten public health and safety. The Georgia Program's next full IMPEP is scheduled for January 2014.

## Nuclear Materials Users Security

The NRC responded to the U.S. Government Accountability Office (GAO) Report GAO-12-925, "Nuclear Nonproliferation-Additional Actions Needed to Improve Security of Radiological Sources at U.S. Medical Facilities." The NRC assessed the GAO conclusions, supported Congressional briefings, and responded to associated questions. The NRC provided its formal response

to Congress on November 19, 2012. The agency also provided support for two ongoing GAO audits involving source security (non-medical source security and radiological security zones), requiring the reprioritization of existing work.

In FY 2013, the agency issued an Information Assessment Team Advisory on how licensees can make voluntary notifications to the NRC's protected Webserver for security and cyber incidents. Development of cyber security policy for academic, medical, and industrial materials licensees was delayed by eight months because of higher-priority work.

The NRC worked collaboratively with the Commonwealth of Pennsylvania to share information and issue press releases that led to the successful recovery of a portable gauge lost in West Virginia in May 2013. The gauge was found by a citizen, who contacted authorities, and the gauge was recovered in good condition.

## Spent Fuel Storage and Transportation

The NRC ensures that spent nuclear fuel is safely and securely stored and transported. The agency conducts licensing and certification reviews to ensure that spent fuel storage facility and cask designs, domestic and international shipments of spent fuel, and other risk-significant radioactive materials are safe and secure and comply with agency regulations.

Shipments of radioactive materials are safely and securely transported each year within the United States. Several Federal agencies share responsibility for regulating the safety and security of those shipments. The NRC closely coordinates its transportation-related activities with those of the U.S. Department of Transportation (DOT) and, as appropriate, DOE. The agency inspects vendors, fabricators, and licensees using transport packages, spent fuel storage casks, and interim storage of spent fuel both at and away from reactor sites to help ensure the safety and security of spent fuel storage and radioactive material transportation.

*Dry Cask Storage*

## Spent Fuel Storage and Transportation Licensing and Oversight

During 2013, the NRC issued licenses and certificates and developed guidance to ensure safety and security in the area of spent fuel storage and transportation. The agency issued approval for a new spent fuel transportation package, Model No. TN-LC. The agency approved the transport of National Research Universal Reactor and National Research Experimental Reactor highly enriched uranium fuel elements in the Model No. NAC-LWT spent fuel transportation package, which supported shipments by the DOE National Nuclear Security Administration's Spent Nuclear Fuel Acceptance Program in January 2013.

The agency issued NUREG-2152, "Computational Fluid Dynamics Best Practice Guidelines for Dry Cask Applications" as a final report in March 2013. The report provides practical advice for reviewing computational fluid dynamic (CFD) methods used in vendor applications and for achieving high quality CFD simulations of a dry cask.

As part of licensing program improvements, the NRC published "General Solicitation for Public Comment (Request for Comments) on the Topic of Retrievability, Cladding Integrity, and Safe Handling of Spent Fuel at an Independent Spent Fuel Storage Installation and During Transportation" in the *Federal Register* on January 17, 2013.

The NRC conducted a number of oversight activities during FY 2013. The agency completed inspection activities at the La Crosse Boiling-Water Reactor associated with the licensee's completion of the major milestone of relocating all spent fuel from the fuel pool to the independent spent fuel storage installation (ISFSI) storage pad. The agency completed inspection of final corrective actions at the North

Anna general-licensed ISFSI in response to the 2011 Virginia earthquake in support of an upcoming loading campaign. The NRC also completed the review of requests for exemption from the new emergency preparedness rule for decommissioning nuclear power plant sites and ISFSIs. Completion of these exemption requests will eliminate the need for these facilities to meet requirements under the new rule that were intended only for sites with operating reactors.

The NRC issued EA-13-112, "Order for Implementation of Additional Security Measures and Fingerprinting for Unescorted Access to Beaver Valley Nuclear Power Station Independent Spent Fuel Storage Installation," and EA-13-132, "Order for Implementation of Additional Security Measures and Fingerprinting for Unescorted Access to Pilgrim Nuclear Power Station Independent Spent Fuel Storage Installation." The agency issues these Orders one year before licensees intend to load spent fuel in an ISFSI to allow adequate time for the licensee to implement required security enhancements and for the NRC to inspect the implementation before operation.

The agency completed a pilot training program for ISFSI inspectors to ensure common understanding and implementation of the inspection program. The NRC conducted the Independent Spent Fuel Storage Installation Inspector Counterpart Meeting on March 6 and 7, 2013, to enhance partner cooperation through a common understanding of issues impacting the business line and collaborative development of inspection program documents.

While all expired NRC-certified Type B transportation packages were phased out at the end of Calendar Year 2012, one DOT specification package design, the 20WC, remains in service. The NRC has extended approvals for this DOT specification package through the end of Calendar Year 2013, allowing the certificate holder (the University of Missouri Research Reactor) to obtain a replacement package to transport the associated medical and industrial isotopes. The application for the replacement package is under expedited review. The review team is coordinating closely with the applicant to identify the appropriate point at which fabrication of the package could begin at risk but with a reasonable level of assurance that design questions had been effectively resolved. DOT is periodically updated on the progress of the technical review and status of the NRC approval for use of the expired package.

## Spent Fuel Storage and Transportation Rulemaking

As directed by the Commission on September 6, 2012, in response to a court decision vacating the NRC's 2010 Waste Confidence Decision, the NRC established and staffed a dedicated Waste Confidence Directorate, tasked with developing a generic environmental impact statement and rule within 24 months. The agency held four public meetings to collect public comments on the scope of the project. The agency published the Waste Confidence Scoping Summary Report. Periodic public teleconferences are held to discuss the project status. On September 13, 2013, the agency published the draft generic environmental impact statement and proposed rule for public comment. The NRC will hold 12 additional public meetings at NRC headquarters and around the country to receive comments on the draft generic environmental impact statement and proposed rule.

The agency published the proposed rule package for 10 CFR Part 71, "Packaging and Transportation of Radioactive Material." The proposed rule will harmonize 10 CFR Part 71 with IAEA standards and DOT regulations. Public comments were received by the deadline of July 30, 2013, and have been under review. The agency issued letters to those Tribes qualified for advance notification of spent fuel transportation to confirm reservation boundaries and set expectations for handling Safeguards Information. Those letters were necessary to support changes made to 10 CFR Part 71 and 10 CFR Part 73, "Physical Protection of Plants and Materials."

In FY 2013, the agency initiated proof-of-concept testing to inform the technical basis for a security rulemaking for the physical protection of ISFSIs and monitored retrievable storage installations. Test results would also be used to address stakeholder concerns regarding using a dose-based versus a design-basis threat approach in formulating the appropriate level of physical security requirements. The NRC conducted a classified meeting with impacted external stakeholders on the technical basis for the ISFSI security rule to ensure stakeholder awareness of potential vulnerabilities.

## Spent Fuel Storage and Transportation Research

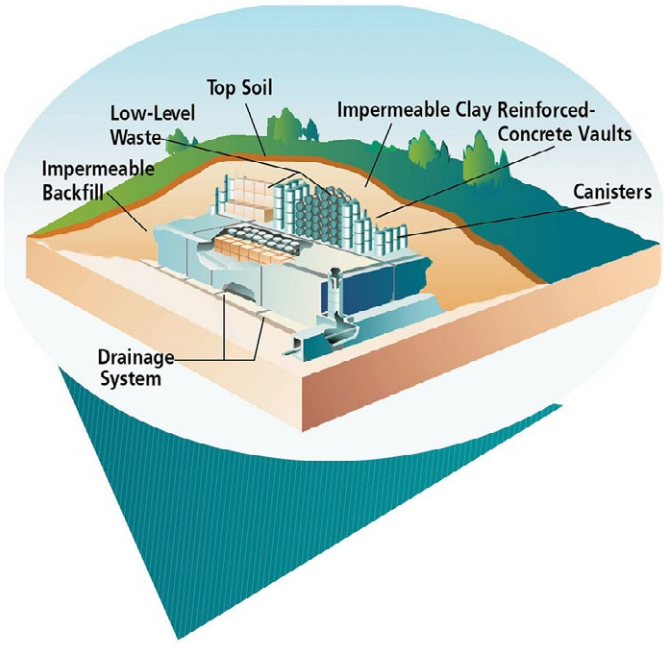
The NRC supports research associated with burnup credit and very long-term dry spent fuel storage, such as research into concrete degradation, weld corrosion, impacts of high-burnup fuel, climatic or weather-related impacts on cask performance, transportability of fuel after long-term storage, and the need for an improved hazards assessment, including the potential impact of long-term storage on eventual disposal. The technical bases for extended storage and transportation are being reviewed to ensure environmental effects and material property changes do not affect the safety of licensed dry cask storage systems. The NRC also continued research on the performance of metal and polymeric O-ring seals used in spent fuel shipping casks in beyond-design-basis temperature excursions (e.g., extreme fires).

## Spent Fuel and Transportation Security

During FY 2013, the agency completed the final action (Recommendation 1) from the Audit of NRC's Oversight of ISFSI Security (OIG-11-A-10) to develop and implement an overarching process document that defines and clearly documents the roles and responsibilities of all offices involved in ISFSI security. The agency developed the ISFSI Security Roles and Responsibilities document in coordination with Headquarters and regional offices, and subsequently approved and issued by the Executive Director for Operations (EDO).

The agency published the final rule for 10 CFR 73.37, "Requirements for Physical Protection of Irradiated Reactor Fuel in Transit," which makes generically applicable the Spent Fuel and Transportation Orders issued on May 20, 2013 and that became effective on August 19, 2013. The rulemaking also incorporated, in part, a response to a State of Nevada Petition for Rulemaking. Provisions of the rule included the notification of states, the NRC operations center, and coordination with local law enforcement on transportation routes for irradiated fuel. The rule requires armed escorts for the entire shipment route, the development of normal and contingency response procedures, and more thorough background investigations of individuals associated with the shipment. NUREG-0561, Rev. 2, "Physical Protection of Shipments of Irradiated Reactor Fuel," was issued in June 2013, to provide guidance for the rulemaking.

*Figure 19*
Low-Level Waste Disposal




## Decommissioning and Low-Level Waste

Decommissioning removes radioactive contamination from buildings, equipment, ground water, and soil to achieve levels that permit the release of the property while protecting the public. The NRC terminates the licenses for decommissioned facilities after the licensees demonstrate that the residual onsite radioactivity is within regulatory limits and sufficiently low to protect the health and safety of the public and the environment. Completion of decommissioning, environmental, and performance assessment activities ensures that residual radioactivity does not pose an unacceptable risk to the public (see Figure 19).

## Decommissioning And Low-Level Waste Licensing And Oversight

The NRC took a number of actions during FY 2013 related to the safe and secure decommissioning of facilities and management of low-level waste. The agency assumed

regulatory jurisdiction over Shieldalloy Metallurgical Corporation and issued an amended NRC license containing license amendments issued by New Jersey while the facility was under State jurisdiction. Subsequently, in response to a court decision, the NRC reinstated the transfer of regulatory authority over the Shieldalloy site to New Jersey. The NRC completed several in-situ recovery (ISR) and uranium recovery licensing actions, including issuing the Lost Creek ISR safety evaluation report and environmental assessment; PRI Smith Ranch license renewal request for additional information (RAI); United Nuclear Corporation Church Rock groundwater background license amendment RAI; and Hydro Resources, Inc. license renewal acceptance review.

The agency issued the F-Tank Farm (FTF) technical review report on plutonium (Pu) waste release modeling, which evaluates work performed by DOE after NRC's FTF Technical Evaluation Report (TER) but before the waste determination was finalized by DOE. In accordance with its statutory responsibilities with regard to WIR, the NRC summarized its technical review of Pu waste release documents prepared by the DOE Savannah River Site (SRS) in a memorandum in May 2013. Review of work performed by DOE between issuance of the NRC's TER and DOE's issuance of the final waste determination affirmed the need for Pu (and other key radionuclides) solubility experiments to support key modeling assumptions made in FTF and H-Tank Farm performance assessments prepared for SRS.

The agency held a technical meeting with the U.S. Army to identify the path forward for a possession-only licence for Schofield Barracks and Pohakuloa Training Area in Hawaii, which contain depleted uranium from Davey Crockett Munitions.

Other activities during FY 2013 included issuance of the Advisory Council on Historic Preservation (ACHP) letter on the path forward for the Dewey-Burdock Section 106 consultation, which invited ACHP to participate in future Section 106 interactions. The agency participated in a U.S. Environmental Protection Agency uranium recovery contamination workshop held in Gallup, NM, and it met with the Navajo president as part of the Navajo 5-year plan activities. The NRC briefed the House Energy and Commerce Committee staff on the Navajo 5-year plan.

### Decommissioning and Low-Level Waste Rulemaking

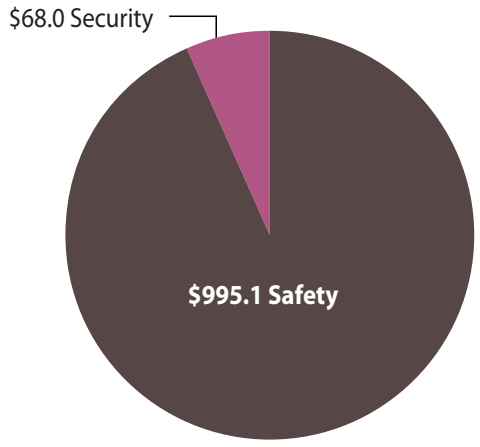
The agency issued preliminary draft rule language for 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," for public comment in December 2012.

The NRC held a public Webinar in June 2013 to seek input from the public, licensees, Agreement States, non-Agreement States, and other stakeholders on a potential rulemaking to address prompt remediation of residual radioactivity during the operational phase of licensed material sites and nuclear reactors. The meeting was held as directed by Staff Requirements Memorandum (SRM), SRM-SECY- 07-0177 and the previously issued SRM-SECY-12-0046.

## COSTING TO GOALS

The NRC is working to improve its cost management capabilities to better align its costs with desired outcomes. This year's Performance and Accountability Report presents the full cost of achieving the Safety and Security goals for the agency's programs, Nuclear Reactor Safety and Security and Nuclear Materials Safety and Security. The total cost of achieving the agency's strategic goals was $1,063.1 million. The cost of achieving the agency's Safety goal was $995.1 million and the cost of achieving the agency's Security goal was $68.0 million (see Figure 20).

*Figure 20*
NRC Safety and Security Costs *(in millions)*



# ORGANIZATIONAL EXCELLENCE OBJECTIVES

The NRC has three organizational excellence objectives: Openness, Effectiveness, and Operational Excellence. These objectives are critical components to carrying out the agency's regulatory mandate to serve the American people. The NRC received its twelfth consecutive Certificate of Excellence in Accountability Reporting from the Association of Government Accountants (AGA) for its FY 2012 Performance and Accountability Report.

## Openness

The Openness objective explicitly recognizes that the public must be informed about, and have a reasonable opportunity to participate in the NRC's regulatory processes. The NRC is firmly committed to transparency, participation, and collaboration as key principles governing the agency's relationship with the public and other stakeholders. The agency has demonstrated its commitment to these openness principles through its longstanding efforts to keep stakeholders informed and involved in the NRC's regulatory process. The NRC has continued to receive high survey scores from the American Customer Satisfaction Index for its publicly available information and search effectiveness, which are well above those of similar regulatory agencies.

The agency completed implementation of all initiatives presented in the agency's Open Government Plan published in FY 2010 and available on the NRC's Web site at http://www.NRC.gov/public-involve/open.html. In April 2012, the agency published an addendum to its Open Government Plan outlining its commitment to openness, which continued in 2013. This addendum is available on the NRC's Web site at http://pbadupws.nrc.gov/docs/ML1207/ML12073A302.pdf. The focus of the addendum on the use of mobile technology aligns well with the President's initiative on Building a 21st Century Platform to Better Serve the American People. In May 2013, the NRC made high value data and information available through Web APIs (application programming interfaces), published a Web API for its Developer's page, provided mobile access for several applications, and published the agency's plan for the use of mobile technologies.

*2013 Regulatory Information Conference*

The NRC continued to expand its use of social media as a vehicle to communicate with stakeholders. With the launch of NRC Chat, the agency is encouraging real-time, two-way dialogue with the public on topics of high interest. At the annual Regulatory Information Conference (RIC) held in March 2013 and attended by more than 3,000 participants from 34 countries, the NRC presented a case study that illustrated how our social media platforms continue to enhance the agency's commitments to transparency and to integrate public participation and collaboration into our regulatory activities. As part of the Mobile NRC initiative, RIC attendees were provided access to the conference agenda and the ability to download conference publications from their own devices. In addition, Quick Response codes were used on event materials to provide mobile device users with enhanced access to RIC materials.

The NRC's statistics on the use of social media initiatives (blog, Twitter, YouTube, Flickr, and LinkedIn) has shown a high level of interest from stakeholders. For example, in FY 2013, the agency posted 381 blog entries, approved 3,003 comments, and attracted 413,926 visits. The NRC counted 4,283 Twitter followers and has sent 1,185 "tweets." The NRC also posted 93 video and audio clips to YouTube, has 363 regular subscribers, and has counted 37,187 visits.

In cooperation with the American Nuclear Society and Physicians for Social Responsibility, the agency hosted two Webinar sessions for bloggers to interact with the agency's Chairman.

The NRC has continued to improve its response to requests under the Freedom of Information Act (FOIA). The Japan FOIA team has made significant progress and will complete the backlog of FOIA requests related to Fukushima by the end of the calendar year. The agency has provided FOIA training focusing on FOIA law and recordkeeping practices to agency staff.

The agency continues to streamline public interactions with agency information systems by deploying the Criminal History Submission System as part of the Electronic Information Exchange and Web-Based Licensing, a component of the Integrated Source Management Portfolio. In addition, the deployment of the Case Management System provided enhanced functionality and easier management of case-related documents and photographs.

Several enhancements supporting Digital Government were implemented that allow the public to view search results of publicly available documents through a mobile Web-based interface. Information technology (IT) developers can incorporate these searches into their applications, and tools are available to measure site usage statistics for the NRC public Web site.

The agency continues to provide individuals who are limited English proficient meaningful access to NRC programs and activities (e.g., events, meetings, hearings), reasonable notification of NRC public information, and language translation assistance and services.

## Nuclear Reactor Safety Highlights

### *Operating Reactors*

The NRC held three significant public meetings to discuss the ongoing SONGS review activities, including two in California and one at Headquarters. These meetings involved significant logistical and coordination activities to ensure that adequate opportunity was provided for the high level of public participation and interest this issue has generated.

In FY 2013, the NRC hosted a Webinar on the preliminary results of the agency's August 2012 special inspection of a leak from a control rod drive mechanism at the Palisades Nuclear Plant. This initiative provided a direct communication avenue to inform interested members of the public.

On flooding issues, the NRC interacted with external stakeholders that included industry seismic and flooding task forces, the Interagency Committee on Dam Safety, the Federal Energy Regulatory Commission, the U.S. Department of the Interior, and the Nuclear Energy Institute.

The NRC also conducted a 3-day interagency workshop and Webinar on Probabilistic Flood Hazard Assessment. More than 250 individuals participated in eight technical sessions addressing flood mechanisms and probabilistic approaches for assessing the risk from flood hazards.

The agency finalized the safety culture common language for reactors. The effort to develop a common language was a joint effort between the agency and industry and was achieved through a collaborative effort over a 14-month period.

### *New Reactors*

The NRC issued an Annual Report of the New Reactor Program highlighting the significant accomplishments and goals of the program and the status of activities. The agency conducted extensive public outreach as part of the cROP pilot project, including (1) holding several public assessment meetings near the Vogtle and Summer construction sites and NRC Headquarters, and (2) soliciting stakeholder feedback through internal and external surveys.

The NRC conducted an extensive outreach effort to solicit feedback from external stakeholders during the conduct of a lessons-learned effort of the first use of the 10 CFR Part 52 licensing process and a self-assessment of post-COL implementation. Specifically, the agency held three public meetings and separately contacted dozens of external stakeholders.

## Nuclear Materials and Waste Safety Highlights

### *Fuel Facilities*

The NRC held two annual meetings (Fuel Cycle Information Exchange and Nuclear Material Management and Safeguards System) with industry, international partners, and non-

governmental organizations. The Fuel Cycle Information Exchange, held on June 11 and 12, 2013, covered the topics of Post Fukushima, Safety Culture, Security, and Cumulative Effects of Regulations.

### *Nuclear Materials Users*

The NRC conducted two public meetings in FY 2013 to solicit comments on the policy statements that govern the Agreement State program. The comments received will contribute to any changes to the policy statements.

The Advisory Committee on the Medical Use of Isotopes conducted two public meetings and held three public teleconferences to discuss the 10 CFR Part 35 draft proposed rule and other topics related to the use of radioactive materials in medicine. Additionally, Part 35, Part 37, and NUREG-1556 working groups included Agreement State representation.

### *Spent Fuel Storage and Transportation*

During FY 2013, the NRC held two Webcasts and two Webinars to receive public comments during the Waste Confidence generic environmental impact statement scoping period and conducted eight conference calls open to the public regarding the status of the Waste Confidence draft generic environmental impact statement and proposed rule. The NRC will hold thirteen additional public meetings at NRC Headquarters and across the country in early FY 2014 to receive additional comments.

The agency held 46 public meetings, including technical meetings with spent fuel storage and transportation licensees and meetings to provide an opportunity for public comments on the scope of the Environmental Impact Statement to support the Commission's Waste Confidence Decision and Rule.

### *Decommissioning and Low-Level Waste*

The agency held approximately 40 technical meetings with decommissioning licensees, uranium recovery facility applicants and licensees, and low-level waste stakeholders that were open to the public. The agency also engaged in outreach and consultation with Native American Tribes as part of efforts to fulfill the agency's Section 106 responsibilities under the *National Historic Preservation Act*. During FY 2013, the agency consulted with State Historic Preservation Officers, Tribal Historic Preservation Officers, appropriate Tribes, and other consulting organizations to identify historic properties, including those that are of religious and cultural significance to the Tribes, to assess and resolve any adverse effects on those sites as part of the agency's review of uranium recovery license applications.

## Effectiveness

During FY 2013, the agency continued its efforts to improve performance in response to increasing demands on the NRC's resources. This requires the agency to become more effective, efficient, and timely in its regulatory activities and ensure that available resources are optimally directed toward accomplishing the agency's mission.

On November 28, 2012, the agency completed SECY-12-0161 proposing expansion of the Alternative Dispute Resolution Program as an option for escalated non-willful (traditional) enforcement cases with proposed civil penalties that are identified through investigations or inspections, for a 1-year pilot period. The NRC issued a *Federal Register* notice revising the Enforcement Policy on January 28, 2013. The revision primarily addressed topics specified in SRM-SECY-09-0190, "Major Revision to NRC Enforcement Policy." Corresponding Enforcement Manual changes were also completed.

During FY 2013, the agency completed efforts to provide secure communications for the new NRC Headquarters building. This involved the design, construction, and implementation of multiple secure communications systems to support the Operations Center Secure Compartmented Information Facility (SCIF) and other floors throughout the new building that will use secure communications systems. The NRC also received final approval from its certification authority regarding the SCIF.

## Nuclear Reactor Safety Highlights

### *Operating Reactors*

The NRC is evaluating the Baseline Inspection Program to determine if (and how) it can better meet ROP objectives. The independent review of the ROP will include the relative roles of Headquarters and regional staff, staff interactions with industry

over performance indicator assessments, and the effectiveness of NRC's assessment of substantive cross-cutting issues.

The agency will coordinate expertise and resources among multiple offices to ensure technical issues are addressed and a shared understanding of regulatory and technical implications is achieved for coherent decision-making across the agency (continued operability, license renewal, new reactor licensing, and potential generic implications).

### *New Reactors*

The agency issued RIS 2012-12 to request notification from applicants, licensees and potential applicants about their intent to submit ESPs, LWAs, COLs, and DC applications and take other licensing actions. The information obtained will help the agency to plan its resource needs for the future. The NRC issued a Design Specific Review Standard (DSRS) for the mPower SMR design for use and comment. The DSRS addresses the staff's position on specific design features of the mPower reactor and is expected to improve the efficiency and effectiveness of the staff's review of this application.

The agency conducted a successful preapplication audit of the DC review of the APR-1400 design. The audit identified areas of insufficient information resulting in action by the applicant to revise the application submittal date to address those areas before submitting to the agency for review.

## Nuclear Materials and Waste Safety Highlights

The agency began 10 CFR Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material," Implementation Working Group activities in November 2012. This group includes representatives from across the NRC and the Organization of Agreement States to ensure a smooth transition of NRC activities (including order rescission, training, inspection, enforcement, etc.) from the post-9/11 security orders to the new 10 CFR Part 37 rule.

The NRC provided Safeguards Information training to Tribes who asked for advance notification of spent nuclear fuel shipments. The deadline for regulatory compliance for licensees to notify Tribes of such actions was June 11, 2013.

The NRC supported an IAEA Consultancy on the Regulatory Aspects and Practical Experiences in the Application of Entombment Decommissioning Strategy. In addition, the NRC has been involved in the Joint Convention (JC) on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management JC preparation activities in support of the 5th Cycle of the JC in 2015.

## Operational Excellence

This objective focuses on the activities related to acquisitions, administrative services, financial management, human resource management, information management/information technology, and outreach.

## Acquisitions

The NRC convened the 4th and final Portfolio Council (PC) for implementation of its strategic acquisition program. The Corporate Support PC was established in February 2013 and is reviewing consultant, subscriptions, and administrative services to identify potential strategic sourcing strategies. The Technical Assistance and Research PC developed the agency's first strategic sourcing strategy for technical services, currently in the acquisition process with implementation expected in early 2014. The IT PC is initiating an assessment of the agency's printing management to support the development of recommendations for an agencywide strategic sourcing strategy. The Education and Training PC implemented one training strategy, and the Corporate Support PC review of meetings and conferences resulted in the execution of blanket purchase agreements with several local hotels for standard costs, terms, and conditions to support meeting space and support services. The agency also completed a spending analysis for FY 2012 to provide the PCs with the spending data critical to the development of effective and efficient strategic sourcing strategies.

Throughout the year, the agency supported an excellent level of small business contract performance, with the agency exceeding four out five of its small business prime contract goals through: awarding over $83 million to small businesses; conducting internal training on the benefits of small business contracting, including how to identify qualified small

businesses; and exploring the small business marketplace through business counseling and outreach activities at external conferences and events.

## Administrative Services

### *NRC White Flint Complex Building*

The NRC began occupancy of the new headquarters building in early FY 2013, beginning the reconsolidation of NRC headquarters staff that had been dispersed in remote buildings over the past several years. The agency continued with implementation of several energy savings projects throughout its facilities. These projects included the upgrade of the heating, ventilation, and air conditioning chiller drives to the more efficient variable frequency drives, and a retrofit to light-emitting diode lighting in the elevator lobbies.

### *Physical and Personnel Security*

In FY 2013, the NRC developed and implemented a robust security survey tool that measures security standards against risk and consequences. The agency also provided security support for over 35 offsite public meetings, processed over 50,000 licensee criminal history program investigations, and coordinated with Federal partners in the area of Federal building security.

The NRC implemented the Personnel Security and Adjudication Tracking System, which allows users to perform investigative reviews, adjudication, and approval of access authorizations or security clearances through the Web.

*Three White Flint North Building*

### *Rulemaking and Rulemaking Support*

On May 3, 2013, the NRC published for public comment a proposed rule, "Revisions to the Petition for Rulemaking Process" (78 FR 25886), that would streamline and clarify the NRC's process for addressing petitions for rulemaking (PRM). The aim of the proposed changes to the PRM process is to improve transparency and make the process more efficient and effective. The proposal marks the first comprehensive update to the NRC's process for considering PRMs since that process was first established in 1979.

On November 23, 2012, as part of its voluntary response to Executive Order 13579 "Regulation and Independent Regulatory Agencies" (http://www.gpo.gov/fdsys/pkg/FR-2011-07-14/pdf/2011-17953.pdf), the NRC published a draft plan for the retrospective review of existing rules for public comment (77 FR 70123). The draft plan describes the processes and activities that the NRC uses to determine whether any of its regulations should be modified, streamlined, expanded, or repealed. The NRC received eight public comments during the 60-day public comment period. The NRC will consider its processes in light of the public comments and prepare a final plan that will be published by December 31, 2013.

## Financial Management

In FY 2013, the NRC completed a business process improvement to streamline the agency's budget formulation process by initiating baseline budgeting practices, including budget execution in the formulation process and incrementally centralizing budget formulation functions in the Office of the Chief Financial Officer (OCFO). Baseline budgeting is based on the premise that programs and activities that are currently funded will continue into the next budget period without any significant increase or decrease in the level of service. These levels are adjusted according to execution and projections for changing work. The NRC began the centralization of budget formulation functions within OCFO for six business lines by performing the budget functions previously performed by the respective offices.

On July 1, 2013, the NRC issued a final rule in the *Federal Register* amending the licensing, inspection, and annual fees charged to its applicants and licensees. The amendments are necessary to implement the *Omnibus Budget Reconciliation Act*

*of 1990* (OBRA–90), as amended, which requires the NRC to recover through fees approximately 90 percent of its budget authority in FY 2013, not including amounts appropriated for WIR and amounts appropriated for generic homeland security activities. Based on the *Consolidated and Further Continuing Appropriations Act of 2013*, the NRC's required fee recovery amount for the FY 2013 budget was projected at appoximately $864.0 million. After accounting for billing adjustments, the total amount to be billed as fees to licensees was $859.6 million. The NRC Fee Recovery Schedules for FY 2013 is located at http://www.gpo.gov/fdsys/pkg/FR-2013-07-01/pdf/2013-15529.pdf

During the fiscal year, the agency successfully transitioned financial operations support services for payments, collections, and travel processing from the National Business Center, U.S. Department of the Interior to a commercial services provider.

The NRC continued its excellence in financial reporting. For the tenth consecutive year, an independent auditor has rendered an unqualified opinion on the NRC financial statements. The auditor also rendered an unqualified opinion for the sixth consecutive year on the agency's internal control. The auditors concluded that the NRC had no reportable conditions or significant deficiencies.

During FY 2013, the NRC continued to make significant progress in modernizing its financial systems. System performance, data integrity, business processes, user expertise, and reporting were enhanced through its core accounting system, Financial Accounting and Integrated Management Information System, (FAIMIS), to include user training, and development of a reporting dashboard and interactive reporting tool. The NRC also added a Salary and Benefits Projection Application to its Budget Formulation System (BFS). This BFS enhancement facilitates the analysis of employee compensation and benefits scenarios for future years and improves budget forecasting. A sustained emphasis on modern, Web-enabled technology; automated processes; and extensive user support has improved the financial information available to the NRC, which has allowed for better informed decision making. The NRC began its implementation of the next generation travel system, ETravel System 2 (ETS2) scheduled for deployment in FY 2014. ETS2, an end-to-end travel management system, is expected to ease online booking, automate the vouchering process, and enhance travel management reporting.

## Human Resource Management

As the NRC moves toward the future, staff levels have stabilized and it is unlikely that there will be any growth over the next several years. In response, the NRC has adjusted its human capital strategies to ensure that the agency is focused on the mission of protecting public health and safety and security while supporting increasing mandates. These comprehensive human capital strategies are consistent with the agency's core values, reflective of our mission and strategic goals, clear in purpose, and flexible in implementation.

Over the past two and a half years, the NRC has used a variety of methods and measures to regulate hiring and to implement and refine the organizational structure to meet changing mission needs such as the development of short-and-long term staffing plans, and limited/targeted external hiring for critical skills. These methods refined the hiring process and helped control full-time equivalent utilization. As a result, the agency has made significant progress in aligning staff with the salary and benefits budget, thus allowing us to increase external hiring, as needed and within stabilized FTE levels, beginning in FY 2013 and continuing into FY 2014.

The NRC implemented a strategy to transform workforce centers by reducing inefficiencies and overhead, and by centralizing and streamlining processes, while continuing to provide effective and more efficient services. Steps include the successful transition of agency employees from various program offices to corporate offices in an effort to centralize selected office support functions; launch of a Business Process Improvement Program to review and analyze the agency's "current state" onboarding process to create a more centralized and effective "future state" process; and implementation of applicable human capital management strategies, such as change management and communication, internal recruitment, and cross-occupational development. Additionally, the agency implemented an automated, comprehensive solution – Workforce Tracking and Transformation System / Entrance on Duty System – to enhance our current workforce planning process. This system

allows the agency to staff positions in a more timely and cost-effective manner, streamline the entrance-on-duty process, and enhance tracking and reporting of the hiring process.

The NRC is approaching work in a context of budgeted priorities and is strategically focusing on not only replacing employees who depart but also fine-tuning available skill sets to meet future mission needs while still emphasizing Government-wide programs such as hiring of the disabled (e.g., The Office of Personnel Management's (OPM) List of People with Disabilities and the Workforce Recruitment Program); employing veterans through coordination of, and attendance at, events focused on veterans, including the Operation War Fighter career fair, the Corporate Gray Military Friendly job fair, and the Vets to Feds program; and supporting the agency's Comprehensive Diversity Management Plan through the newly created Diversity Management and Inclusion Council. As a result of the increased emphasis on the hiring of veterans and disabled veterans, the NRC exceeded its FY 2013 established hiring goals In the first three quarters of FY 2013, 26 percent of all NRC hires were veterans and 7.3 percent of total hires were disabled veterans.

Another way the agency is ensuring that critical skills and competencies are available in the future is by adapting our training and development programs to meet the changing needs of the agency and changes in technology. The NRC continues to focus on a competency-based approach to training, ensuring a line-of-sight alignment between employees' learning experiences and the agency's mission. Training and development programs are designed to shorten the time to competency. The NRC's learning and development programs continue to evolve to support the needs of the next generation of regulatory experts. For instance, the NRC has continued the successful development of new reactor simulators and technical training courses to coincide with the building of a new generation of nuclear reactors. Additionally, the agency continued to implement online and distance learning to deliver high-quality learning products to the NRC workforce anytime, anyplace. By using these approaches, the NRC ensures effective training with the added benefits of a reduction in costs and schedule convenience for the learner.

The NRC recognizes the need to capture and maintain the knowledge and skills of senior staff and management as they become eligible for retirement. The NRC has made revitalization of the agency's Knowledge Management (KM) program a priority to support effective approaches to knowledge collection, transfer, and use for information relevant to the NRC's mission. This program includes strategic hiring and training to fill knowledge gaps, establishing an IT infrastructure to facilitate knowledge transfer, and fostering a culture of knowledge transfer and retention. In FY 2013, the agency sponsored a successful campaign called "KNOWvember" to spotlight the NRC's KM program and to raise visibility and awareness of the importance of KM, published the first KM NUREG by the Office of Nuclear Reactor Research on the Three Mile Island accident, and hosted a KM series by the Office of New Reactors on 50 Years of New Reactor Licensing.

The NRC continues to be among the best places to work in the Federal Government according to Federal Human Capital Survey Results. Specifically, the FY 2012 Federal Employee Viewpoint Survey placed the NRC in the top three of the 37 largest Federal departments and agencies in each of the four areas (Leadership and Knowledge Management, Results-Oriented Performance Culture, Talent Management, and Job Satisfaction) covered by the survey. The NRC excels in areas such as matching employees' skills to the agency's mission, strategic management, effective leadership, performance-based advancements, training and development, support for diversity, and work-life balance. The NRC realizes that the success of the agency depends on the talent and commitment of our employees and strives to create a workplace rich in work-life balance where employees are engaged in meaningful and challenging work.

## INFORMATION TECHNOLOGY AND INFORMATION MANAGEMENT

The agency continues to strengthen its IT governance structure to facilitate the efficient and effective management of the agency's IT/information management (IM) investment portfolio. To support the overall strategic direction described in the NRC Strategic Plan and the IT/IM Strategic Plan, the agency developed the IT/IM Roadmap to help guide IT/

IM planning activities across the agency. With the goal of improving transparency in IT budget and spending, significant efforts have been focused on improving processes around capital planning, enterprise architecture, and major investment decisions.

The agency continues to improve tools and create enhancements to make it easier to find information. The FileNet P8 platform was upgraded to its newest version 5.1 to provide enhanced capabilities necessary to build an enterprise Business Process Automatic Stack platform (BPAS). This platform was used to deliver three systems in FY 2013: (1) Agency Lessons Learned Tracking System, (2) SECY System of Tracking and Reporting, and (3) Public Meeting Notice System. The upgrade also replaced the core search engine with a new appliance (Content Search Services or CSS) that provides faster and better search results, which addresses the concerns cited in the FY 2012 IT/IM Survey. The new CSS also adds several other user-requested features that will help finalize the transition from the ADAMS Original to the ADAMS P8.

The NRC has continued to improve its planning and implementation of a comprehensive, integrated, and cost-effective internal cyber security program. The agency has focused its efforts on evolving threats to electronic information in accordance with applicable laws and directives by: (1) prioritizing security challenges and developing responses, (2) educating users and cyber security professionals, (3) striving to maintain a high level of awareness, (4) addressing approaches to evaluate and report on the agency's security and risk posture, and (5) implementing a cyber risk dashboard.

An updated version of Management Directive (MD) and Handbook 12.5, "NRC Cyber Security Program," was issued to ensure NRC information and IT systems are protected from unauthorized access, use, disclosure, disruption, modification, and destruction. The update incorporated current Federal direction, addressed current threats, and updated NRC organizational changes. This revision follows the internationally accepted information security policy framework issued by the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) Joint Technical Committee as ISO/IEC Standard 27002:2005(E), "Code of Practice for Information Security Management." The directive and handbook provide requirements for securing IT systems and devices.

Effective cyber security helps ensure that the agency identifies and addresses ongoing threats. The NRC completed installation and operation of sensors to detect advanced persistent threats (APT) in infrastructure and development network environments. The APT appliance positions the agency to detect, prevent, and respond to attempts at the unauthorized exfiltration (pulling, stealing) of NRC data outside the agency. The agency also completed coordination with the U.S. Department of Homeland Security (DHS) on Trusted Internet Connection and the Continuous Diagnostics and Monitoring memorandums of agreement. This effort allows the NRC to participate in the continuous diagnostic and monitoring acquisition pilot led by DHS. In addition, it helps ensure that the NRC participates in the next generation of security service offerings for our internet connectivity.

During FY 2013, the agency conducted "phishing" exercises to test susceptibility to e-mail-based security attack, with overall user awareness shown to be increasing as reflected by user behavior changes. The NRC also conducted role-based security training classes and incorporated security training into the staff's learning plans. Role-based training for those with significant information security responsibilities is required by the *Federal Information Security Management Act*.

The agency deployed several IT/IM modernization and improvements initiatives, including the BPAS, to be used to automate business processes within the agency. Using BPAS, the agency developed a system of tracking to modernize the automation of commission voting and track work assigned to the NRC staff by the Commission. Additionally, the agency continued to expand the Bring Your Own Device initiative and enabled secure and significantly broader mobile access to e-mail and calendar functions to agency staff. Staff members are able to use their personal devices to access this information. This approach reduces the per-user cost to the agency for delivering access to this information.

## Outreach

IIn FY 2013, the agency successfully managed equal employment opportunity (EEO) complaints and achieved 95 percent timeliness. It responded to over 100 contacts,

processed 22 informal EEO complaints, 11 formal EEO complaints, issued three final agency decisions, settled 18 cases, completed 10 investigations, received three requests for hearings before the Equal Employment Opportunity Commission, and ensured compliance with 25 settlement agreements.

Over the past year, the NRC successfully coordinated several activities promoting Affirmative Employment and Diversity: 1) established a Diversity Management Inclusion Council (DMIC); 2) held an Annual EEO Briefing to the Commission; 3) conducted a successful Diversity Day Program; 4) provided support to seven EEO Advisory Committees and 2 employee organizations for special emphasis observances; 5) held several information exhibits on the Alternative Dispute Resolution (ADR) Program and Disability Awareness; 6) coordinated EEO and Diversity training for approximately 600 supervisors and managers; and (7) held the first joint EEO Counselor and EEO Advisory Committee Conference.

The NRC assisted two DOJ Limited English Proficiency (LEP) subcommittees to provide technical assistance regarding the NRC's best practices. The Domestic Translation Services Contract was incorporated into the NRC's Enterprise-wide Contracts catalog.

The agency collaborated with White House and Federal officials to affect changes and outcomes to support and assist minority serving institutions (MSIs) in their efforts related to the U.S. President's higher education initiatives. The NRC worked across agencies and organizational boundaries (internal/external) to partner and increase outreach efforts to promote MSI interest and participation in environmental justice and emergency management efforts.

*Commission Briefing on NRC's International Programs*

## International Activities

The NRC's international responsibilities include participation in activities that support the U.S. Government's compliance with international treaties and agreements; implementation of export and import licensing of nuclear facilities, equipment, and materials; conducting programs of bilateral nuclear cooperation and assistance; and support for safety, security and safeguards activities of relevant multinational nuclear safety organizations such as IAEA and the Organization for Economic Co-operation and Development's Nuclear Energy Agency (NEA).

### *International Treaties and Agreements*

The NRC led the U.S. preparations for the 2013 CNS Organizational Meeting and developed the U.S. National Report for the April 2014 Convention on Nuclear Safety (CNS) Review Meeting of Contracting Parties. In May 2013, the NRC supported the U.S. Government delegation to the first and second Preparatory Committee meetings for the Nuclear Non-Proliferation Treaty (NPT), which will have its review meeting in 2015. Two key obligations for NPT Member States are uniform implementation of IAEA safeguards and making available peaceful uses of nuclear energy. The NRC demonstrates the U.S. commitment to safeguards by working with licensees at whose facilities IAEA safeguards are put into effect. The NRC's cooperation and assistance programs have been viewed by the United States Government as examples of how the United States meets the NPT peaceful uses obligation.

### *Export and Import Licensing*

The NRC issued final rules updating 10 CFR Part 110, "Export and Import of Nuclear Equipment and Material," to reflect the nuclear non-proliferation policy of the Executive Branch by adding South Sudan to the list of restricted destinations while leaving Sudan on the list of embargoed destinations. The NRC published the Final Branch Technical Position on the Impact of Non-U.S. Origin Radioactive Sources to provide the guidance on the sealed source exclusion to the definition of "radioactive waste" in 10 CFR Part 110.

The NRC completed 119 specific export or import licensing actions, eighteen reviews of 10 CFR Part 810, "Assistance to Foreign Atomic Energy Activities" authorization requests; and eight Subsequent Arrangement requests proposed by the Executive Branch. The NRC participated in four U.S. interagency bilateral physical protection visits to support export licensing. The NRC's export/import licensing reviews ensure that nuclear equipment and material are transferred to authorized parties in ways consistent with applicable U.S. law and international obligations. The NRC continued to monitor policy and technical changes at the Nuclear Suppliers Group (NSG) for impacts on its export regulations, including participation in the multiyear exercise that successfully reviewed and updated the NSG's export control lists.

## *Bilateral Cooperation and Assistance*

The NRC continues an active program of bilateral cooperation under technical exchange agreements with 39 countries and EURATOM and Taiwan. In FY 2013, three bilateral technical cooperation exchange arrangements were finalized with Japan, Vietnam, and China. On December 14, 2012, a new cooperative arrangement was signed with Japan's Nuclear Regulation Authority (NRA). On May 9, 2013, the NRC and the Vietnam Agency for Radiation and Nuclear Safety signed a new arrangement. On July 11, 2013, the NRC renewed its Arrangement with the National Nuclear Safety Administration of the People's Republic of China. The NRC has provided draft Arrangements for review and final signature for Argentina, Australia, Croatia, France, Germany, Greece, India, Indonesia, the Netherlands, Pakistan, and the United Kingdom. All other NRC international agreements are current, and all information was exchanged with appropriate agreements and approvals in place.

The agency continued bilateral technical exchanges with China on the regulatory aspects for the first-of-a-kind design, construction, and future initial operation of AP1000 nuclear power plants in China.

The NRC continues to work with Japanese counterparts on Fukushima and other safety-related activities. The NRC and the Japan NRA held two Steering Committee meetings on nuclear safety. The cooperative framework provides the basis for more structured bilateral cooperation between NRA and NRC, covering all areas and issues of mutual interests on nuclear regulation and safety, including, in particular, Fukushima-related issues. Additionally, the NRC has held information exchanges with other Japanese government agencies on NRC's structure and activities.

Under its active assistance program, the NRC continued engagement on establishing the basic regulatory infrastructure needed for oversight of a nuclear power program with countries of Africa, Europe, the Middle East, and Southeast Asia. The agency also continued expansion of engagement with regulatory counterparts in Africa, Asia, and Latin America on establishing effective regulatory oversight of uranium recovery activities and facilities.

The NRC continued the program of assistance to the countries of Latin America and the former Soviet Union for regulatory controls over radioactive materials, including the establishment or enhancement of national source registries and review of national legislation. The agency also began expansion of sources-related assistance to countries of the Middle East and Africa.

The NRC held a uranium recovery workshop for the regulator and other government representatives of Mongolia. The workshop was sponsored through NRC's international assistance program and was held in May 2013. The overall goal of the workshop was to provide information on regulatory development, licensing, regulatory oversight, and prevention of health and environmental problems from legacy sites when uranium production ceases.

## *Multilateral Cooperation and Assistance*

The agency continues to benefit from frequent dialogue with its counterparts in a multinational context, including exchanges of information, best practices, and global lessons learned. The NRC also benefits from the participation in the IAEA standards development process, which enables the agency to influence international guidance and consider improvements in the domestic regulatory regime.

The NRC continues to be successful in influencing the content of IAEA safety and security documents as well as the IAEA's approach to document development. In keeping with the NRC's regulations and operating practices, the agency has supported a strong safety/security interface at the IAEA, including a comprehensive process for document development with a rigorous and effective review by senior international technical experts. The NRC participates in approximately 100 IAEA meetings each year on a variety of technical topics.

The NRC also strongly supports the IAEA's peer review services, having hosted both an Integrated Regulatory Review Service (IRRS) mission and numerous Operational Safety Review Team (OSART) missions in the United States and having provided senior experts to participate in missions in other countries. The most recent U.S. OSART was held at the Seabrook Station in New Hampshire in June 2011 with a followup mission planned for FY-2014. The NRC hosted an IAEA International Physical Protection Advisory Service (IPPAS) mission in October 2013. The NRC recently submitted a letter to IAEA formally requesting an IRRS followup mission in the United States in 2014.

The NRC continued to collaborate closely with other U.S. Government agencies in support of the IAEA's Action Plan for Nuclear Safety developed following the Fukushima accident. The agency has participated in each of the topical International Experts Meetings that IAEA has organized under the plan. The NRC has also supported other U.S. Government agencies in making commitments in support of the IAEA at a ministerial level.

The NRC is engaged both domestically and internationally in efforts to enhance nuclear safety and security through the regulatory oversight of radioactive sources. The agency has participated in numerous meetings of technical and legal experts on the IAEA's Code of Conduct for the Safety and Security of Radioactive Sources, both to ensure that its implementing guidance is clear and accurate and to encourage Member States that have not yet made a political commitment to implement the Code to do so. The NRC also provides a voluntary contribution to IAEA, on the order of $1 million annually, to support IAEA's Code-related assistance. The agency worked with other U.S. Government agencies, such as the U.S. Department of State, DOE, U.S. Department of Commerce, and National Security Council Staff, to develop international security guidance documents for radioactive sources.

The NRC continued to participate in numerous IAEA-sponsored coordination, information exchange, and knowledge management forums. These include the Global Nuclear Safety and Security Network, the Asian Nuclear Safety Network, the Regulatory Cooperation Forum, the Technical Support Organization Forum, the Forum of Nuclear Regulatory Bodies in Africa, and the Arab Network of Nuclear Regulators.

The NRC continues to benefit from its work at the NEA and holds leadership positions in a number of NEA committees and working groups. The NEA's membership comprises countries with mature nuclear programs and regulatory organizations, which facilitates beneficial dialogue on detailed technical topics. The NEA's research activities enable multiple countries to benefit from research conducted in a single location, which promotes cooperation and efficient use of limited resources. Some of the most significant work is done with the Halden Reactor Project, a program of research covering a broad range of areas including fuels, materials, digital systems, human factors, and human reliability. The Halden facility in Norway is a diverse center of excellence, unique in the nuclear arena.

In 2013, the NRC took a leadership role in the Multinational Design Evaluation Program (MDEP) by chairing the Policy Group (PG), co-chairing the Steering Technical Committee, and leading working groups on digital I&C, vendor inspection cooperation, and the AP1000 design. MDEP continues to be successful in increasing cooperation among regulators in design reviews and enhancing convergence of requirements and practices. Through MDEP, the NRC cooperated with other regulators in the review of the AP1000, EPR, and APR-1400 designs, and began preparations to cooperate on the ABWR design review. Sweden was approved for full membership on the MDEP PG and Steering Technical Committee and plans to participate in the Digital Instrumentation and Controls working group, the Codes and Standards working group, and the EPR and AP1000 working groups. Also, MDEP is currently reviewing the possible formation of two new MDEP

design-specific working groups: one to cooperate on the VVER (Russian "Vodo-Vodyanoi Energetichesky Reactor," i.e., "Water-Water Power Reactor") design, and one to cooperate on the ABWR design.

### *International Security*

Three years ago, the President of the United States convened the first-ever, heads of state-level international Nuclear Security Summit. The objective of this Summit was to focus on how to better safeguard weapons-grade plutonium and uranium in order to prevent nuclear terrorism. One of the outcomes of this first summit was the United States agreeing to an IPPAS Mission to be hosted by the NRC and NIST.

The second Nuclear Security Summit was held in Seoul, Republic of Korea on March 26 and 27, 2012. In support of U.S. Government commitments for the Seoul Summit and its policy of strengthening security over nuclear materials worldwide, the NRC hosted an "International Regulators Conference on Nuclear Security" in December 2012. This conference discussed a range of activities relevant to enhancing regulatory approaches to security at civilian facilities and shared best practices among senior-level representatives from other Federal agencies, licensees, international counterparts, and the NRC. The NRC also is supporting U.S. Government preparations for the 2014 Nuclear Security Summit, which will be held in the Netherlands.

## PROGRAM EVALUATIONS

The NRC conducted several program evaluations of its regulatory operations for both the nuclear reactor and the nuclear materials programs.

### Reactor Oversight Process Assessment

The agency performs an annual self-assessment of the Reactor Oversight Process (ROP). This assessment uses program evaluations and performance metrics to determine the overall effectiveness of the ROP through its success in meeting its pre-established goals and intended outcomes. In addition, specific and independent evaluations are often performed in the interest of continuous improvement. For example, in FY 2013, the Government Accountability Office commenced an audit of NRC Oversight of Commercial Reactor Safety in response to a request made by the Senate Committee on Environment and Public Works. In addition, an independent review of the ROP's objectives and implementation is being performed in response to Commission direction. Recommendations and lessons learned from these and other evaluations will be considered for additional program improvements.

### Operator Licensing Program

The NRC licenses all individuals who either operate or supervise the operation of the controls of a commercially owned nuclear power reactor or a test/research (i.e., non-power) reactor in the United States. The NRC regulates the licensing of reactor operators and senior operators through a combination of regulatory requirements: initial licensing, including written examinations and operating tests; and oversight of requalification training and examination programs, including enforcement.

The Operator Licensing Program annually audits one or two written examinations and operating tests in one region once every four years to ensure consistent quality, level of difficulty, administration, and grading of examinations. The Operator Licensing Program evaluation also includes a detailed review of the operator licensing function in at least one region on an annual basis with the regions performing an annual self-assessment during the alternate years. Additionally, the agency coordinates a biennial Operator Licensing Program conference, which is attended by all the regions.

### New Reactors

The NRC performed a review of lessons learned during the first-time implementation of the combined licensing portion of 10 CFR Part 52, "License, Certifications, and Approvals for Nuclear Power Plants." The NRC concluded that, while issuance of the first COLs was successful, several actions were identified to improve the process.

The NRC performed a self-assessment of the its licensing and inspection requirements, policies, procedures, and practices during the first year of post-COL implementation of 10 CFR Part 52. The assessment concluded that post-COL oversight was conducted with safety as the primary focus.

Upon completion of the 12-month pilot of the cROP, the NRC performed a self-assessment of the program and concluded that the new construction assessment and enforcement approach employing a regulatory structure, construction significance determination process, and construction action matrix is effective in ensuring that new reactors are built in accordance with an approved design.

The NRC performs an annual self-assessment of the Vendor Inspection Program Plan to ensure that it is being successfully carried out and to look for improvement opportunities. The assessment of FY 2012 found that four of the six performance metrics met the predetermined criteria, and corrective actions were identified during FY 2013 for those that did not.

### Integrated Materials Performance Evaluation Program

The NRC concluded the IMPEP review for Region III. No recommendations were identified by the team, and the Management Review Board found the program to be adequate for the third consecutive review and extended the period of the next IMPEP to five years for the second time.

The NRC also conducted nine IMPEP reviews of the Agreement State regulatory programs for Georgia, New Hampshire, Mississippi, North Dakota, Illinois, Washington, Nevada, New Mexico, and Oregon. These reviews were conducted with participation from Agreement State staff from North Carolina, Florida, Kansas, Minnesota, Texas, Colorado, Maryland, Wisconsin, and Arizona on the teams. Three States, Georgia, Illinois, and Washington, were found to need additional oversight to improve their programs.

## Data Sources, Data Quality, and Data Security

The NRC's data collection and analysis methods are driven largely by the regulatory mandate that Congress entrusted to the agency. Specifically, the NRC's mission is to regulate the nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, protect the environment, and promote the common defense and security. In undertaking this mission, the agency oversees nuclear power plants, non-power reactors, nuclear fuel facilities, interim spent fuel storage, radioactive material transportation, disposal of nuclear waste, and the industrial and medical uses of nuclear materials.

As part of the NRC's regulatory requirement under 10 CFR 20.2206, "Reports of Individual Monitoring," several NRC-regulated industries are required to submit occupational radiation exposure reports to the Radiation Exposure Information and Reporting System (REIRS) database. The agency analyzes these reports to ensure that licensees comply with the annual occupational dose limit of 50 mSv (5 rem). The agency uses the data in the following ways:

(1) as a metric in the agency's Reactor Oversight Process to evaluate the effectiveness of licensee programs used to maintain occupational radiation doses as low as reasonably achievable and for inspection planning,

(2) to assist in the evaluation of the radiological risk associated with certain categories of NRC-licensed activities and for comparative analysis of radiation protection performance,

(3) to provide occupational radiation exposure history reports to individuals exposed to radiation or radioactive material at NRC-licensed facilities, and

(4) to provide facts for responding to Congressional and administration inquiries and to questions from the public regarding occupational radiation exposures at NRC-licensed facilities.

Every year, the agency publishes NUREG-0713, "Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities," NUREG-0713, Volume 33 for calendar year 2011, which was issued in April 2013. It is available on the agency's Web site: http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0713/v33/

Section 208 of the *Energy Reorganization Act of 1974*, as amended, requires the NRC to inform Congress of incidents or events that the Commission determines to be significant from the standpoint of public health and safety. The agency developed the Abnormal Occurrence Criteria to comply with the legislative intent of the *Energy Reorganization Act of 1974*

to determine which events should be considered significant. Based on these criteria, the agency prepares an annual, "Report to Congress on Abnormal Occurrences" (NUREG-0090). One important characteristic of this report is that the data presented normally originate from external sources, such as Agreement States and NRC licensees. NUREG-0090, Volume 35, Revision 1, for FY 2012, issued in May 2013, is available on the agency's Web site: http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0090/v35/r1/

The NRC finds these data sources credible because (1) agency regulations require Agreement States, licensees, and other external sources to report the necessary information, (2) the NRC maintains an aggressive inspection program that, among other activities, includes auditing licensee programs and evaluating Agreement State programs to ensure that they are reporting the necessary information as required by the agency's regulations, and (3) the NRC has established procedures for inspecting and evaluating licensees. The agency employs multiple database systems to support this process, including the Licensee Event Report Search System, the Accident Sequence Precursor database, the Nuclear Materials Events Database, and the REIRS. In addition, non-sensitive reports submitted by Agreement States and NRC licensees are available to the public through ADAMS, accessible through the agency's Web site http://nrc-stp.ornl.gov/

The NRC verifies the reliability and technical accuracy of event information reported to the agency. The agency periodically inspects licensees and reviews Agreement State programs. In addition, NRC headquarters, the regional offices, and Agreement States hold periodic conference calls to discuss event information. Events identified as meeting the Abnormal Occurrence Criteria are validated and verified before being reported to Congress.

The NRC is also an active participant in data.gov, a Federal Web site designed to increase public access to high value, machine-readable datasets generated by the Executive Branch. The NRC will continue to encourage public feedback on its high-value information, in ways consistent with agency policy and guidance provided by data.gov, and will continue to add new datasets to its high-value dataset publication plan.

## INFORMATION SECURITY

The NRC's information security program (1) protects NRC and licensee information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction, (2) protects electronic control functions from unauthorized access or manipulation, and (3) ensures that adequate controls for protecting security-related information are used in the conduct of NRC business. The NRC information security program includes measures to accomplish the following:

(a) Ensure that information security requirements, standards, and guidance are clear, concise, appropriate, and able to mitigate the potential adverse effects if sensitive information is compromised.

(b) Ensure that security controls for information owned by or under the control of the NRC are consistent with established information security controls, operating as intended, and having the desired impact, and that similar controls for licensees regulated by the NRC are in compliance with NRC information security regulations.

(c) Ensure that suspected or actual information security violations are evaluated and appropriate sanctions are considered.

(d) Ensure that the NRC has made sufficient preparations for information security-related emergencies and incidents.

(e) Ensure that internal information security program components complement each other and are periodically evaluated and improved.

## PERFORMANCE DATA COMPLETENESS AND RELIABILITY

To manage for results, it is essential that the NRC assess the completeness and reliability of its performance data. Comparisons of actual performance with the projected levels are possible only if the data used to measure performance are complete and reliable. Consequently, the *Reports Consolidation Act of 2000* requires the NRC Chairman to certify the completeness and reliability of the performance

data used in this report. The process for ensuring that the data are complete and reliable requires offices to complete a template for submission to the Chief Financial Officer for every performance measure certifying that the data submitted have been approved by the applicable Office Director. The report "Verification and Validation of NRC's Performance Measures and Metrics," contains the processes the agency uses to collect, validate, and verify performance data. This report can be found in Appendix III of the NRC's FY 2013 Congressional Budget Justification, which is available on the NRC's Web site at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1100/v28/.

## DATA COMPLETENESS

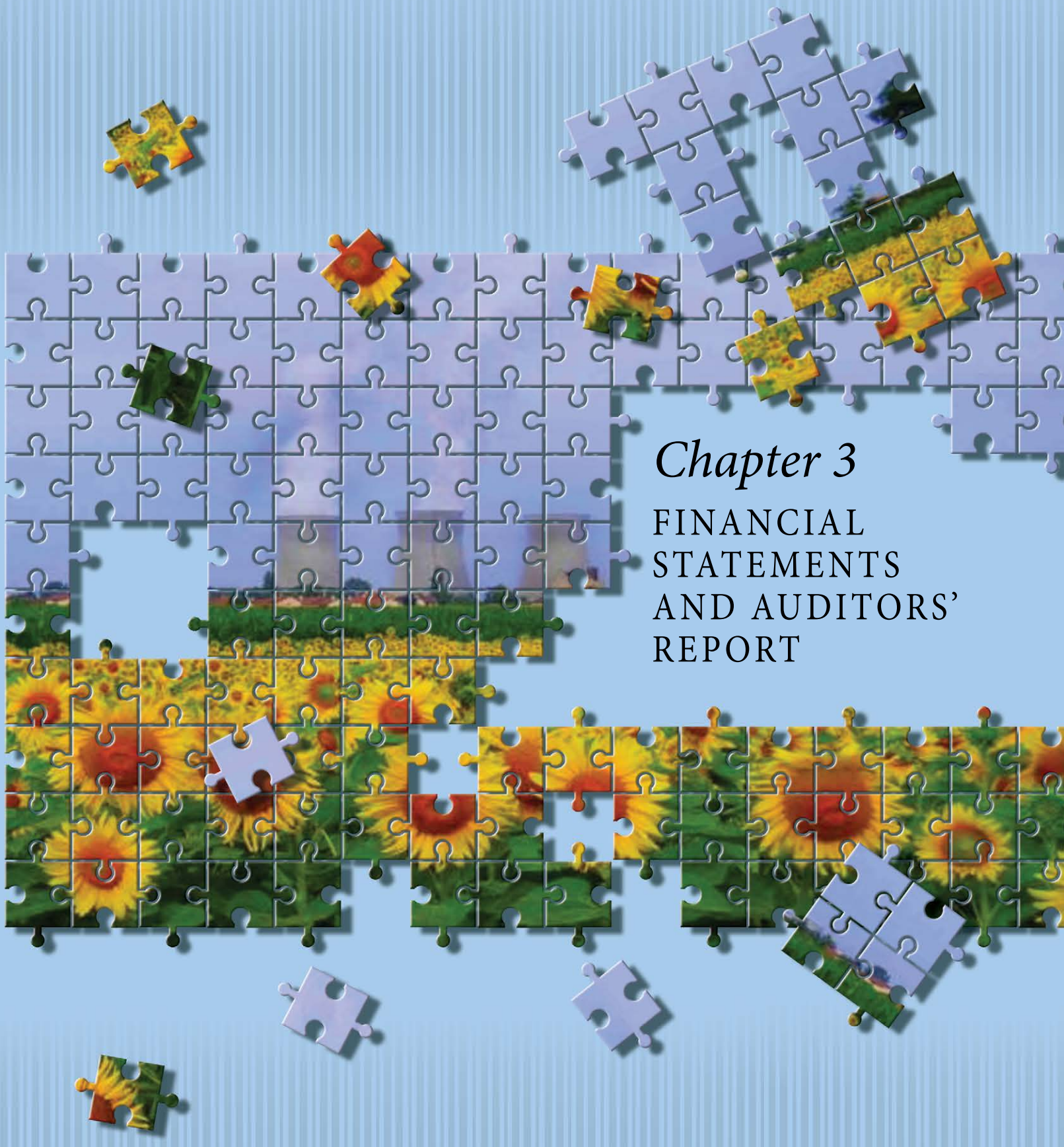
The NRC considers data complete if the agency reports actual performance data for every performance goal and indicator in the annual plan. Actual performance data include all data that are available when the agency sends its report to the President and Congress. The agency has reported actual data for every strategic and performance goal measure. In addition, all of the data are reported for each measure. As a result, the data presented in this report meet the requirements for data completeness.

## DATA RELIABILITY

The NRC considers data reliable when agency managers and decisionmakers use the data in carrying out their responsibilities. The data presented in this report meet this requirement for data reliability because NRC managers and senior leaders regularly use the reported data in the course of their duties.

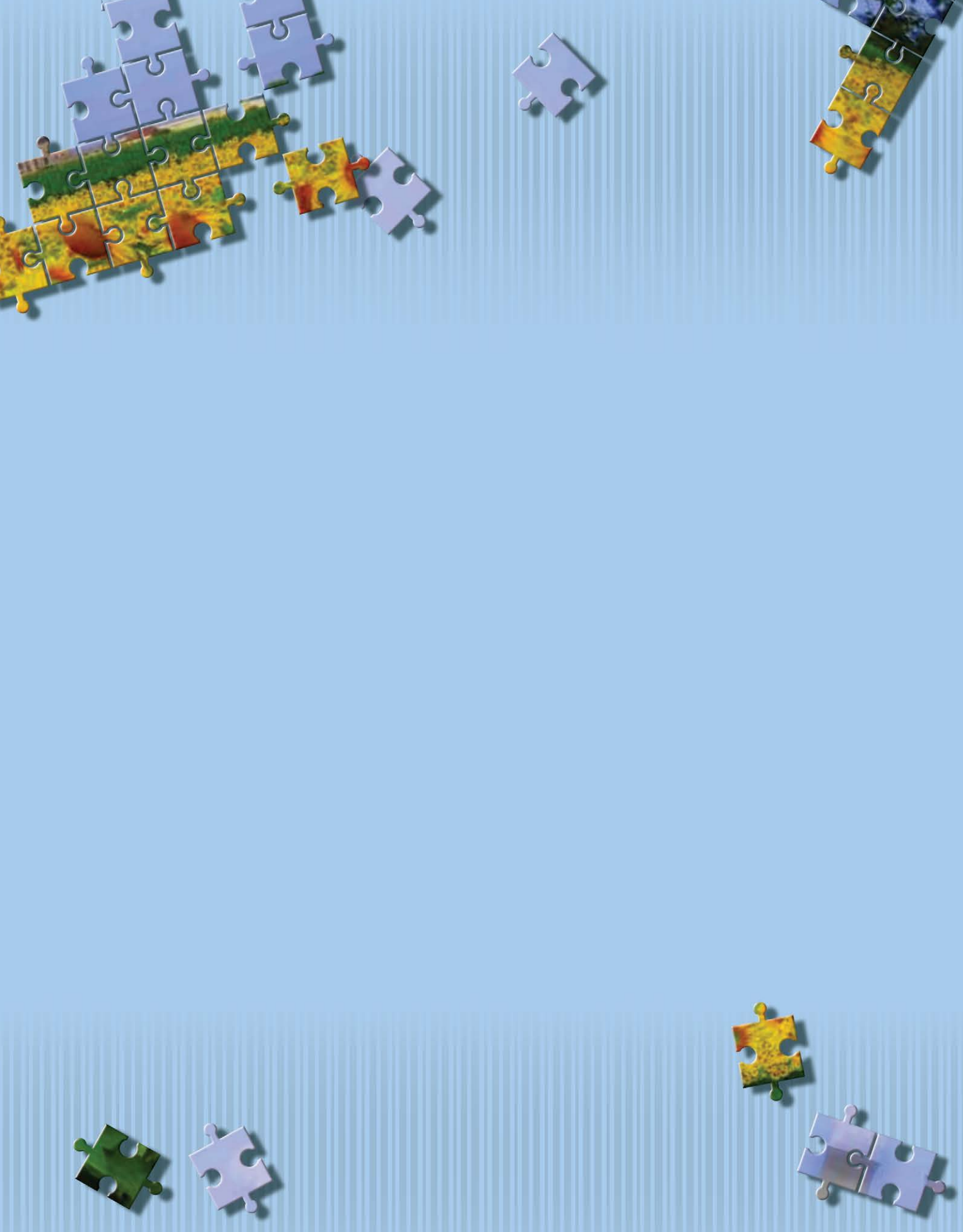




# *Chapter 3*

# FINANCIAL STATEMENTS AND AUDITORS' REPORT



## A Message From The Chief Financial Officer

I am pleased to present the financial statements for the U.S. Nuclear Regulatory Commission (NRC) Fiscal Year (FY) 2013 Performance and Accountability Report. For the tenth consecutive year, an independent auditor has rendered an unqualified opinion on the NRC financial statements. The auditor has also rendered an unqualified opinion on the NRC's internal control over financial reporting and concluded that the NRC is compliant with pertinent provisions of laws and regulations.

Receiving this most recent clean opinion was particularly notable since FY 2013 provided the NRC with challenging workload and budgetary conditions. Significant portions of the agency's planned regulatory activities are dependent on dynamic requests for new design and facility licensing reviews influenced by energy market fluctuations. Additionally, emerging issues affecting existing NRC reactor and fuel facility licensees resulting from lessons learned from the reactor accident at the Fukushima Dai-ichi Nuclear Station in Japan created new demands for the NRC not initially anticipated in the budget. Similarly, the level of agency budgeted resources were uncertain with the Government-wide prolonged Continuing Resolution, sequestration, and a rescission to the NRC FY 2013 appropriations. The successful redistribution of limited agency resources to address the highest priority regulatory activities and effective accounting for the use of funds in our financial statements is a tribute to the talent and dedication of the NRC's financial managers and staff.

In FY 2013, the NRC continued its modernization of financial systems with the transition to a new strategic acquisition system that seamlessly integrates with the agency's financial accounting system to provide timely and accurate financial information of contracting transactions with improved internal controls. The NRC was also actively engaged with the U.S. Department of the Treasury to support its Government-wide new reporting initiatives: Government-wide Treasury Account Symbol Adjusted Trial Balance System, the Central Accounting Reporting System, and the Intra-Governmental Transactions Quarterly Score Card. These activities should put the agency in a sound position to continue with both agency and Government-wide financial management systems improvements in future years.

The NRC implemented an update to its programmatic internal control framework in FY 2013 based on Federal best practices. The updated framework ensures alignment with the agency's strategic plan, budget structure, and performance reporting; streamlines and improves agency processes and administrative requirements into a more interdependent approach; and increases management's accountability for the effectiveness of the agency's programmatic internal control.

The NRC is committed to ensuring the safety and security of the Nation's civilian use of nuclear materials in the most effective and efficient manner. The regulation of the Nation's nuclear industries during times of fiscal and regulatory challenges requires careful stewardship of limited agency resources and demands superior financial performance. I am proud of the progress we have made during this past year to promote sound business practices in accomplishing our regulatory mission and am confident that we will continue to make improvements.

J.E. Dyer
Chief Financial Officer
November 26, 2013

## Financial Statements

### Balance Sheet

*(In Thousands)*

| As of September 30, | 2013 | 2012 |
|---|---|---|
| **Assets** | | |
| Intragovernmental | | |
| Fund balance with Treasury (Note 2) | **$ 318,244** | $ 357,529 |
| Accounts receivable (Note 3) | **8,779** | 7,660 |
| Other-Advances and prepayments | **4,935** | 11,736 |
| Total intragovernmental | **331,958** | 376,925 |
| Accounts receivable, net (Note 3) | **83,029** | 92,946 |
| Property and equipment, net (Note 4) | **107,771** | 99,982 |
| Other | **17** | 14 |
| **Total Assets** | **$ 522,775** | $ 569,867 |
| **Liabilities** | | |
| Intragovernmental | | |
| Accounts payable | **$ 9,322** | $ 16,900 |
| Other (Note 5) | **4,238** | 3,896 |
| Total intragovernmental | **13,560** | 20,796 |
| Accounts payable | **28,726** | 26,272 |
| Federal employee benefits (Note 6) | **7,023** | 7,224 |
| Other (Note 5) | **70,189** | 70,301 |
| **Total Liabilities** | **119,498** | 124,593 |
| **Net Position** | | |
| Unexpended appropriations | **242,640** | 285,080 |
| Cumulative results of operations (Note 8) | **160,637** | 160,194 |
| **Total Net Position** | **403,277** | 445,274 |
| **Total Liabilities and Net Position** | **$ 522,775** | $ 569,867 |

The accompanying notes to the financial statements are an integral part of this statement.

## Statement of Net Cost

*(In Thousands)*

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| **Nuclear Reactor Safety and Security** | | |
| Gross costs | **$ 831,114** | $ 824,091 |
| Less: Earned revenue | **(760,283)** | (815,701) |
| Total Net Cost of Nuclear Reactor Safety and Security (Note 9) | **70,831** | 8,390 |
| **Nuclear Materials and Waste Safety and Security** | | |
| Gross costs | **232,011** | 228,000 |
| Less: Earned revenue | **(91,959)** | (88,630) |
| Total Net Cost of Nuclear Materials and Waste Safety and Security (Note 9) | **140,052** | 139,370 |
| **Net Cost of Operations** | **$ 210,883** | $ 147,760 |

The accompanying notes to the financial statements are an integral part of this statement.

## Statement of Changes in Net Position
*(In Thousands)*

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| **Cumulative Results of Operations** | | |
| Beginning Balance | **$ 160,194** | $ 105,193 |
| Budgetary Financing Sources | | |
| Appropriations used (Note 11) | **176,169** | 169,056 |
| Non-exchange revenue (Note 11) | **482** | 697 |
| Transfers-in/out without reimbursement | **-** | - |
| Other Financing Sources | | |
| Imputed financing from costs absorbed by others (Note 11) | **35,157** | 33,705 |
| Other | **(482)** | (697) |
| Total Financing Sources | **211,326** | 202,761 |
| **Net Cost of Operations** | **(210,883)** | (147,760) |
| **Net Change** | **443** | 55,001 |
| **Cumulative Results of Operations** | **$ 160,637** | $ 160,194 |
| **Unexpended Appropriations** | | |
| Beginning Balance | **$ 285,080** | $ 310,332 |
| Budgetary Financing Sources | | |
| Appropriations received | **186,209** | 143,804 |
| Other adjustments | **(52,480)** | - |
| Appropriations used (Note 11) | **(176,169)** | (169,056) |
| Total Budgetary Financing Sources | **(42,440)** | (25,252) |
| **Total Unexpended Appropriations** | **242,640** | 285,080 |
| **Net Position** | **$ 403,277** | $ 445,274 |

The accompanying notes to the financial statements are an integral part of this statement.

## Statement of Budgetary Resources

*(In Thousands)*

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| **Budgetary Resources** | | |
| Unobligated balance brought forward, October 1 | **$ 62,904** | $ 48,510 |
| Recoveries of prior year unpaid obligations | | |
| Actual | **14,921** | 14,428 |
| Unobligated balance from prior year budget authority, net | **77,825** | 62,938 |
| Appropriations | **985,620** | 1,038,204 |
| Spending authority from offsetting collections | **6,385** | 6,914 |
| **Total Budgetary Resources** | **$ 1,069,830** | $ 1,108,056 |
| **Status of Budgetary Resources** | | |
| Obligations incurred (Note 12) | **$ 1,027,051** | $ 1,045,152 |
| Unobligated balance, end of year | | |
| Apportioned | **30,017** | 50,977 |
| Exempt from apportionment | **11,005** | 10,497 |
| Unapportioned | **1,757** | 1,430 |
| Total unobligated balance, end of year | **42,779** | 62,904 |
| **Total Status of Budgetary Resources** | **$ 1,069,830** | $ 1,108,056 |
| **Change in Obligated Balance** | | |
| **Unpaid Obligations** | | |
| Unpaid obligations brought forward, October 1 | **$ 303,254** | $ 359,402 |
| Obligations incurred (Note 12) | **1,027,051** | 1,045,152 |
| Outlays, gross | **(1,036,572)** | (1,086,872) |
| Recoveries of prior year unpaid obligations | **(14,921)** | (14,428) |
| Total unpaid obligations, end of year | **$ 278,812** | $ 303,254 |
| **Uncollected payments** | | |
| Uncollected customer payments from Federal sources, brought forward, October 1 | **$ (8,631)** | $ (13,333) |
| Change in uncollected customer payments, from Federal sources | **5,114** | 4,702 |
| Total uncollected customer payments, from Federal sources, end of year | **$ (3,517)** | $ (8,631) |
| **Memorandum entries:** | | |
| Obligated balances, start of year | **$ 294,623** | $ 346,069 |
| Obligated balances, end of year | **$ 275,295** | $ 294,623 |
| **Budget Authority and Outlays, Net** | | |
| Budget Authority, gross | **$ 992,005** | $ 1,045,118 |
| Actual offsetting collections | **(11,668)** | (11,616) |
| Change in uncollected customer payments from Federal sources | **5,114** | 4,702 |
| **Budget Authority, Net** | **$ 985,451** | $ 1,038,204 |
| Outlays, gross | **$ 1,036,572** | $ 1,086,872 |
| Actual offsetting collections | **(11,668)** | (11,616) |
| Outlays, net | **1,024,904** | 1,075,256 |
| Distributed offsetting receipts | **(851,891)** | (894,399) |
| **Agency Outlays, Net** | **$ 173,013** | $ 180,857 |

The accompanying notes to the financial statements are an integral part of this statement.

# Notes to the Financial Statements

*(All Tables are Presented in Thousands)*

## Note 1. Summary of Significant Accounting Policies

### A. Reporting Entity

The NRC is an independent regulatory agency of the Federal Government that the U.S. Congress created to regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment. Its purposes are defined by the *Energy Reorganization Act of 1974*, as amended, along with the *Atomic Energy Act of 1954*, as amended, which provide the foundation for regulating the Nation's civilian use of nuclear materials.

The NRC operates through the execution of its congressionally approved appropriations for Salaries and Expenses (which includes funds derived from the Nuclear Waste Fund (NWF)) and the Office of the Inspector General (OIG). In addition, the U.S. Agency for International Development (USAID) provides transfer appropriations to develop nuclear safety, regulatory authorities, and independent oversight of nuclear reactors in Russia, Ukraine, Kazakhstan, Georgia, and Armenia.

### B. Basis of Presentation

These financial statements report the financial position and results of operations of the NRC as required by the *Chief Financial Officers Act of 1990* and the *Government Management Reform Act of 1994*. These financial statements were prepared from the books and records of the NRC in conformance with GAAP of the United States and the form and content for entity financial statements specified by the OMB in Circular No. A-136, "Financial Reporting Requirements." GAAP for Federal entities are the standards prescribed by the Federal Accounting Standards Advisory Board, which is the official body for setting the accounting standards of the U.S. Government. These statements are, therefore, different from the financial reports, also prepared by the NRC pursuant to OMB directives, which are used to monitor and control the NRC's use of budgetary resources.

The NRC has not presented a Statement of Custodial Activity because the amounts involved are immaterial and incidental to its operations and mission.

### C. Budgets and Budgetary Accounting

Budgetary accounting measures appropriation and consumption of budget spending authority or other budgetary resources and facilitates compliance with legal constraints and controls over the use of Federal funds. Under budgetary reporting principles, budgetary resources are consumed at the time of purchase. Assets and liabilities, which do not consume current budgetary resources, are not reported, and only those liabilities for which valid obligations have been established are considered to consume budgetary resources.

In FY 2012, Congress enacted no-year appropriations for the NRC Salaries and Expenses and the OIG, which are available for obligation by the NRC until expended. Additionally, Congress enacted a two-year appropriation for the OIG, which is available for obligation by the NRC until September 30, 2013. NRC's FY 2013 appropriations are full-year continuing resolutions at the funding levels included in the FY 2012 Energy and Water Development Appropriations Act, less a 5 percent reduction for sequestration and a 0.2 percent rescission.

### D. Basis of Accounting

These financial statements reflect both accrual and budgetary accounting transactions. Under the accrual method, revenues are recognized when earned and expenses are recognized when a liability is incurred, without regard to receipt or payment of cash. Budgetary accounting is also used to record the obligation of funds prior to the accrual-based transaction. The Statement of Budgetary Resources presents budgetary resources available to the NRC and changes in obligations during the year. Interest on borrowings of the Treasury is not included as a cost to NRC programs and is not included in the accompanying financial statements.

## E. Revenues and Other Financing Sources

The NRC is required to offset its appropriations by revenue received during the fiscal year from the assessment of fees. The NRC assesses two types of fees to recover its budget authority: (1) fees assessed under 10 CFR Part 170, "Fees for Facilities, Materials, Import and Export Licenses, and Other Regulatory Services under the *Atomic Energy Act of 1954*, as Amended," for licensing, inspection, and other services under the authority of the *Independent Offices Appropriation Act of 1952* to recover the NRC's costs of providing individually identifiable services to specific applicants and licensees, and (2) annual fees assessed for nuclear facilities and materials licensees under 10 CFR Part 171, "Annual Fees for Reactor Licenses and Fuel Cycle Licenses and Material Licenses." Licensing revenues are recognized on a straight-line basis over the licensing period. The annual licensing period for reactor and materials fees begins October 1 and ends September 30. Annual fees for reactors are invoiced in four quarterly installments, before the end of each quarter. The materials annual fee is invoiced in the month the license was originally issued. Inspection fees are recorded as revenues when the services are performed.

For accounting purposes, appropriations are recognized as financing sources (appropriations used) at the time goods and services are received. Periodically during the fiscal year, appropriations recognized are reduced by the amount of assessed fees collected during the fiscal year to the extent of new budget authority for the year. Collections that exceed the new budget authority are held to offset subsequent years' appropriations. Appropriations expended for property and equipment are recognized as expenses when the asset is consumed in operations as reflected by depreciation and amortization expense.

## F. Fund Balance with Treasury

The NRC's cash receipts and disbursements are processed by the Treasury. The Fund Balance with Treasury is primarily appropriated funds and license fee collections that are available to pay current liabilities and to finance authorized purchase commitments. Fund Balance with Treasury represents the NRC's right to draw on the Treasury for allowable expenditures.

## G. Accounts Receivable

Accounts receivable consist of amounts that other Federal agencies and the public owe to the NRC. Amounts due from the public are presented net of an allowance for uncollectible accounts. The allowance is determined based on the age of the receivable and allowance rates established from historical experience. Receivables from Federal agencies are expected to be collected; therefore, there is no allowance for uncollectible accounts for Federal agencies.

## H. Non-Entity Assets

Non-entity assets consist of miscellaneous penalties and interest due from the public, which, when collected, must be transferred to the Treasury.

## I. Property and Equipment

Property and equipment consist primarily of typical office furnishings, leasehold improvements, nuclear reactor simulators, and computer hardware and software. The costs of internal use software include the full cost of salaries and benefits for agency personnel involved in software development. The NRC has no real property. The land and buildings in which the NRC operates are provided by the General Services Administration (GSA), which charges the NRC rent that approximates the commercial rental rates for similar properties.

Property with a cost of $50 thousand or more per unit and a useful life of 2 years or more is capitalized at cost and depreciated using the straight-line method over the useful life. Other property items are expensed when purchased. Normal repairs and maintenance are charged to expense as incurred.

## J. Accounts Payable

The NRC uses an estimation methodology to calculate the accounts payable balance, which represents costs for billed and unbilled goods and services received prior to year end that are unpaid. The NRC had previously used an estimation methodology to calculate the accounts payable balance based on a review of the sample obligations from the total open obligations balances. For FY 2013, the NRC calculated the accounts payable balance using an average based on the historical trend of validated accruals. This estimation methodology is validated quarterly.

## K. Liabilities Not Covered by Budgetary Resources

Liabilities represent the amount of monies or other resources that are likely to be paid by the NRC as the result of a transaction or event that has already occurred. No liability can be paid by the NRC absent an appropriation. Liabilities for which an appropriation has not been enacted are classified as "Liabilities Not Covered by Budgetary Resources." Also, NRC liabilities arising from sources other than contracts can be abrogated by the Government acting in its sovereign capacity.

### Intragovernmental

The NRC records a liability to the U.S. Department of Labor (DOL) for *Federal Employees Compensation Act* (FECA) benefits paid by DOL on behalf of the NRC.

### Federal Employee Benefits

Federal employee benefits represent the actuarial liability for estimated future FECA disability benefits. The future workers' compensation estimate was generated by DOL from an application of actuarial procedures developed to estimate the liability for FECA, which includes the expected liability for death, disability, medical, and miscellaneous costs for approved compensation cases. The liability is calculated using historical benefit payment patterns related to a specific incurred period to predict the ultimate payments related to that period.

### Other

Accrued annual leave represents the amount of annual leave earned by NRC employees but not yet taken.

## L. Contingent Liabilities

Contingent liabilities are those for which the existence or amount of the liability cannot be determined with certainty pending the outcome of future events. The uncertainty should ultimately be resolved when one or more future events occur or fail to occur. A contingent liability (included in Other Liabilities) should be recorded when a past event or exchange transaction has occurred, a future outflow or other sacrifice of resources is probable, and the future outflow or sacrifice of resources is measurable. A contingency is considered probable when the future confirming event or events are more likely than not to occur, with the exception of pending or threatened litigation and unasserted claims. A contingency is disclosed in the notes to the financial statements if any of the conditions for liability recognition are not met and there is at least a reasonable possibility that a loss or an additional loss may have been incurred. A contingency is considered reasonably possible when the chance of the future confirming event or events occurring is more than remote but less than probable (Note 16). A contingency is not recognized as a contingent liability and an expense nor disclosed in the notes to the financial statements when the chance of the future event or events occurring is remote. A contingency is considered remote when the chance of the future event or events occurring is slight.

## M. Annual, Sick, and Other Leave

Annual leave is accrued as it is earned and the accrual is reduced as leave is taken. Each year, the balance in the accrued annual leave liability account is adjusted to reflect current pay rates. To the extent that current or prior-year funding is not available to cover annual leave earned but not taken, funding will be obtained from future financing sources. Sick leave and other types of nonvested leave are expensed as taken.

## N. Retirement Plans

The NRC employees belong to either the Federal Employees Retirement System (FERS) or the Civil Service Retirement System (CSRS).

The NRC does not report, on its financial statements, FERS and CSRS assets, accumulated plan benefits, or unfunded liabilities, if any, applicable to its employees. Reporting such amounts is the responsibility of OPM. The portion of the current and estimated future outlays for CSRS not paid by the NRC is included in NRC's financial statements as an imputed financing source in NRC's Statement of Changes in Net Position and as program costs on the Statement of Net Cost.

## O. Leases

The NRC's capital leases are for personal property consisting of reproduction equipment which is installed at NRC Headquarters.

Operating leases consist of real property leases with GSA. These leases are for NRC's headquarters and regional offices. The GSA charges the NRC lease rates that approximate commercial rates for comparable space.

## P. Pricing Policy

The NRC provides nuclear reactor and materials licensing and inspection services to the public and other Government entities. In accordance with OMB Circular No. A-25, "User Charges," and the *Independent Offices Appropriation Act of 1952*, the NRC assesses fees under 10 CFR Part 170 for licensing and inspection activities to recover the full cost of providing individually identifiable services.

The NRC's policy is to recover the full cost of goods and services provided to other Government entities where the services performed are not part of its statutory mission and the NRC has not received appropriations for those services. Fees for reimbursable work are assessed at the 10 CFR Part 170 rate with minor exceptions for programs that are nominal activities of the NRC.

## Q. Net Position

The NRC's net position consists of unexpended appropriations and cumulative results of operations. Unexpended appropriations represent appropriated spending authority that is unobligated and has not been withdrawn by the Treasury and obligations that have not been paid. Cumulative results of operations represent the excess of financing sources over expenses since inception.

## R. Use of Management Estimates

The preparation of the accompanying financial statements in accordance with GAAP requires management to make certain estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses. Actual results could differ from those estimates.

## S. Allocation Transfers

The NRC is a party to allocation transfers with the USAID as a receiving (child) entity. These transfers are for the international development of nuclear safety and regulatory authorities in Russia, Ukraine, Kazakhstan, Georgia, and Armenia for the startup, operation, shutdown, and decommissioning of Soviet-designed nuclear power plants; the safe and secure use of radioactive materials; and the accounting for and protection of nuclear materials. Allocation transfers are legal delegations by one agency of its authority to obligate budget authority and outlay funds to another agency. All financial activity related to these allocation transfers (e.g., budget authority, obligations, outlays) is reported in the financial statements of the parent entity from which the underlying legislative authority, appropriations, and budget apportionments are derived.

## T. Statement of Net Cost

The programs as presented on the Statement of Net Cost are based on the annual performance budget and are described as follows:

The Nuclear Reactor Safety and Security program encompasses all the NRC efforts to ensure that civilian nuclear power reactor facilities and research and test reactors are licensed and operated in a manner that adequately protects public health and safety and the environment, and protects against radiological sabotage and theft or diversion of special nuclear materials. The Nuclear Reactor Safety and Security program contains the following activities: operating reactors and new reactors.

The Nuclear Materials and Waste Safety and Security program encompasses all the NRC efforts to protect public health and safety and the environment and ensures the secure use and management of radioactive materials. The Nuclear Materials and Waste Safety and Security program contains the following activities: fuel facilities, nuclear materials users, decommissioning and low-level waste, spent fuel storage and transportation, and a high-level waste repository.

For intragovernmental gross costs and revenue, the buyers and sellers are Federal entities. For earned revenues from the public, the buyers of the goods or services are non-Federal entities.

## *Note 2.* Fund Balance with Treasury

| As of September 30, | 2013 | 2012 |
|---|---|---|
| **Fund Balances** | | |
| Appropriated funds | **$ 304,746** | $ 343,925 |
| Nuclear Waste Fund | **13,498** | 13,602 |
| Other fund types | **-** | 2 |
| **Total** | **$ 318,244** | $ 357,529 |
| | | |
| **Status of Fund Balance with Treasury** | | |
| Unobligated balance | | |
| Available | | |
| Appropriated funds | **$ 41,022** | $ 61,474 |
| Unavailable | | |
| Unapportioned | **1,757** | 1,430 |
| Temporary reduction of spending authority from offsetting collections | **169** | - |
| Obligated balance not yet disbursed | **275,296** | 294,623 |
| Non-budgetary funds with Treasury | **-** | 2 |
| **Total** | **$ 318,244** | $ 357,529 |

The Fund Balance with Treasury consists of the unobligated and obligated budgetary account balances. It includes NWF activity. The NWF unobligated balance is $11.0 million and $10.5 million as of September 30, 2013, and 2012, respectively.

Other fund types in the Fund Balance with Treasury represent license fee collections used to offset NRC current year budget authority, miscellaneous collections, and adjustments which will offset revenue in the following fiscal year.

## *Note 3.* Accounts Receivable

| As of September 30, | 2013 | 2012 |
|---|---|---|
| **Intragovernmental receivables** | | |
| Fee receivables and reimbursements | **$ 8,779** | $ 7,660 |
| | | |
| **Receivables with the Public** | | |
| Materials and facilities fees, billed | **$ 8,048** | $ 3,180 |
| Materials and facilities fees, unbilled | **76,730** | 91,269 |
| Other | **67** | 61 |
| Total Receivables with the Public | **84,845** | 94,510 |
| Less: Allowance for uncollectible accounts | **(1,816)** | (1,564) |
| **Total Receivables with the Public, Net** | **$ 83,029** | $ 92,946 |
| | | |
| Total Accounts Receivable | **$ 93,624** | $ 102,170 |
| Less: Allowance for uncollectible accounts | **(1,816)** | (1,564) |
| **Total Accounts Receivable, Net** | **$ 91,808** | $ 100,606 |

## *Note 4.* Property and Equipment, Net

| As of September 30, | | | | 2013 | 2012 |
|---|---|---|---|---|---|
| **Fixed Assets Class** | **Service Years** | **Acquisition Value** | **Accumulated Depreciation and Amortization** | **Net Book Value** | **Net Book Value** |
| Equipment | 5-8 | $ 12,633 | $ (11,350) | **$ 1,283** | $ 1,252 |
| Leased equipment | 5-8 | 1,806 | (1,625) | **181** | 298 |
| IT software | 5 | 54,206 | (38,213) | **15,993** | 17,410 |
| IT software under development | - | 2,850 | - | **2,850** | 2,155 |
| Leasehold improvements | 20 | 131,981 | (45,999) | **85,982** | 33,611 |
| Leasehold improvements in progress | - | 1,482 | - | **1,482** | 45,256 |
| **Total** | | $ 204,958 | $ (97,187) | **$ 107,771** | $ 99,982 |

## *Note 5.* Other Liabilities

| As of September 30, | 2013 | 2012 |
|---|---|---|
| **Intragovernmental** | | |
| Liability to offset miscellaneous accounts receivable | **$ 58** | $ 6 |
| Liability for advances from other agencies | **12** | 18 |
| Accrued workers' compensation | **1,669** | 1,797 |
| Accrued unemployment compensation | **13** | 13 |
| Employee benefit contributions | **2,486** | 2,062 |
| **Total Intragovernmental Other Liabilities** | **$ 4,238** | $ 3,896 |
| | | |
| **Other Liabilities** | | |
| Accrued annual leave | **$ 46,832** | $ 47,824 |
| Accrued salaries and benefits | **10,423** | 8,772 |
| Contract holdbacks, advances, capital lease liability, and other | **6,300** | 5,544 |
| Grants payable | **6,634** | 8,161 |
| **Total Other Liabilities** | **$ 70,189** | $ 70,301 |
| | | |
| **Total Intragovernmental and Other Liabilities** | **$ 74,427** | $ 74,197 |

Other liabilities are current except for capital lease liability (Note 7).

## *Note 6.* Liabilities Not Covered by Budgetary Resources

| As of September 30, | 2013 | 2012 |
|---|---|---|
| Intragovernmental | | |
| FECA paid by DOL | **$ 1,669** | $ 1,797 |
| Accrued unemployment compensation | **13** | 13 |
| Federal Employee Benefits | | |
| Future FECA | **7,023** | 7,224 |
| Other | | |
| Accrued annual leave | **46,832** | 47,824 |
| **Total Liabilities Not Covered by Budgetary Resources** | **55,537** | 56,858 |
| **Total Liabilities Covered by Budgetary Resources** | **63,961** | 67,735 |
| **Total Liabilities** | **$ 119,498** | $ 124,593 |

Liabilities Not Covered by Budgetary Resources represents the amount of future funding needed to pay the accrued unfunded expenses as of September 30, 2013, and 2012. These liabilities are not funded from current or prior-year appropriations and assessments, but rather should be funded from future appropriations and assessments. Accordingly, future funding requirements have been recognized for the expenses that will be paid from future appropriations.

The projected annual benefit payments for FECA are discounted to present value. For FY 2013, projected annual payments were discounted to present value based on OMB's interest rate assumptions, which reflect the average duration in years for income payments and medical payments. The interest rate assumptions utilized for FY 2013 discounting were 2.73 percent in year 1 and 3.13 percent in year 2 for wage benefits, and 2.33 percent in year 1 and 2.86 percent in year 2 for medical benefits.

## *Note 7.* Leases

| As of September 30, | 2013 | 2012 |
|---|---|---|
| **Assets Under Capital Leases:** | | |
| Copiers and booklet maker | **$ 1,806** | $ 1,806 |
| Accumulated depreciation | **(1,625)** | (1,508) |
| **Net Assets Under Capital Leases** | **$ 181** | $ 298 |

| As of September 30, | | | 2013 | 2012 |
|---|---|---|---|---|
| **Future Lease Payments Due:** | **Fiscal Year** | **Capital** | **Operating** | |
| | 2013 | $ - | $ - | **$ -** | $ 56,327 |
| | 2014 | 171 | 39,599 | **39,770** | 44,266 |
| | 2015 | 93 | 40,146 | **40,239** | 41,226 |
| | 2016 | - | 40,380 | **40,380** | 41,342 |
| | 2017 | - | 39,785 | **39,785** | 41,093 |
| | 2018 and thereafter | - | 272,133 | **272,133** | 255,035 |
| | Total Lease Liability | 264 | 432,043 | **432,307** | 479,289 |
| Add: Imputed Interest | | 3 | - | **3** | 9 |
| **Total Future Lease Payments** | | $ 267 | $ 432,043 | **$ 432,310** | $ 479,298 |

The Capital Lease Liability of $264 thousand is included in Other Liabilities (Note 5). For Future Lease Payments, the NRC calculates the Capital Lease Liability and adds the imputed interest to arrive at the Total Future Lease Payments.

For FY 2013, there are six capital leases with terms of 5 years, consisting of two capital leases added in FY 2011 with an interest rate of 1.26 percent, two capital leases added in FY 2008 with an interest rate of 3.99 percent (these two capital leases were extended for one additional year), and two capital leases added in FY 2007 with an interest rate of 4.58 percent (these two capital leases were extended one additional year). The reproduction equipment is depreciated over 5 years using the straight-line method with no salvage value.

The operating lease for the Two White Flint North (TWFN) building of the NRC Headquarters office complex in Rockville, MD is set to expire on December 15, 2013. The NRC was still negotiating the new lease terms for the building as of September 30, 2013. As a result, the future lease payments do not include amounts for TWFN beyond December 15, 2013.

## *Note 8.* Cumulative Results of Operations

| As of September 30, | 2013 | 2012 |
|---|---|---|
| Liabilities not covered by budgetary resources (Note 6) | **$ (55,537)** | $ (56,858) |
| Investment in property and equipment, net (Note 4) | **107,771** | 99,982 |
| Contributions from foreign cooperative research agreements | **4,008** | 4,064 |
| Nuclear Waste Fund | **13,498** | 13,782 |
| Accounts receivable, fees | **90,889** | 99,068 |
| Fee collection revenue not transferred | **-** | 104 |
| Other | **8** | 52 |
| **Cumulative Results of Operations** | **$ 160,637** | $ 160,194 |

## *Note 9.* Statement of Net Cost

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| **Nuclear Reactor Safety and Security** | | |
| Intragovernmental gross costs | **$ 234,342** | $ 237,830 |
| Less: Intragovernmental earned revenue | **(55,560)** | (48,945) |
| Intragovernmental net costs | **178,782** | 188,885 |
| Gross costs with the public | **596,772** | 586,261 |
| Less: Earned revenues from the public | **(704,723)** | (766,756) |
| Net costs with the public | **(107,951)** | (180,495) |
| **Total Net Cost of Nuclear Reactor Safety and Security** | **$ 70,831** | $ 8,390 |
| **Nuclear Materials and Waste Safety and Security** | | |
| Intragovernmental gross costs | **$ 60,242** | $ 59,551 |
| Less: Intragovernmental earned revenue | **(6,216)** | (6,228) |
| Intragovernmental net costs | **54,026** | 53,323 |
| Gross costs with the public | **171,769** | 168,449 |
| Less: Earned revenues from the public | **(85,743)** | (82,402) |
| Net costs with the public | **86,026** | 86,047 |
| **Total Net Cost of Nuclear Materials and Waste Safety and Security** | **$ 140,052** | $ 139,370 |

## *Note 10.* Exchange Revenues

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| Fees for licensing, inspection, and other services | **$ 843,703** | $ 894,860 |
| Revenue from reimbursable work | **8,539** | 9,471 |
| **Total Exchange Revenues** | **$ 852,242** | $ 904,331 |

## *Note 11.* Financing Sources Other Than Exchange Revenue

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| **Appropriations Used** | | |
| Collections are used to reduce the fiscal year's appropriations recognized: | | |
| Funds consumed | **$ 1,028,164** | $ 1,064,774 |
| Less: Collection of fees assessed | **(851,891)** | (894,296) |
| Less: Nuclear Waste Funding expense | **(104)** | (1,422) |
| **Total Appropriations Used** | **$ 176,169** | $ 169,056 |

Funds consumed include $62.9 million and $48.6 million through September 30, 2013, and 2012, respectively, of available funds from prior years.

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| **Non-Exchange Revenue, Net of Funds Returned to U.S. Treasury General Fund** | | |
| Civil penalties | **$ 184** | $ 466 |
| Miscellaneous receipts | **298** | 231 |
| Non-Exchange Revenue | **482** | 697 |
| Contra-Revenue | **(482)** | (697) |
| **Total Non-Exchange Revenue, Net of Funds Returned to the Treasury General Fund** | **$ -** | $ - |

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| **Imputed Financing** | | |
| Civil Service Retirement System | **$ 15,044** | $ 13,193 |
| Federal Employee Health Benefit | **17,215** | 19,958 |
| Federal Employee Group Life Insurance | **89** | 90 |
| Judgments/Awards | **2,809** | 464 |
| **Total Imputed Financing** | **$ 35,157** | $ 33,705 |

The NRC employees belong to either the FERS or the CSRS retirement systems. For FY 2013 and FY 2012, for employees belonging to FERS, the NRC withheld 0.8 percent of base pay earnings, in addition to *Federal Insurance Contribution Act* (FICA) withholdings, and matched the withholdings with an 11.7 percent contribution. The sum is transferred to the Federal Employees Retirement Fund. For employees covered by CSRS, the NRC withholds 7 percent of base pay earnings. The NRC matched this withholding with a 7 percent contribution in FY 2013 and FY 2012.

The Thrift Savings Plan (TSP) is a retirement savings and investment plan for employees belonging to either FERS or CSRS. The maximum percentage of base pay that an employee participating in FERS or CSRS may contribute is unlimited, subject to the maximum contribution of $17,500 in 2013 and $17,000 in 2012. For employees participating in FERS, the NRC automatically contributes one percent of base pay to their account and matches contributions up to an additional 4 percent. For employees participating in CSRS, there is no NRC matching of the contribution. The sum of the employees' and NRC's contributions are transferred to the Federal Retirement Thrift Investment Board.

## *Note 12.* Total Obligations Incurred

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| Direct Obligations | | |
| Category A | **$ 1,019,466** | $ 1,032,329 |
| Exempt from Apportionment | **52** | - |
| Total Direct Obligations | **1,019,518** | 1,032,329 |
| Reimbursable Obligations | **7,533** | 12,823 |
| **Total Obligations Incurred** | **$ 1,027,051** | $ 1,045,152 |

Obligations exempt from apportionment are the result of funds derived from the NWF. Category A Obligations consist of NRC appropriations only. Undelivered orders for the NWF are $2.5 million and $3.1 million, Salaries and Expenses are $221.6 million and $246.4 million, and the Office of the Inspector General is $1.1 million and $2.4 million through September 30, 2013, and 2012, respectively.

## *Note 13.* Nuclear Waste Fund

For FY 2013 and FY 2012, the NRC's budget did not include funds from the NWF. The funding provided to the NRC prior to FY 2012 and carried forward to subsequent years was for the purpose of performing activities associated with the DOE application for a high-level waste repository at Yucca Mountain, NV.

The Statement of Federal Financial Accounting Standards (SFFAS) No. 43, "Funds from Dedicated Collections: Amending SFFAS 27, Identifying and Reporting Earmarked Funds," lists three defining criteria for funds from dedicated collections. Generally, funds from dedicated collections must have at least one source of funds external to the Federal Government, and the statute provides explicit authority to retain current, unused revenues for future use. Also, the law includes a requirement to account for and report on the receipt and use of the financing sources as distinguished from general revenues.

In 1982, Congress passed the *Nuclear Waste Policy Act of 1982* (Public Law 97-425) establishing the Nuclear Waste Fund (NWF) to be administered by DOE (42 U.S.C. 10222). For the NRC, the NWF transfer is a source of financing from other than non-Federal sources. The NRC collects no revenue on behalf of the NWF and has no administrative control over it. Furthermore, the Treasury has no separate fund symbol for the NWF under the NRC's agency location code. The receipt and expenditure of NWF money is reported to the Treasury under the NRC's primary Salaries and Expenses fund (X0200).

Based on these facts, the NWF is not a fund from dedicated collections from the NRC's perspective. To provide additional information to the users of these financial statements, enhanced disclosure of the fund is presented below.

The NWF amounts received, expended, obligated, and unobligated balances as of September 30, 2013, and 2012, are shown in the following:

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| Appropriations received | **$ -** | $ - |
| Expended appropriations | **$ 107** | $ 1,689 |
| Obligations incurred | **$ 52** | $ - |
| Unobligated balance (includes recoveries of prior year obligations) | **$ 11,005** | $ 10,497 |

## *Note 14.* Explanation of Differences Between the Statement of Budgetary Resources and the Budget of the U.S. Government

The SFFAS No. 7, "Accounting for Revenue and Other Financing Sources," requires the NRC to reconcile the budgetary resources reported on the Statement of Budgetary Resources to the prior fiscal year actual budgetary resources presented in the Budget of the U.S. Government and explain any material differences. The NRC does not have any material differences between the Statement of Budgetary Resources and the Budget of the U.S. Government.

## *Note 15.* Reconciliation of Net Cost of Operations to Budgetary Resources

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| **Budgetary Resources Obligated** | | |
| Obligations incurred (Note 12) | **$ 1,027,051** | $ 1,045,152 |
| Less: Spending authority from offsetting collections and recoveries | **(21,475)** | (21,342) |
| Less: Distributed offsetting receipts | **(851,891)** | (894,399) |
| Net Obligations | **153,685** | 129,411 |
| **Other Resources** | | |
| Imputed financing from costs absorbed by others | **35,157** | 33,705 |
| Non-Exchange Revenue | **482** | 697 |
| Funds returned to U.S. Treasury General Fund | **(482)** | (697) |
| Net Other Resources Used to Finance Activities | **35,157** | 33,705 |
| Total Resources Used to Finance Activities | **188,842** | 163,116 |
| Resources Used to Finance Items Not Part of the Net Cost of Operations | **(3,908)** | (26,311) |
| Total Resources Used to Finance the Net Cost of Operations | **184,934** | 136,805 |
| Components of the Net Cost of Operations that will not require or generate resources in the current period | **25,949** | 10,955 |
| **Net Cost of Operations** | **$ 210,883** | $ 147,760 |

## *Note 16.* Contingencies

The NRC is subject to potential liabilities in various administrative proceedings, legal actions, environmental suits, and claims brought against it. In the opinion of the NRC's management and legal counsel, the ultimate resolution of these proceedings, actions, suits, and claims will not materially affect the financial position or net costs of the NRC.

### *Reasonably Possible Likelihood of an Adverse Outcome:*

As of September 30, 2013, the NRC was not a party to a case in which an adverse outcome was probable or reasonably possible. The NRC was a party to a case as of September 30, 2012, where an adverse outcome was reasonably possible. The upper range of the loss on the potential liability was $2.5 million as of September 30, 2012.

# Required Supplementary Information

## Schedule of Budgetary Resources

*(In Thousands)*

| For the year ended September 30, 2013 | Salaries and Expenses | Office of Inspector General | Office of Inspector General | Nuclear Facility Fees | Total |
|---|---|---|---|---|---|
| | X0200 | X0300 | 12/130300 13/140300 | X5280 | |
| **Budgetary Resources** | | | | | |
| Unobligated balances brought forward, October 1 | $ 61,447 | $ 1,457 | $ - | $ - | **$ 62,904** |
| Recoveries of prior-year obligations | | | | | |
| Actual | 14,599 | 322 | - | - | **14,921** |
| Unobligated balance from prior-year budget authority, net | 76,046 | 1,779 | - | - | **77,825** |
| Appropriations | 975,309 | 9,280 | 1,031 | - | **985,620** |
| Spending authority from offsetting collections | 6,384 | 1 | - | - | **6,385** |
| **Total Budgetary Resources** | $ 1,057,739 | $ 11,060 | $ 1,031 | $ - | **$ 1,069,830** |
| **Status of Budgetary Resources** | | | | | |
| Obligations incurred (Note 12) | $ 1,016,328 | $ 9,692 | $ 1,031 | $ - | **$ 1,027,051** |
| Unobligated balance, end of year | | | | | |
| Apportioned | 28,649 | 1,368 | - | - | **30,017** |
| Exempt from apportionment | 11,005 | - | - | - | **11,005** |
| Unapportioned | 1,757 | - | - | - | **1,757** |
| Total unobligated balance, end of year | 41,411 | 1,368 | - | - | **42,779** |
| **Total Status of Budgetary Resources** | $ 1,057,739 | $ 11,060 | $ 1,031 | $ - | **$ 1,069,830** |
| **Change in Obligated Balance** | | | | | |
| **Unpaid obligations** | | | | | |
| Unpaid obligations, brought forward, October 1 | $ 302,612 | $ 642 | $ - | $ - | **$ 303,254** |
| Obligations incurred (Note 12) | 1,016,328 | 9,692 | 1,031 | - | **1,027,051** |
| Outlays, gross | (1,026,243) | (9,298) | (1,031) | - | **(1,036,572)** |
| Recoveries of prior-year unpaid obligations | (14,599) | (322) | - | - | **(14,921)** |
| Total unpaid obligations, end of period | $ 278,098 | $ 714 | $ - | $ - | **$ 278,812** |
| **Uncollected payments** | | | | | |
| Uncollected customer payments, from Federal sources brought forward, October 1 | $ (8,631) | $ - | $ - | $ - | **$ (8,631)** |
| Change in uncollected customer payments, from Federal sources | 5,114 | - | - | - | **5,114** |
| Total uncollected customer payments, from Federal sources | $ (3,517) | $ - | $ - | $ - | **$ (3,517)** |
| **Memorandum entries:** | | | | | |
| Obligated balances, start of year | $ 293,981 | $ 642 | $ - | $ - | **$ 294,623** |
| Obligated balances, end of period | $ 274,581 | $ 714 | $ - | $ - | **$ 275,295** |
| **Budget Authority and Outlays, Net** | | | | | |
| Budget Authority, gross | $ 981,693 | $ 9,281 | $ 1,031 | $ - | **$ 992,005** |
| Actual offsetting collections | (11,667) | (1) | - | - | **(11,668)** |
| Change in uncollected customer payments from Federal sources | 5,114 | - | - | - | **5,114** |
| **Budget Authority, Net** | $ 975,140 | $ 9,280 | $ 1,031 | $ - | **$ 985,451** |
| Outlays, gross | $ 1,026,243 | $ 9,298 | $ 1,031 | $ - | **$ 1,036,572** |
| Actual offsetting collections | (11,667) | (1) | - | - | **(11,668)** |
| Outlays, net | 1,014,576 | 9,297 | 1,031 | - | **1,024,904** |
| Distributed offsetting receipts | - | - | - | (851,891) | **(851,891)** |
| **Agency Outlays, Net** | $ 1,014,576 | $ 9,297 | $ 1,031 | $ (851,891) | **$ 173,013** |

## Schedule of Budgetary Resources
*(In Thousands)*

| For the year ended September 30, 2012 | Salaries and Expenses | Office of Inspector General | Office of Inspector General | Nuclear Facility Fees | Total |
|---|---|---|---|---|---|
| | X0200 | X0300 | 12/130300 | X5280 | |
| **Budgetary Resources** | | | | | |
| Unobligated balances brought forward, October 1 | $ 47,602 | $ 1,012 | $ - | $ (104) | **$ 48,510** |
| Recoveries of prior-year obligations | | | | | |
| Actual | 13,992 | 436 | - | - | **14,428** |
| Unobligated balance from prior-year budget authority, net | 61,594 | 1,448 | - | (104) | **62,938** |
| Appropriations | 1,027,240 | 9,774 | 1,086 | 104 | **1,038,204** |
| Spending authority from offsetting collections | 6,900 | 14 | - | - | **6,914** |
| **Total Budgetary Resources** | $ 1,095,734 | $ 11,236 | $ 1,086 | $ - | **$ 1,108,056** |
| **Status of Budgetary Resources** | | | | | |
| Obligations incurred (Note 12) | $ 1,034,287 | $ 9,779 | $ 1,086 | $ - | **$ 1,045,152** |
| Unobligated balance, end of year | | | | | |
| Apportioned | 49,564 | 1,413 | - | - | **50,977** |
| Exempt from apportionment | 10,497 | - | - | - | **10,497** |
| Unapportioned | 1,386 | 44 | - | - | **1,430** |
| Total unobligated balance, end of year | 61,447 | 1,457 | - | - | **62,904** |
| **Total Status of Budgetary Resources** | $ 1,095,734 | $ 11,236 | $ 1,086 | $ - | **$ 1,108,056** |
| **Change in Obligated Balance** | | | | | |
| **Unpaid obligations** | | | | | |
| Unpaid obligations, brought forward, October 1 | $ 358,707 | $ 695 | $ - | $ - | **$ 359,402** |
| Obligations incurred (Note 12) | 1,034,287 | 9,779 | 1,086 | - | **1,045,152** |
| Outlays, gross | (1,076,390) | (9,396) | (1,086) | - | **(1,086,872)** |
| Recoveries of prior-year unpaid obligations | (13,992) | (436) | - | - | **(14,428)** |
| Total unpaid obligations, end of period | $ 302,612 | $ 642 | $ - | $ - | **$ 303,254** |
| **Uncollected payments** | | | | | |
| Uncollected customer payments, from Federal sources brought forward, October 1 | $ (13,333) | $ - | $ - | $ - | **$ (13,333)** |
| Change in uncollected customer payments, from Federal sources | 4,702 | - | - | - | **4,702** |
| Total uncollected customer payments, from Federal sources | $ (8,631) | $ - | $ - | $ - | **$ (8,631)** |
| **Memorandum entries:** | | | | | |
| Obligated balances, start of year | $ 345,374 | $ 695 | $ - | $ - | **$ 346,069** |
| Obligated balances, end of period | $ 293,981 | $ 642 | $ - | $ - | **$ 294,623** |
| **Budget Authority and Outlays, Net** | | | | | |
| Budget Authority, gross | $ 1,034,140 | $ 9,788 | $ 1,086 | $ 104 | **$ 1,045,118** |
| Actual offsetting collections | (11,602) | (14) | - | - | **(11,616)** |
| Change in uncollected customer payments from Federal sources | 4,702 | - | - | - | **4,702** |
| **Budget Authority, Net** | $ 1,027,240 | $ 9,774 | $ 1,086 | $ 104 | **$ 1,038,204** |
| Outlays, gross | $ 1,076,390 | $ 9,396 | $ 1,086 | $ - | **$ 1,086,872** |
| Actual offsetting collections | (11,602) | (14) | - | - | **(11,616)** |
| Outlays, net | 1,064,788 | 9,382 | 1,086 | - | **1,075,256** |
| Distributed offsetting receipts | - | - | - | (894,399) | **(894,399)** |
| **Agency Outlays, Net** | $ 1,064,788 | $ 9,382 | $ 1,086 | $ (894,399) | **$ 180,857** |

# Inspector General's Letter Transmitting Independent Auditors' Report

UNITED STATES
NUCLEAR REGULATORY COMMISSION
**WASHINGTON, D.C. 20555-0001**

**OFFICE OF THE INSPECTOR GENERAL**

December 9, 2013

MEMORANDUM TO: Chairman Macfarlane

FROM: Hubert T. Bell ***/RA/***
Inspector General

SUBJECT: RESULTS OF THE AUDIT OF THE UNITED STATES NUCLEAR REGULATORY COMMISSION'S FINANCIAL STATEMENTS FOR FISCAL YEARS 2013 and 2012 (OIG-14-A-06)

The Chief Financial Officers Act of 1990, as amended (CFO Act), requires the Inspector General (IG) or an independent external auditor, as determined by the IG, to annually audit the United States Nuclear Regulatory Commission's (NRC) financial statements in accordance with applicable standards. In compliance with this requirement, the Office of the Inspector General (OIG) retained CliftonLarsonAllen, LLP (CLA), to conduct this annual audit. Transmitted with this memorandum are the following CLA reports:

- Opinion on the Principal Statements.
- Opinion on Internal Control.
- Compliance with Laws and Regulations.

NRC's Performance and Accountability Report includes comparative financial statements for FY 2013 and FY 2012.

**Objective of a Financial Statement Audit**

The objective of a financial statement audit is to determine whether the audited entity's financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management as well as evaluating the overall financial statement presentation.

CLA's audit and examination were made in accordance with auditing standards generally accepted in the United States of America; *Government Auditing Standards* issued by the Comptroller General of the United States; attestation standards established by the American Institute of Certified Public Accountants; and Office of Management and Budget (OMB) Bulletin No. 14-02, *Audit Requirements for Federal Financial Statements*. The audit included, among other things, obtaining an understanding of NRC and its operations, including internal control over financial reporting; evaluating the design and operating effectiveness of internal control and assessing risk; and testing relevant internal controls over financial reporting. Because of inherent limitations in any internal control, misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal control to future periods are subject to the risk that the internal control may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

**Audit Results**

The results are as follows:

Financial Statements

- Unqualified opinion.

Internal Controls

- Unqualified opinion.

Compliance with Laws and Regulations

- No reportable instances of noncompliance.

**Office of the Inspector General Oversight of CLA Performance**

To fulfill our responsibilities under the CFO Act and related legislation oversight of the quality of the audit work performed, we monitored CLA's audit of NRC's FY 2013 and FY 2012 financial statements by:

- Reviewing CLA's audit approach and planning.
- Evaluating the qualifications and independence of CLA's auditors.
- Monitoring audit progress at key points.
- Examining the working papers related to planning and performing the audit and assessing NRC's internal controls.
- Reviewing CLA's audit reports for compliance with *Government Auditing Standards* and OMB Bulletin No.14-02
- Coordinating the issuance of the audit reports.

- Performing other procedures deemed necessary.

CLA is responsible for the attached auditor's report, dated December 2, 2013, and the conclusions expressed therein. OIG is responsible for technical and administrative oversight regarding the firm's performance under the terms of the contract. Our oversight, as differentiated from an audit in conformance with *Government Auditing Standards*, was not intended to enable us to express, and accordingly we do not express, an opinion on:

- NRC's financial statements.
- The effectiveness of NRC's internal control over financial reporting.
- NRC's compliance with laws and regulations.

However, our monitoring review, as described above, disclosed no instances where CLA did not comply, in all material respects, with applicable auditing standards.

**Meeting with the Chief Financial Officer**

At the exit conference on December 3, 2013, representatives of the Office of the Chief Financial Officer, OIG, and CLA discussed the results of the audit.

**Comments of the Chief Financial Officer**

In his response, the Chief Financial Officer (CFO) agreed with the report. The full text of the CFO's response follows this report.

We appreciate NRC staff's cooperation and continued interest in improving financial management within NRC.

Attachment: As stated

cc: Commissioner Svinicki
Commissioner Apostolakis
Commissioner Magwood
Commissioner Ostendorff
R. Mitchell, OEDO
K. Brock, OEDO
J. Arildsen, OEDO
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# INDEPENDENT AUDITORS' REPORT

CliftonLarsonAllen LLP

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## INDEPENDENT AUDITORS' REPORT

Inspector General
United States Nuclear Regulatory Commission

Chairman
United States Nuclear Regulatory Commission

In our audits of the fiscal years (FY) 2013 and 2012 financial statements of the United States Nuclear Regulatory Commission (NRC), we found:

- The financial statements are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (U.S.);
- NRC maintained, in all material respects, effective internal control over financial reporting; and
- No reportable noncompliance with certain provisions of laws and regulations tested including the requirements of the Federal Financial Management Improvement Act of 1996 (FFMIA).

The following sections discuss in more detail: (1) these conclusions; (2) Management's Discussion and Analysis (MD&A), other required supplementary information (RSI), and other information included with the financial statements; (3) management's responsibilities; and (4) our responsibilities.

**Report on the Financial Statements and Internal Control over Financial Reporting**

We have audited the accompanying financial statements of NRC, which comprise the balance sheets as of September 30, 2013 and 2012, and the related statements of net cost and changes in net position, the statements of budgetary resources for the years then ended, and the related notes to the financial statements. The objective of our audits was to express an opinion on the fairness of these financial statements. We have also audited NRC's internal control over financial reporting as of September 30, 2013.

***Management's Responsibilities***

NRC management is responsible for the (1) preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the U.S., (2) preparation, measurement, and presentation of the RSI in accordance with the prescribed accounting principles generally accepted in the U.S., (3) preparation and presentation of other information in documents containing the audited financial statements and auditors' report, and consistency of that information with the audited financial statements and the RSI, (4) design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error, including to provide reasonable assurance that the broad control objectives of the Federal Managers' Financial Integrity Act of 1982 (FMFIA) are met. NRC management evaluated the effectiveness of NRC's internal control over financial reporting as of September 30, 2013, based on criteria established under FMFIA.

**INDEPENDENT AUDITORS' REPORT (Continued)**

***Auditors' Responsibilities***

Our responsibility is to express an opinion on these financial statements and an opinion on the NRC's internal control over financial reporting based on our audits. We conducted our audits of the financial statements in accordance with auditing standards generally accepted in the U.S.; and the standards applicable to the financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. We conducted our audit of internal control over financial reporting referred to above in accordance with attestation standards established by the American Institute of Certified Public Accountants and the standards applicable to audits of internal control contained in *Government Auditing Standards*. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement, and that effective internal control over financial reporting was maintained in all material respects, respectively. We are also responsible for applying certain limited procedures with respect to the RSI and all other accompanying information included with the financial statements. We conducted our audits in accordance with OMB Bulletin No. 14-02*, Audit Requirements for Federal Financial Statements* (OMB Bulletin 14-02).

In order to fulfill these responsibilities, we (1) obtained an understanding of NRC and its operations, including its internal control over financial reporting; (2) assessed the risk of financial statement misstatement and the risk that a material weakness exists in internal control over financial reporting; (3) evaluated the design and operating effectiveness of internal control based on the assessed risk; (4) considered the NRC's process for evaluating and reporting on internal control under FMFIA and financial management systems under FFMIA; (5) assessed the risk of substantial noncompliance and tested whether NRC's financial management systems substantially complied with FFMIA requirements; (6) tested compliance with certain provisions of laws, regulations, contracts, and grant agreements; (7) examined, on a test basis, evidence supporting the amounts and disclosures in the financial statements; (8) evaluated the appropriateness of the accounting policies used and the reasonableness of significant accounting estimates made by management; (9) evaluated the overall presentation of the financial statements; (10) conducted inquiries of management about the methods of preparing the RSI and compared this information for consistency with management's responses to the auditors' inquiries, the financial statements, and other knowledge we obtained during the audit of the financial statements, in order to report omissions or material departures from Federal Accounting Standards Advisory Board (FASAB) guidelines, if any, identified by these limited procedures; (11) read the other information included with the financial statements in order to identify material inconsistencies, if any, with the audited financial statements; and (12) performed such other procedures as we considered necessary in the circumstances.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

We did not evaluate all internal controls relevant to operating objectives as broadly established under FMFIA, such as those controls relevant to preparing performance information and ensuring efficient operations. We limited our internal control testing to testing controls over financial reporting. Our internal control testing was for the purpose of expressing an opinion on the effectiveness of internal control over financial reporting and may not be sufficient for other purposes.

***Definition of Internal Control and Inherent Limitations***

An entity's internal control over financial reporting is a process effected by those charged with governance, management, and other personnel, the objectives of which are to provide reasonable

**INDEPENDENT AUDITORS' REPORT (Continued)**

assurance that: (1) transactions are properly recorded, processed, and summarized to permit the preparation of financial statements in accordance with accounting principles generally accepted in the U.S.; (2) assets are safeguarded against loss from unauthorized acquisition, use, or disposition; and (3) transactions are executed in accordance with laws governing the use of budget authority and with other laws and regulations that could have a direct and material effect on the financial statements.

Because of inherent limitations, internal control over financial reporting may not prevent, or detect and correct misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

***Opinion on the Financial Statements***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of NRC as of September 30, 2013 and 2012, and its net costs, changes in net position, and budgetary resources for the years then ended, in accordance with accounting principles generally accepted in the U.S.

***Opinion on Internal Control over Financial Reporting***

In our opinion, NRC maintained, in all material respects, effective internal control over financial reporting as of September 30, 2013, that provided reasonable assurance that misstatements, losses, or noncompliance that are material in relation to the financial statements would be prevented or detected and corrected on a timely basis. Our opinion on internal control is based on criteria established under 31 U.S.C. 3512 (c), (d), commonly known as the FMFIA.

***Other Matters***

*Required Supplementary Information*
Accounting principles generally accepted in the U.S. require that NRC's MD&A, and other RSI, be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the FASAB, who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the MD&A and other RSI in accordance with auditing standards generally accepted in the U.S., which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the RSI information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*Other Information*
The FY 2013 Performance and Accountability Report contains a wide range of other information, some of which is not directly related to the financial statements. This other information includes the cover, table of contents, message from the Chairman, Chapter 2 (Program Performance), message from the Chief Financial Officer, Inspector General's letter transmitting the auditors' report, management's response to the audit report, and Chapter 4 (Other Accompanying Information). This information is presented for purposes of additional analysis and is not a required part of the financial statements or RSI. The other information has not been subjected to the auditing procedures applied

**INDEPENDENT AUDITORS' REPORT (Continued)**

in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

**Report on Compliance with Laws and Regulations Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards***

***Compliance with Laws and Regulations***

In connection with our audit of the financial statements, we performed tests of the NRC's compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audits, and accordingly, we do not express such an opinion. The results of our tests for the year ended September 30, 2013, disclosed no instances of noncompliance or other matters that are required to be reported in accordance with *Government Auditing Standards*, issued by the Comptroller General of the United States.

***Systems Compliance with FFMIA Requirements***

Under FFMIA, we are required to report whether the financial management systems used by NRC substantially comply with the (1) Federal financial management systems requirements, (2) applicable Federal accounting standards, and (3) the United States Standard General Ledger (USSGL) at the transaction level. To meet this requirement, we performed tests of compliance with FFMIA Section 803(a) requirements. However, providing an opinion on compliance with FFMIA was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests of FFMIA disclosed no instances in which NRC's financial management systems did not substantially comply with (1) Federal financial management systems requirements, (2) applicable Federal accounting standards, or (3) the USSGL at the transaction level.

***Management's Responsibilities***

Management is responsible for ensuring NRC's financial management systems are in substantial compliance with FFMIA requirements, and ensuring compliance with other applicable laws, regulations, contracts, and grant agreements.

***Auditors' Responsibilities***

We are responsible for testing compliance with certain provisions of laws and regulations that have a direct and material effect on the financial statements and applicable laws for which OMB Bulletin 14-02 requires testing.

We did not test compliance with all laws and regulations applicable to NRC. We limited our tests of compliance to certain provisions of laws and regulations that have a direct and material effect on the financial statements and those required by OMB Bulletin 14-02 that we deemed applicable to NRC's financial statements for the fiscal year ended September 30, 2013. We caution that noncompliance with laws and regulations may occur and not be detected by these tests and that such testing may not be sufficient for other purposes. Also, our work on FFMIA would not necessarily disclose all instances of noncompliance with FFMIA requirements.

**INDEPENDENT AUDITORS' REPORT (Continued)**

***Purpose of the Report on Compliance with Laws and Regulations***

The purpose of the Report on Compliance is solely to describe the scope of our testing of compliance with laws and regulations and the result of that testing, and not to provide an opinion on the NRC's compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering NRC's compliance. Accordingly, this report is not suitable for any other purpose.

Clifton Larson Allen LLP

Arlington, Virginia
December 2, 2013

## Management's Response to the Independent Auditors' Report on the Financial Statements

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 3, 2013

CHIEF FINANCIAL OFFICER

MEMORANDUM TO: Stephen D. Dingbaum
Assistant Inspector General for Audits
Office of the Inspector General

FROM: J. E. Dyer
Chief Financial Officer

SUBJECT: AUDIT OF THE FISCAL YEAR 2013 AND 2012 FINANCIAL STATEMENTS

We appreciate the collaborative relationship between the Office of the Inspector General, the auditors, and the Office of the Chief Financial Officer in supporting our continuing effort to improve financial reporting. We have reviewed the Independent Auditor's Report of the Agency's Fiscal Year 2013 and 2012 financial statements and are in agreement with it.

cc: R. Mitchell, AO/OEDO
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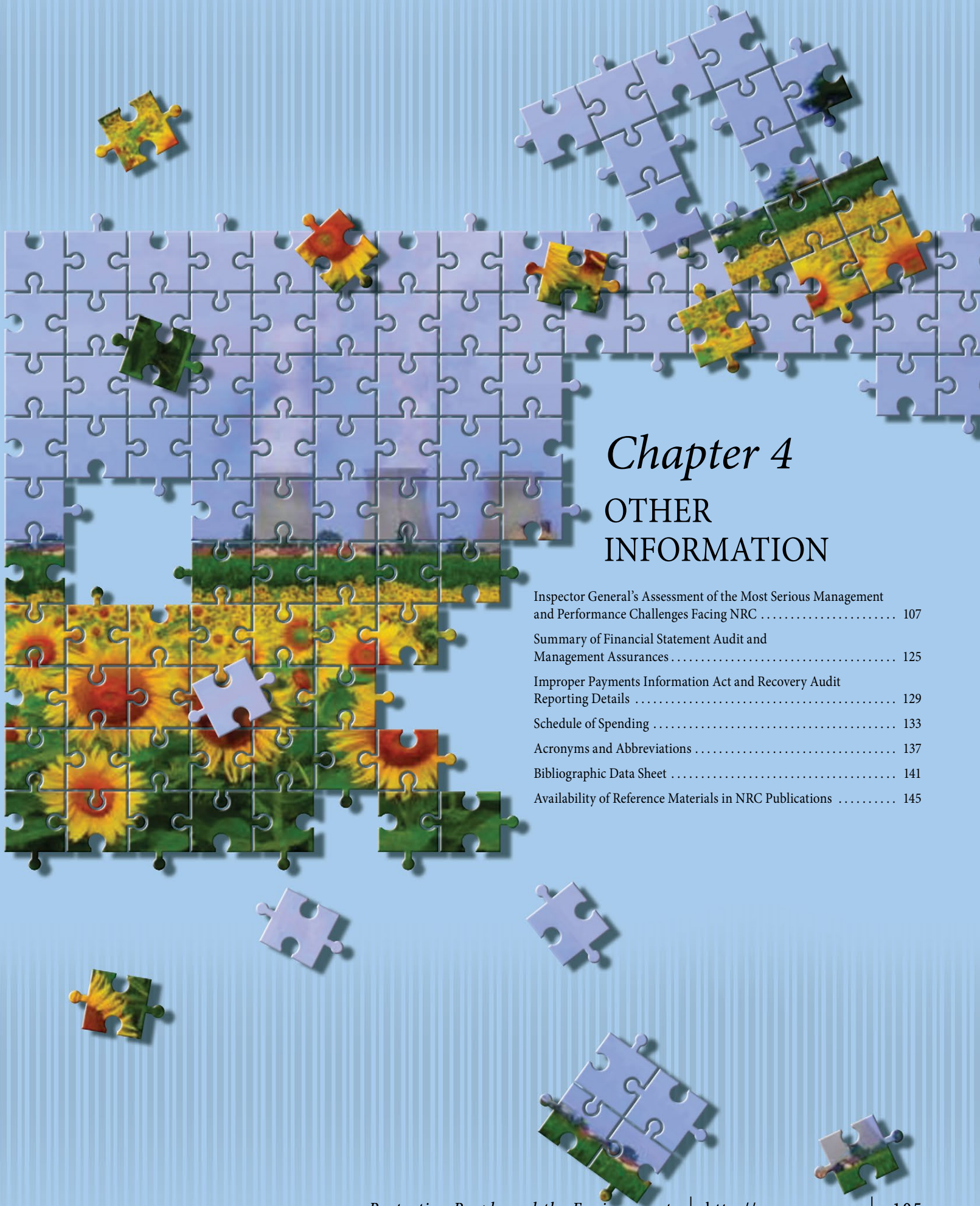
M. Khanna, OEDO
C. Jaegers, OEDO



# *Chapter 4*

# OTHER INFORMATION






UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

OFFICE OF THE
INSPECTOR GENERAL

October 2, 2013

MEMORANDUM TO: Chairman Macfarlane

FROM: Hubert T. Bell ***/RA/***
Inspector General

SUBJECT: INSPECTOR GENERAL'S ASSESSMENT OF THE MOST SERIOUS MANAGEMENT AND PERFORMANCE CHALLENGES FACING NRC (OIG-14-A-01)

In accordance with the Reports Consolidation Act of 2000, I have updated what I consider to be the most serious management and performance challenges facing the U.S. Nuclear Regulatory Commission (NRC). This report conveys the updated challenge list and provides a description of each challenge area and an assessment of agency actions to address these areas.

**BACKGROUND AND OBJECTIVES**

On January 24, 2000, Congress enacted the *Reports Consolidation Act of 2000*, requiring Federal agencies to provide financial and performance management information in a more meaningful and useful format for Congress, the President, and the public. The act requires the Inspector General (IG) of each Federal agency to annually summarize what he or she considers to be the most serious management and performance challenges facing the agency and to assess the agency's progress in addressing those challenges.

To accomplish this assessment, I considered the overall work of the Office of the Inspector General (OIG), the OIG staff's general knowledge of agency operations, and other relevant information to develop and update the list of management and performance challenges and assess the agency's progress in addressing these challenges. In addition, my staff sought input from NRC's Chairman, Commissioners,

and management to obtain their views on what challenges the agency is facing and what efforts the agency has taken or are underway to address previously identified management and performance challenges.

**RESULTS**

The NRC's mission is 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. Like other Federal agencies, NRC faces management and performance challenges in carrying out its mission.

Congress left the determination and threshold of what constitutes a most serious management and performance challenge to the discretion of the IGs. I have defined serious management and performance challenges as *mission critical areas or programs that have the potential for a perennial weakness or vulnerability that, without substantial management attention, would seriously impact agency operations or strategic goals*.

Based on this definition, I have identified the following as the most serious management and performance challenges facing NRC as of October 1, 2013:

| **Most Serious Management and Performance Challenges Facing NRC as of October 1, 2013* (as identified by Inspector General)** | |
|---|---|
| **Challenge 1** | *Management of regulatory processes to meet a changing environment in the oversight of nuclear materials.* |
| **Challenge 2** | *Management of NRC security programs.* |
| **Challenge 3** | *Management of regulatory processes to meet a changing environment in the oversight of nuclear facilities.* |
| **Challenge 4** | *Management of regulatory processes associated with high-level radioactive waste.* |
| **Challenge 5** | *Management of information technology.* |
| **Challenge 6** | *Administration of all aspects of financial management and procurement.* |
| **Challenge 7** | *Management of human capital.* |
| ***The most serious management and performance challenges are not ranked in any order of importance.** | |

**Challenge 1. Management of regulatory processes to meet a changing environment in the oversight of nuclear materials**

Overview

NRC is responsible for maintaining an established regulatory framework for the safe and secure use of nuclear materials; medical, industrial, and academic applications; and uranium recovery activities. NRC is authorized to grant licenses for the possession and use of radioactive materials and establish regulations to govern the possession and use of those materials. Agency regulations require that certain material licensees have extensive material control and accounting programs as a condition of their licenses. Other license applicants (including those requesting authorization to possess small quantities of special nuclear materials[1]) must develop and implement plans that demonstrate a commitment to accurately control and account for radioactive materials. Upon a State's request, NRC may enter into an agreement to relinquish its authority to the State to regulate certain radioactive materials (including low-level waste) and limited quantities of special nuclear material. The State must demonstrate that its regulatory program is adequate to protect public health and safety and compatible with NRC's program. The States that enter into an agreement assuming this regulatory authority from NRC are called Agreement States. Currently, there are 37 Agreement States.

Issues

- Ensure appropriate oversight of radioactive material. This includes the accurate tracking and control of byproduct material, especially those materials with the greatest potential to impact public health and safety.

- Ensure that radioactive material is adequately protected to prevent its use for malicious purposes.

- Ensure reliable accounting of special nuclear materials in the NRC and Department of Energy jointly managed Nuclear Materials Management and Safeguards System.

[1] Special nuclear material, as defined by Title 1 (Section 11. Definitions) of the Atomic Energy Act of 1954, is plutonium, uranium-233, or uranium enriched in the isotopes uranium-233 or uranium-235.

- Ensure the appropriate oversight of uranium recovery facilities. The Department of Energy is responsible for cleanup and remediation of these sites under an NRC general license.

- Ensure that Agreement State programs are adequate to protect public health and safety and the environment, and are compatible with NRC's program.

- Ensure the management and safe storage and disposal of low-level radioactive waste produced as a result of NRC-licensed activities.

- Improve implementation of the National Environmental Policy Act (NEPA).

Assessment

During FY 2012, OIG audited NRC's oversight of industrial radiography and found areas where NRC could improve. In FY 2013, NRC continued work on addressing OIG's recommendations to improve its oversight of radiography. The agency is revising its inspection guidance pertaining to radiography—although the revision has been delayed several times.

During FY 2012, OIG conducted two audits concerning general licenses.

- In the first audit, OIG identified that general licensed devices (GLD) could contain dangerous radioactive sources even though persons with no radiation training or experience were allowed to operate the devices. In response to the OIG audit, during FY 2013, agency staff contacted NRC's general licensees that possessed devices with dangerous radioactive sources and encouraged those licensees to transfer their devices to specific licenses.

- In the second audit, OIG found that many general licensees are unaware of NRC's regulatory requirements. The Atomic Energy Act, through the Code of Federal Regulations, establishes regulatory requirements for general licensed devices. However, NRC relies on manufacturers to make general licensees aware of these requirements, thereby delegating some of its responsibilities. In response to the OIG audit, during FY 2013, NRC staff committed to develop a procedure to provide each new NRC general licensee with information that will clearly describe all applicable regulatory requirements.

Since FY 2003, OIG has been tracking NRC's progress regarding the reliable accounting of special nuclear materials. While the agency continues to make progress, it still needs to complete rulemaking on Part 74, Material Control and Accounting of Special Nuclear Material. The final rule and associated guidance are scheduled to be completed by November 12, 2013, and March 12, 2014, respectively.

During FY 2012, OIG audited NRC's oversight of uranium recovery facilities and found opportunities for improvement. In response to the OIG audit, during FY 2013, NRC staff completed actions to ensure compliance with memorandums of understanding it had with the Environmental Protection Agency and developed guidance for inspecting uranium recovery sites transferred to the Department of Energy for long-term surveillance.

Low-level radioactive waste is a byproduct of the country's use and production of certain radioactive material. NRC and the Agreement States regulate low-level waste disposal through a combination of regulatory requirements, licensing, and safety oversight. Currently, there are three low-level waste disposal sites that are regulated by Agreement States. However, these low-level waste disposal sites accept waste only from certain States or accept only limited types of low-level wastes. Low-level radioactive waste that cannot be disposed of at a commercially operated facility is stored "onsite" where it was produced. Onsite storage increases the risk of accident and subjects workers to an increased likelihood of an unplanned exposure. NRC regulates approximately 1,600 materials licensees whose State compact does not have a low-level radioactive waste disposal facility or is not affiliated in a compact.

**Challenge 2. Management of NRC security programs**

Overview

NRC must remain vigilant with regard to the security of its infrastructure and that of nuclear facilities and nuclear materials. NRC must continue to use robust, proactive measures to protect its infrastructure – the buildings, personnel, and information – from both internal and external threats. Moreover, as the nature of the threat continues to evolve, NRC faces challenges with protecting nuclear facilities and materials, the sharing of sensitive information, as well as emergency preparedness and incident response.

Issues

- Ensure that NRC maintains strong internal physical and information security programs to protect NRC assets (e.g., NRC headquarters and regional facilities, safeguards and classified information, and information systems).

- Ensure that NRC strengthens the cyber security inspection program to protect licensee-owned assets from compromise consistent with 10 CFR Part 73 requirements.

- Ensure effective nuclear power plant emergency preparedness oversight.

- Ensure that NRC maintains a strong physical security program to protect licensee-owned assets from attack.

- Ensure implementation of the November 21, 2012, Presidential Memorandum, "National Insider Threat Policy and Minimum Standards for Executive Branch Insider Threat Programs." Currently, the staff is working toward several options for presentation to the Commission that consist of the following: (1) NRC staff informing the Commission of the framework of the NRC's insider threat program as required by Executive Order 13587, "Structural Reforms to Improve the Security of Classified Networks and the Responsible Sharing and Safeguarding of Classified Information"; (2) a policy paper/basic implementation plan that will be a vote paper for Commission consideration, which will include policy questions including the allocation of resources and implications for bargaining unit employees; and (3) once the National Industrial Security Program Operating Manual is finalized, another paper to consider whether and to what degree licensees will be covered by the insider threat program.

- Ensure that NRC continually enhances its capabilities to deter and defeat external threats to its cyber infrastructure to thwart individuals and groups that deploy malicious malware and offensive cyber capabilities for the purpose of accessing NRC's domain for malevolent purposes. Additionally, spear phishing attacks have increased at NRC and present an infrastructure information assurance challenge for the agency.

Assessment

During FY 2013, OIG evaluated NRC's compliance with the Federal Information Systems Management Act of 2002 (FISMA).[2] NRC has continued to make improvements to its information technology security program and progress in implementing the recommendations from previous FISMA evaluations. Most notable is that the agency has continued to maintain authorizations to operate on its agency and contractor systems.[3]

During FY 2013, OIG was mandated to audit NRC's classified information security program's policies and procedures. OIG found a limited number of marking errors but no evidence of systemic misclassification. Yet, this audit did identify several areas where compliance with Federal Government standards could be improved. For example, OIG found that some NRC document classifiers had not received required training; trained classifiers are not issued documentation that training was received; required classification self-assessments would be enhanced by representative sampling; and NRC's policy guidance on classification is outdated. NRC is taking action on the recommendations to strengthen the classified information security program.

Additionally, OIG audited NRC's process for ensuring that NRC employees are complying with personnel reporting responsibilities for continued NRC access authorization eligibility. During this audit, OIG found that NRC had implemented a new system to track personnel security background investigations. This new system should lead to efficiencies in the work. Nevertheless, OIG found that employees are not complying with personnel reporting responsibilities for continued NRC access authorization eligibility. OIG found that NRC employees rarely self-report the occurrence of certain events or conduct that may bring into question their reliability and trustworthiness even though such reporting is a requirement for continued NRC access authorization. OIG made recommendations to strengthen the compliance process. NRC was in agreement with the recommendations and is taking corrective actions.

[2] FISMA is a United States Federal law enacted in 2002. The act requires each Federal agency to develop, document, and implement an agencywide program to provide information security for the information and information systems that support the operations and assets of the agency.
[3] An authorization to operate is a formal designation that authorizes operation of a business product and explicitly accepts the risk to agency operations.

**Challenge 3. Management of regulatory processes to meet a changing environment in the oversight of nuclear facilities**

Overview

NRC faces the challenge of maintaining its core regulatory programs while adapting to changes in its regulatory environment. NRC must address a highly variable interest in licensing and constructing new nuclear power plants to meet the Nation's increasing demands for energy production. As of May 2013, NRC had received 18 Combined License applications, 10 of which NRC was actively reviewing. Moreover, the agency is reviewing two standard design certifications and, for advanced reactors, expects to receive three design certification applications and one construction permit application through 2015.

While responding to the emerging demands associated with licensing and regulating new reactors, NRC must maintain focus and effectively carry out its current regulatory responsibilities, such as inspections of the current fleet of operating nuclear reactors and fuel cycle facilities. NRC intends to increase its safety focus on licensing and oversight activities through risk-informed and performance-based regulation.

Issues

*New Facilities*

- Implement the new Construction Inspection Program.
  - Risk-inform Construction Inspection Program activities to ensure the safe operation of newly constructed nuclear facilities.
  - Ensure that the NRC staff has the necessary knowledge and skill to successfully implement the program.
- As the search for new energy sources continues, NRC must ensure that the process for reviewing applications for new nuclear facilities focuses on safety and effectiveness.

- As the sources of manufactured reactor components become more globalized, NRC must ensure that its regulations and oversight activities appropriately address the challenges associated with licensees procuring components from suppliers located outside the United States.

*Existing Fleet*

- Ensure that NRC maintains the ability to effectively review licensee applications for license renewals and power uprates submitted by industry in response to the Nation's increasing demands for energy production.

- Ensure the most important operational issues remain the agency's top priority, and consistently apply responsive regulatory and review changes across the existing fleet of reactors.

- Establish and maintain effective, stable, and predictable regulatory programs or policies for all program areas.

*Cross-Cutting Issues*

- Systematically identify and develop — and consistently implement — internal controls to ensure effectiveness and efficiency of agency operations and resources.

- Identify and improve weak, informal, or unstructured processes to facilitate effective, efficient, and consistent staff activities.

- Improve the clarity, consistency, and comprehensiveness of guidance for NRC staff, such as the *Inspection Manual* and inter/intra-office guidance.

Assessment

OIG conducted audit followup activities in a number of significant issue areas, including oversight of licensees' vendors and reporting of nuclear power plant component defects, enforcement mechanisms, and new construction inspection. OIG auditors concurred with agency actions to close out recommendations in previously audited areas, including agency efforts to:

- Develop and implement a quality assurance process that ensures the accuracy and completion of enforcement data.

- Develop a vendor inspection program planning document that clearly articulates the program purpose and establishes metrics to evaluate program performance.

- Update inspection procedures to ensure NRC inspectors are evaluating licensee component defect reporting issues on a continual basis.

However, significant audit recommendations remain open regarding the clarity of licensee component defect reporting regulations and guidance, assessing NRC staff needs for new construction-related training, and developing a framework to manage the impact of change on key new reactor oversight programs.

**Challenge 4. Management of regulatory processes associated with high-level radioactive waste**

Overview

NRC regulates high-level radioactive waste generated from commercial nuclear power reactors. High-level radioactive waste is either spent (used) reactor fuel when it is accepted for disposal or waste materials remaining after spent fuel is reprocessed. Because of its highly radioactive fission products, high-level radioactive waste must be handled and stored with care. Since the only way radioactive waste finally becomes harmless is through decay, which for high-level waste can take hundreds of thousands of years, the waste must be stored and finally disposed of in a way that provides adequate protection of the public.

The United States has entered a period where the national policy for storing, reprocessing, and disposal of spent nuclear fuel is being reexamined. With the prospect of spent nuclear fuel being stored at reactor sites for the foreseeable future due to the uncertainty surrounding a permanent repository for high-level radioactive waste, along with recent judicial action, NRC is being called upon to reevaluate its management approaches to the issues associated with long-term high-level radioactive waste storage.

In 2010, NRC updated its Waste Confidence Decision—affirming that spent nuclear fuel could be safely stored onsite at nuclear power plants until a permanent waste repository is built. However, on June 8, 2012, the U.S. Court of Appeals for the District of Columbia Circuit ruled that NRC's waste-confidence decision had not adequately addressed all environmental effects and thus violated the National Environmental Policy Act.

On August 13, 2013, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision. The court ordered NRC to "promptly continue with the legally mandated licensing process" for the Department of Energy's application for authorization to construct a geologic repository for high-level nuclear waste at Yucca Mountain, Nevada, "unless and until Congress authoritatively says otherwise or there are no appropriated funds remaining."

An independent spent fuel storage installation (ISFSI) is an NRC-licensed facility designed and constructed for the interim storage of spent nuclear fuel and other radioactive materials associated with the spent fuel. An ISFSI typically consists of a concrete storage pad, storage containers (casks), and any support facilities. As of March 2013, there were 69 licensed ISFSIs in the United States.

Issues

- Ensure safe and secure interim storage for increasing quantities of high-level radioactive waste for the foreseeable future until a permanent repository for high-level radioactive waste is operational.

- Address regulatory issues relative to a longer-than-anticipated time for interim storage of high-level waste.

- Maintain flexibility to address regulatory challenges related to the storage and transportation of spent nuclear fuel and high-level waste.

Assessment

Because the U.S. Court of Appeals for the District of Columbia Circuit found that NRC violated the National Environmental Policy Act in issuing its 2010 update to the Waste Confidence Decision and Temporary Storage Rule, the Commission suspended all licensing activities that rely on the Waste Confidence Decision and Rule. NRC created a Waste Confidence Directorate within the Office of Nuclear Materials Safety and Safeguards to oversee the drafting of a new Waste Confidence Environmental Impact Statement and Rule. The Commission has instructed the Directorate to issue the final environmental impact statement and rule by no later than September 2014.

In FY 2011, OIG audited the safety aspect of NRC's oversight of ISFSIs and identified areas where the agency could improve. During FY 2013, NRC staff revised its inspection manual establishing a minimum frequency for conducting routine ISFSI safety inspections.

**Challenge 5. Management of information technology**

Overview

NRC needs to continue upgrading and modernizing its information technology (IT) capabilities to meet its IT/information management strategic goals. These goals include ensuring that NRC staff have quick and easy access to information, providing IT solutions that are easy to use and increase agency program performance, and delivering excellent service.

Issues

- Maintain and enhance information technology activities to strengthen the productivity, efficiency, and effectiveness of agency programs and operations.
- Expand mobile computing – "work from anywhere" – options such as remote access from NRC-issued laptops, non-NRC computers, and hand-held devices including a "bring your own devices" pilot program to allow for the distributed work locations of NRC staff.
- Improve information retrieval with better categorization and organization, enterprise content management, and improved search capabilities.
- Enhance "work with anyone" capabilities to include virtual meeting and collaboration tools with internal and external stakeholders including licensees and the public.

Assessment

In December 2010, the U.S. Chief Information Officer promulgated the 25-Point Implementation Plan to Reform Federal Information Technology Management. The plan tasked NRC and other agencies with undertaking specific management reforms and policy changes. During FY 2013, OIG audited NRC's compliance and recommended that NRC could improve IT management. As a result, the agency has agreed to institutionalize current training for its IT acquisition staff, create short-term and long-terms plans for its data centers, and include all data centers in future consolidation efforts.

Also during FY 2013, OIG evaluated NRC's progress in implementing social media at NRC. The evaluation found that NRC has made significant progress and is compliant with Federal social media policies and regulations. However, consistent with the fact that NRC is still in its early stages with its social media program, there remain areas where the agency can enhance its efficiency and effectiveness. These areas include integrating social media into existing policies, training, and practices; implementing more social media specific security, training, and awareness safeguards; establishing a more prominent voice in the digital realm, and maximizing the potential of social media to enhance interaction with agency stakeholders and engage them in a dialogue on nuclear issues. The agency has implemented a number of recommendations such as soliciting input on a regular basis, making the authors more prominent in articles, and ensuring that information on how social media can be accessed by users is clearly defined and visible.

**Challenge 6. Administration of all aspects of financial management and procurement**

Overview

NRC faces significant challenges to efficiently, effectively, and economically manage its corporate resources within the parameters of its budget. In response to a challenging budget environment, NRC is pursuing strategies to target areas of inefficiency.

NRC must meet the requirements of several financial management statutes, including the Federal Managers' Financial Integrity Act and the Chief Financial Officers Act. These acts mandate NRC to establish controls that reasonably ensure that (1) obligations and costs comply with applicable law; (2) assets are safeguarded against waste, loss, unauthorized use, or misappropriation; and (3) revenues and expenditures are properly recorded and accounted for. These acts also encompass programmatic and administrative areas, as well as accounting and financial management.

NRC's procurement of goods and services is made with an aim to achieve the best value for the agency's dollars in a timely manner. Agency policy provides that these activities support the agency's mission; be planned, awarded, and administered efficiently and effectively; and be consistent with sound business practices and contracting principles. Agency efforts are currently focused on the goals of achieving (1) a 21st century acquisition program that uses state-of-the-art acquisition methodologies for acquisition planning, execution, management, and closeout, and (2) an acquisition program that fully integrates with the agencywide program and financial planning and budget execution.

Issues

*Financial Management*

- Respond to the current challenging budget environment.
- Improve the performance and functionality of the agency's core financial system.
- Improve the integration and functionality of all financially-related systems.

*Procurement*

- Implement a 21st century acquisition program that will interface with the agency's core financial management system.

Assessment

*Financial Management*

During FY 2013, NRC continued to demonstrate sound financial management practices. The *Audit of the NRC's Financial Statements for Fiscal Year 2012* resulted in an unqualified audit opinion. Moreover, other OIG audits demonstrated that NRC is in compliance with Federal laws and standards related to financial management.

The agency also continues its efforts to enhance controls over financial management and to reduce agency overhead costs. For example, NRC established a Transforming Assets into Business Solutions Task Force to analyze and assess NRC's business practices and develop a plan to reduce the duplication of efforts in corporate and office support areas. However, OIG audits identified additional opportunities for improvement in financial operations.

An FY 2013 audit on NRC's process for calculating license fees indicated that NRC has opportunities to improve management of fees. Specifically, the audit recommended that the agency develop an annual validation process to compare budget estimates to actual costs and make adjustments as needed to the fee calculation process.

During an FY 2013 audit of travel charge cards, OIG found that NRC has an opportunity to maximize NRC's rebates by using recommended Federal strategies. The audit recommended that the agency implement a policy to pay centrally billed travel card accounts daily or weekly and explore the possibility of using another agency's existing task order to obtain a higher rebate rate.

During FY 2013, OIG Investigations continued to see examples where NRC employees misused their Government travel charge cards, for example, by charging items not associated with official travel. While NRC has made efforts to address this area, continued efforts are needed to reduce and eradicate misuse.

*Procurement*

NRC continues to upgrade its procurement system to streamline the agency's contracting practices. During FY 2013, OIG monitored the agency's procurement activities through meetings with the Division of Contracts, Office of Administration. During FY 2014, these meetings will focus on the agency's Strategic Acquisition System scheduled to be implemented in the August – October 2013 time period.

During FY 2013, an OIG investigation concluded that a contractor improperly billed the agency and failed to provide adequate deliverables. A settlement was reached where the contractor agreed to pay damages plus investigative costs in the amount of $456,938. While NRC program office and contracting officials rejected deliverables and denied charges from the contractor, this OIG investigation highlights the need for continual vigilance in contract administration.

**Challenge 7. Management of human capital**

Overview

For several years, NRC experienced significant workforce growth resulting from increased interest in nuclear power. During FY 2013, NRC's workforce was approximately 4,000 staff positions. Going forward, NRC will need to support increasing mandates in a challenging budget environment. NRC must institutionalize an approach that focuses on its mission of protecting the public health and safety while remaining mindful of staff needs. To manage human capital effectively, while continuing to accomplish the agency's mission, NRC must continue to implement initiatives in the following areas:

- Reduce inefficiencies and overhead by centralizing and streamlining processes while maintaining or improving the level of service to agency offices.

- Space planning.

Issues

- Respond to a challenging budget environment.
- Adapt training and development programs to the changing needs of agency staff.
- Facilitate continuation of space consolidation efforts.
- Address knowledge management in light of the high number of senior experts and managers who are or will be eligible to retire.
- Enhance the environment for raising concerns.

Assessment

NRC, like many other Federal agencies, is dealing with the need to become more efficient in performing its mission. In response, NRC has developed a comprehensive human capital management system that is consistent with the agency's core values. The Office of the Chief Human Capital Officer (OCHCO) has implemented specific hiring controls in order to address the agency's projected shortfall in salaries and benefits. Additionally, OCHCO developed long- and short-term staffing plans focusing on mission-related work. These plans are effective tools for offices over the next several years as they balance grade structure, manage positions and achieve salary and benefit targets.

During audits and evaluations, OIG considers both budget information for NRC programs and training needs for staff and makes recommendations, as appropriate, for improvements in these areas. For example, in FY 2013, OIG conducted audits that discussed improvements needed in the training offered by the agency concerning NRC's (1) budget execution process and (2) travel charge card program.

NRC and the General Services Administration continue to work together to obtain approval for a consolidated housing plan for NRC headquarters that meets current standards for space utilization. After approval by the Office of Management and Budget, the plan will be presented to Congress. The final decision will rest with the House Committee on Transportation and Infrastructure and the Senate Committee on Environment and Public Works.

NRC continues to make progress on reconsolidation of its staff from headquarters interim buildings to the White Flint Campus' Two White Flint North and Three White Flint North buildings.

During FY 2013, OIG also reported on the agencywide safety culture and climate on the basis of an employee survey taken in September 2012.[4] When compared to previous surveys, agency staff rated 8 of 19 categories less favorable than in 2009. Some of these areas include the staff's comfort level in elevating concerns and raising differing opinions, staff development and management, agency image, and the impact of metrics on work quality. Regarding knowledge management, the survey identified that NRC has made improvements in this area but still has opportunities to improve. The survey also indicated that staff may be less comfortable raising concerns since the previous survey was conducted. NRC management has assembled a group consisting of agency staff from multiple offices to seek opportunities for improvement in these areas.

In FY 2013, OIG investigative activities highlighted various human capital issues. For example, OIG completed an investigation regarding concerns associated with NRC's "open door" policy and Differing Professional Opinion (DPO) program. Several interviewees told OIG that because there is a perception by NRC staff that filing a DPO leads to retaliation, many staff are unwilling to use the program. Additionally, OIG investigations completed work and reported instances of misuse of the Transit Subsidy Benefits Program and undocumented Government overtime and time and attendance.

## CONCLUSION

The seven challenges contained in this report are distinct, yet are interdependent to accomplishing NRC's mission. For example, the challenge of managing human capital affects all other management and performance challenges.

The agency's continued progress in taking actions to address the challenges presented should facilitate achievement of the agency's mission and goals.

## SCOPE AND METHODOLOGY

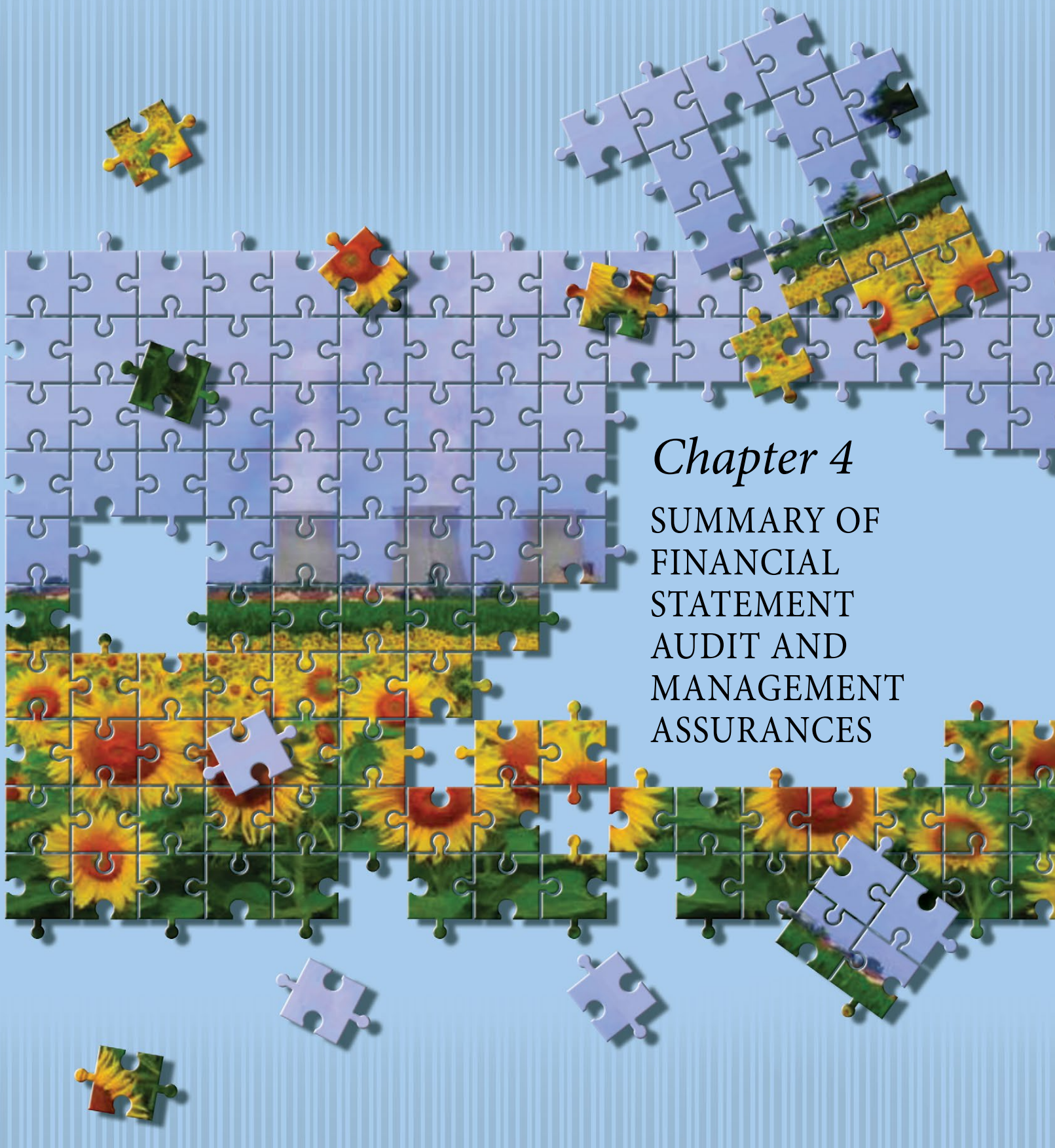
This report presents the IG's annual assessment of the most serious management and performance challenges facing the NRC. The challenges represent critical areas or difficult tasks that warrant high level management attention. To accomplish this work, the OIG focused on determining (1) current challenges, (2) the agency's efforts to address the challenges during FY 2013, and (3) planned agency efforts to address the challenges.

OIG reviewed and analyzed pertinent laws and authoritative guidance, agency documents, and OIG reports, and sought input from NRC officials concerning agency accomplishments relative to the challenge areas and suggestions they had for updating

[4] 2012 NRC Safety Culture and Climate Survey, OIG-13-A-15, March 29, 2013.

the challenges. Specifically, because challenges affect mission critical areas or programs that have the potential to impact agency operations or strategic goals, NRC Commission members, offices that report to the Commission, the Executive Director for Operations, and the Chief Financial Officer were afforded the opportunity to share any information and insights on this subject.

OIG staff conducted this assessment from May through August 2013 at NRC headquarters.



# *Chapter 4*

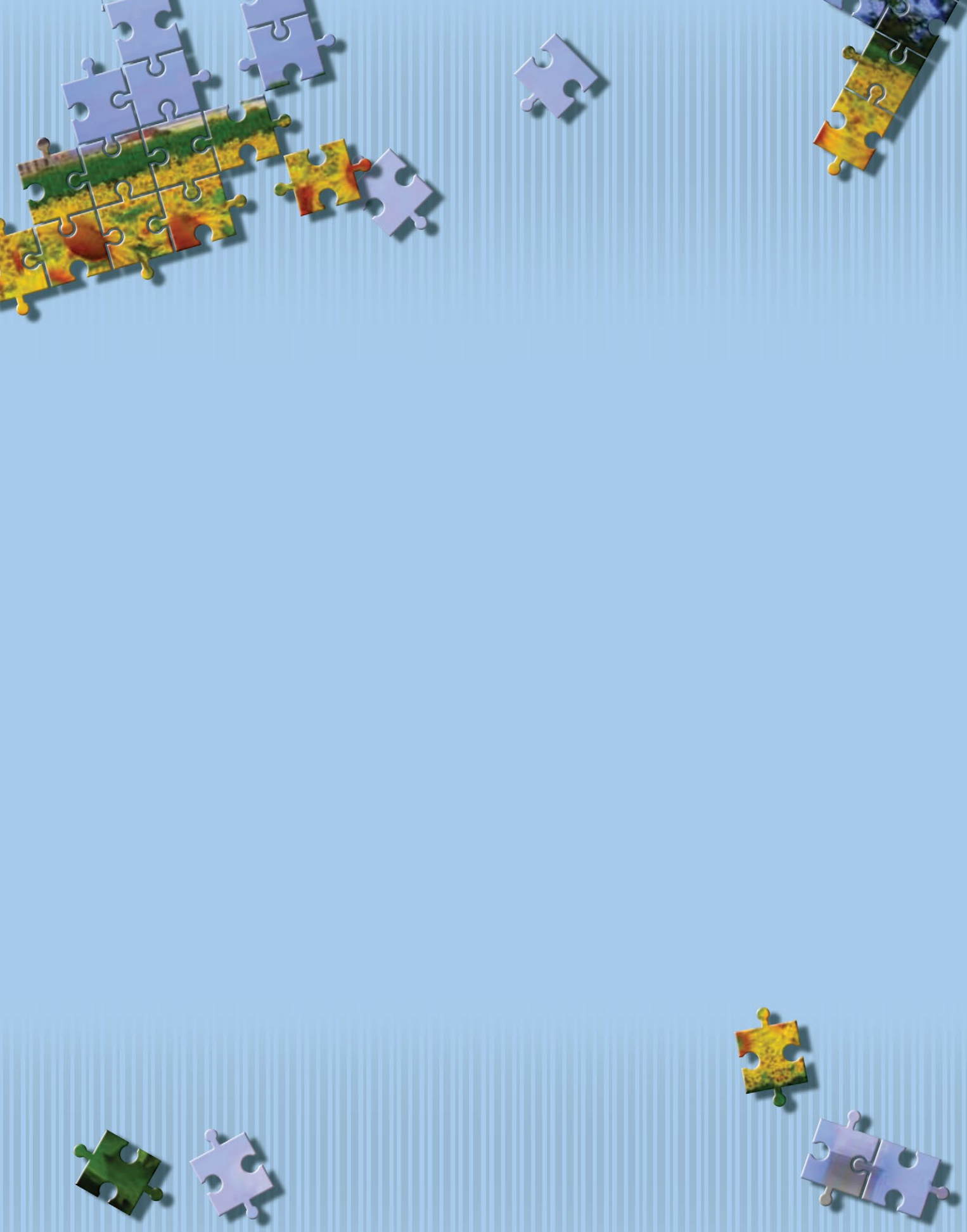
# SUMMARY OF FINANCIAL STATEMENT AUDIT AND MANAGEMENT ASSURANCES

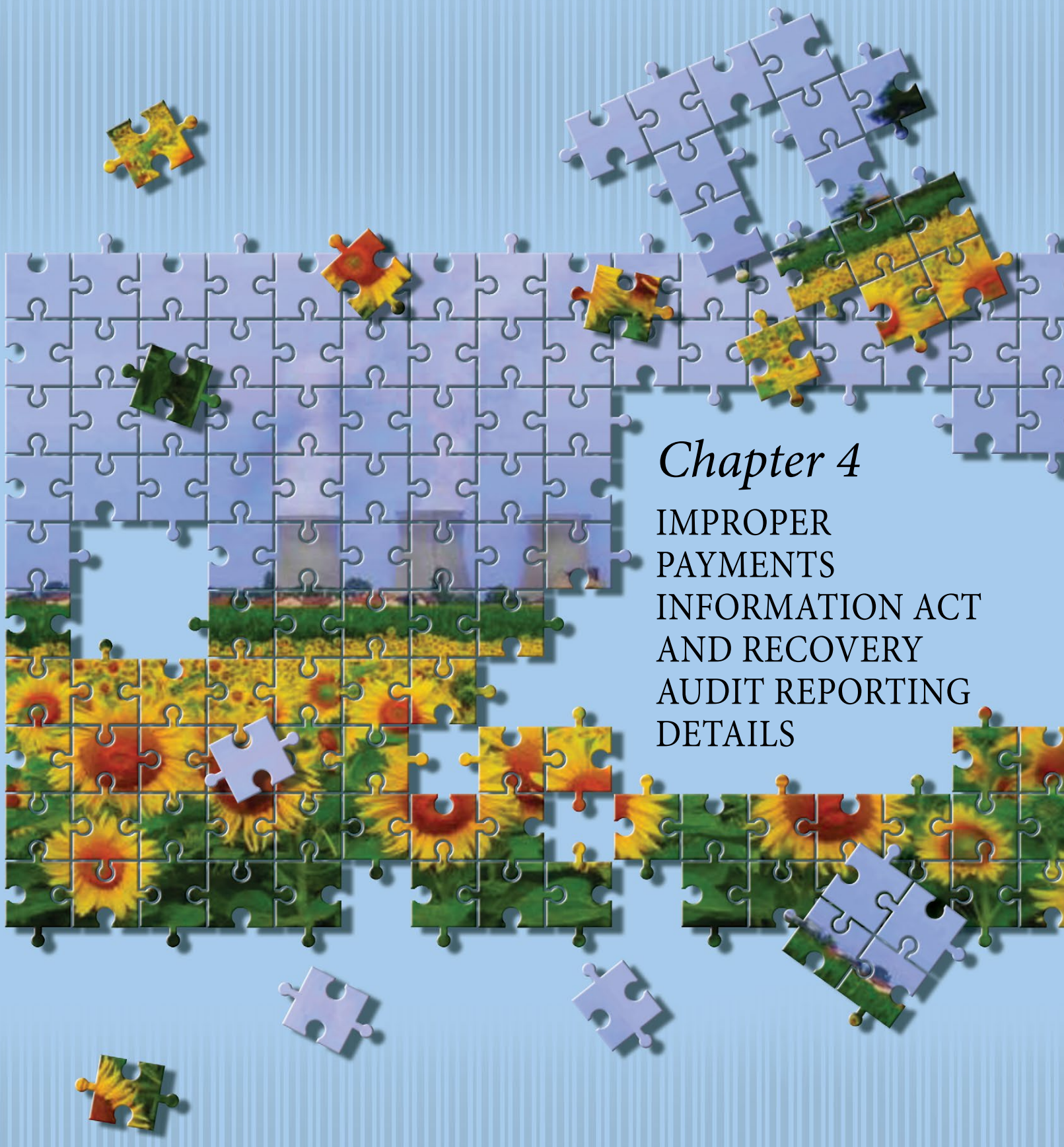





| SUMMARY OF FINANCIAL STATEMENT AUDIT FOR FY 2013 | |
|---|---|
| Audit Opinion | Unqualified |
| Restatement | No |
| Material Weaknesses | No |

| SUMMARY OF MANAGEMENT ASSURANCES FOR FY 2013 | | |
|---|---|---|
| **Effectiveness of Internal Control over Financial Reporting (FMFIA § 2)** | | |
| Statement of Assurance | Unqualified | |
| Material Weaknesses | No | |
| **Effectiveness of Internal Control over Operations (FMFIA § 2)** | | |
| Statement of Assurance | Unqualified | |
| Material Weaknesses | No | |
| **Conformance with Financial Management System Requirements (FMFIA § 4)** | | |
| Statement of Assurance | Systems conform to financial management system requirements | |
| Nonconformance | No | |
| **Compliance with Federal Financial Management Improvement Act (FFMIA)** | | |
| | **Agency** | **Auditor** |
| Systems Requirements | No noncompliance noted | No noncompliance noted |
| Accounting Standards | No noncompliance noted | No noncompliance noted |
| United States Standard General Ledger at Transaction Level | No noncompliance noted | No noncompliance noted |





# *Chapter 4*

# IMPROPER PAYMENTS INFORMATION ACT AND RECOVERY AUDIT REPORTING DETAILS







# *Chapter 4* | IMPROPER PAYMENTS INFORMATION ACT AND RECOVERY AUDIT REPORTING DETAILS

To comply with the *Improper Payments Information Act of 2002* and the *Improper Payments Elimination and Reporting Act of 2010*, the NRC incorporated improper payments testing into the FY 2011 A-123 Appendix A assessment. IPERA states that if gross annual improper payments exceed 2.5 percent of program outlays and $10 million, of the program or activity payments made, or $100 million, then a program is susceptible to significant improper payments.

The NRC performed a risk assessment as of March 31, 2011, to determine which programs would be included in the improper payments testing. According to OMB guidance, agencies were not required to review intragovernmental transactions or payments to employees. Therefore, commercial payments and grants payments remained as potential areas to test. As of March 31, 2011, total commercial payments for FY 2011 were $113,982,097 and total grants payments were $6,932,818. The NRC management determined that the testing would be limited to commercial payments as a result of risk-based analysis of susceptibility of payment streams to improper payments.

The NRC selected a sample based on a population of the commercial payments as of May 31, 2011, that was reconciled to the general ledger. A statistician extracted a statistically valid sample of 265 commercial payments totaling $45.4 million that were divided into eight strata. This sample of 265 payments covered 3.4 percent of commercial payments and 32.7 percent of the total dollar value of all commercial payments. The testing was further refined through the identification of sixteen (16) potential error conditions that would cause a payment to be "improper". These error conditions were grouped into three categories: payment amount, payment eligibility, and payment delivery. Test procedures were developed for each error condition.

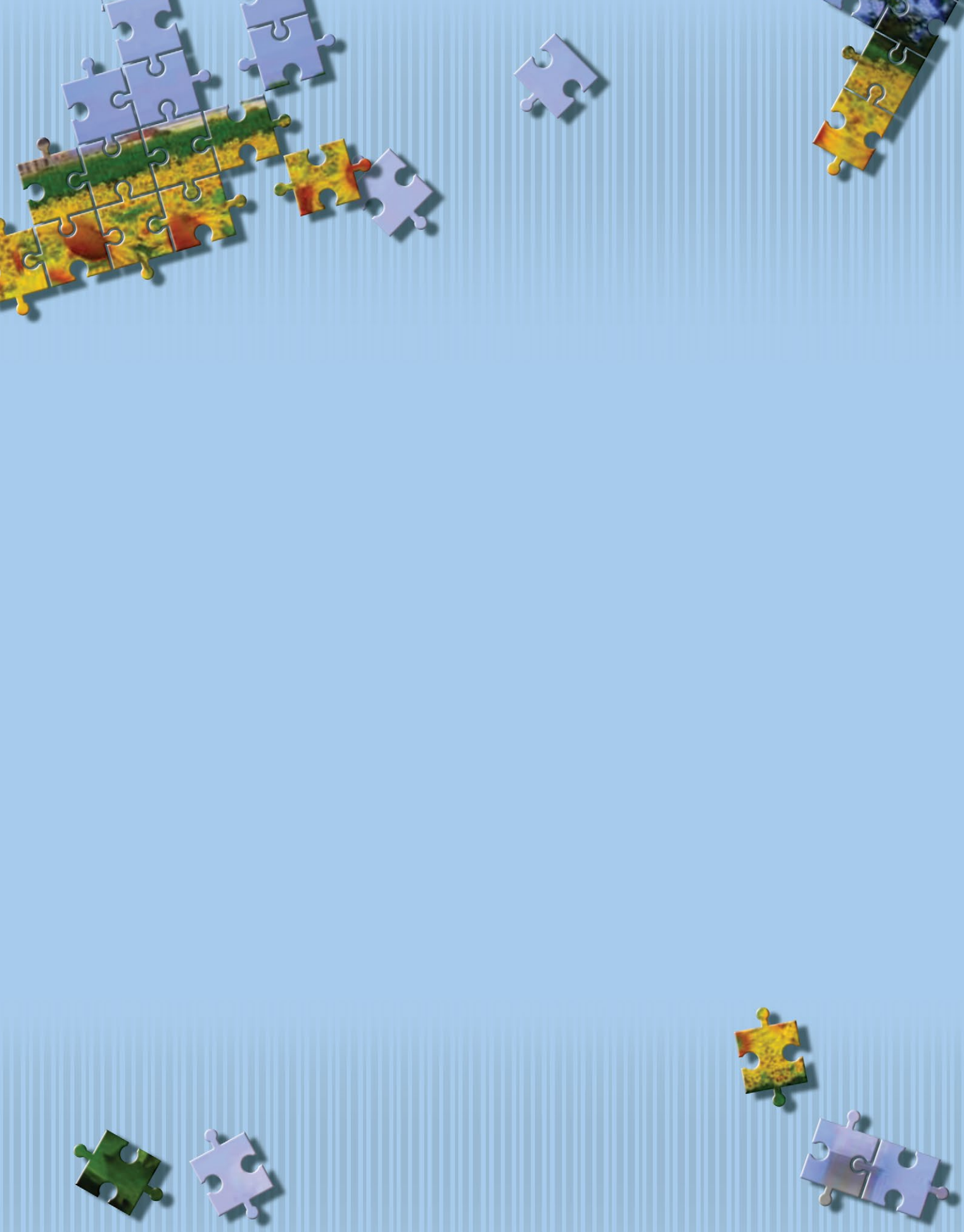
The results of testing identified four instances in which discounts offered by the contractor were not taken, resulting in improper payments of $3,200. Extrapolating the errors to the population resulted in $26,810 in improper payments and an improper payment rate of 0.02 percent for commercial payments in FY 2011. This rate falls well below IPERA's significant improper payment threshold of 2.5 percent of program outlays and $10 million of all program or activity payments made during the fiscal year, or $100 million. Therefore, after discussions with OMB, it was determined that NRC could conduct this testing every 3 years, in accordance with the IPERA and OMB guidance. The next review is scheduled for FY 2014.

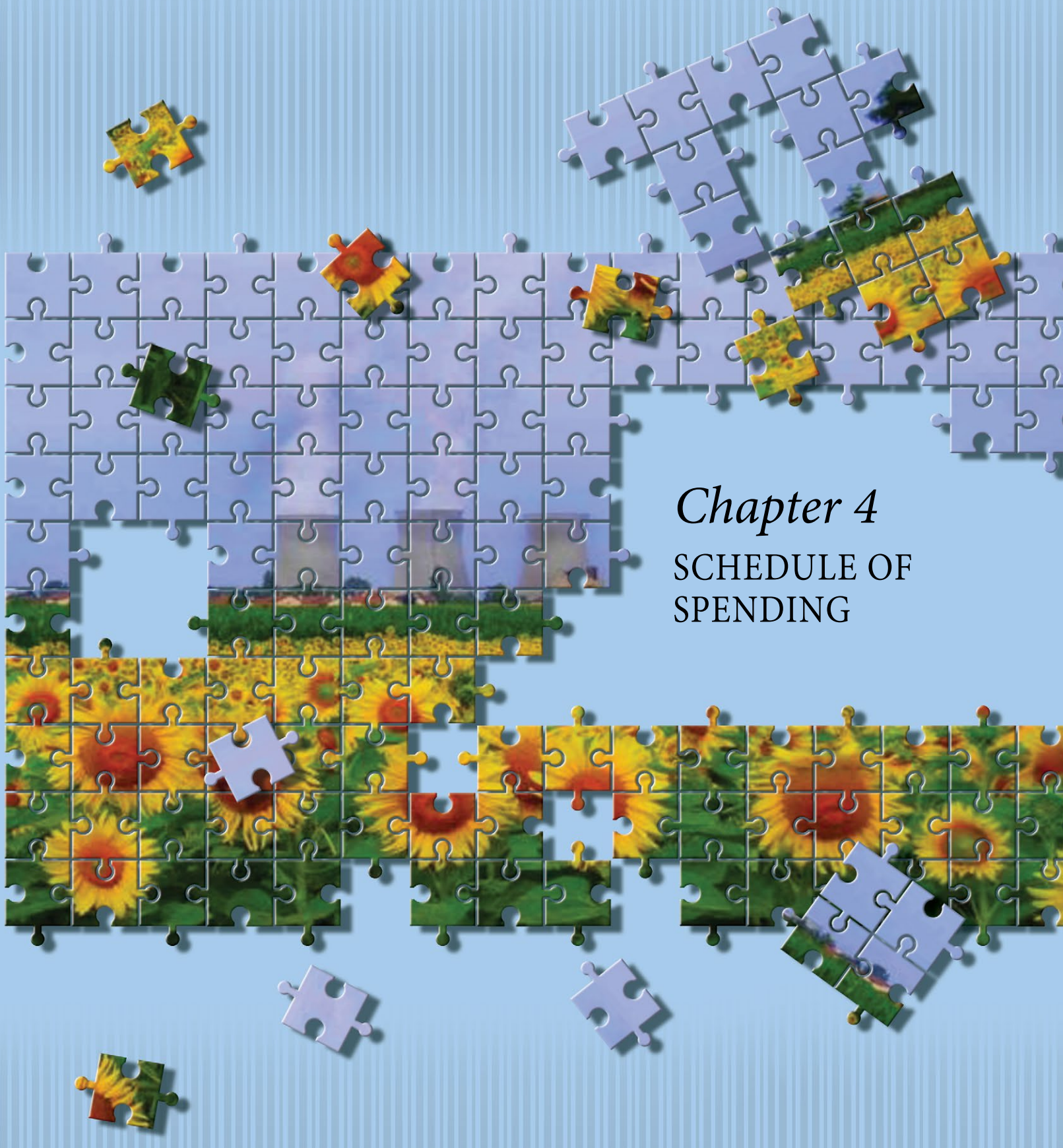
In addition to the testing completed in FY 2011, OCFO staff determined there was $4.2 million in duplicate payments made in July 2013. These errors were identified and corrected. The NRC will continue to monitor its payments in FY 2014 in addition to conducting testing already planned for the year.

Based on the amount of improper payments discovered, $3,200 ($26,810 extrapolated), and the approximate contractor costs of $137,205 for the IPERA testing, the NRC determined that recovery audits are not cost effective. The NRC will continue to monitor improper payments and conduct testing on a 3-year cycle.

**OVERPAYMENTS RECAPTURED OUTSIDE OF PAYMENT RECAPTURE AUDITS**

| Source of Recovery | Amount Identified 2013 | Amount Recovered 2013 | Amount Identified 2012 | Amount Recovered 2012 | Cumulative Amount Identified | Cumulative Amount Recovered |
|---|---|---|---|---|---|---|
| Internal Efforts | $4,200,000 | $4,200,000 | $0 | $0 | $4,200,000 | $4,200,000 |





# *Chapter 4*

# SCHEDULE OF SPENDING







## SCHEDULE OF SPENDING

*(In Thousands)*

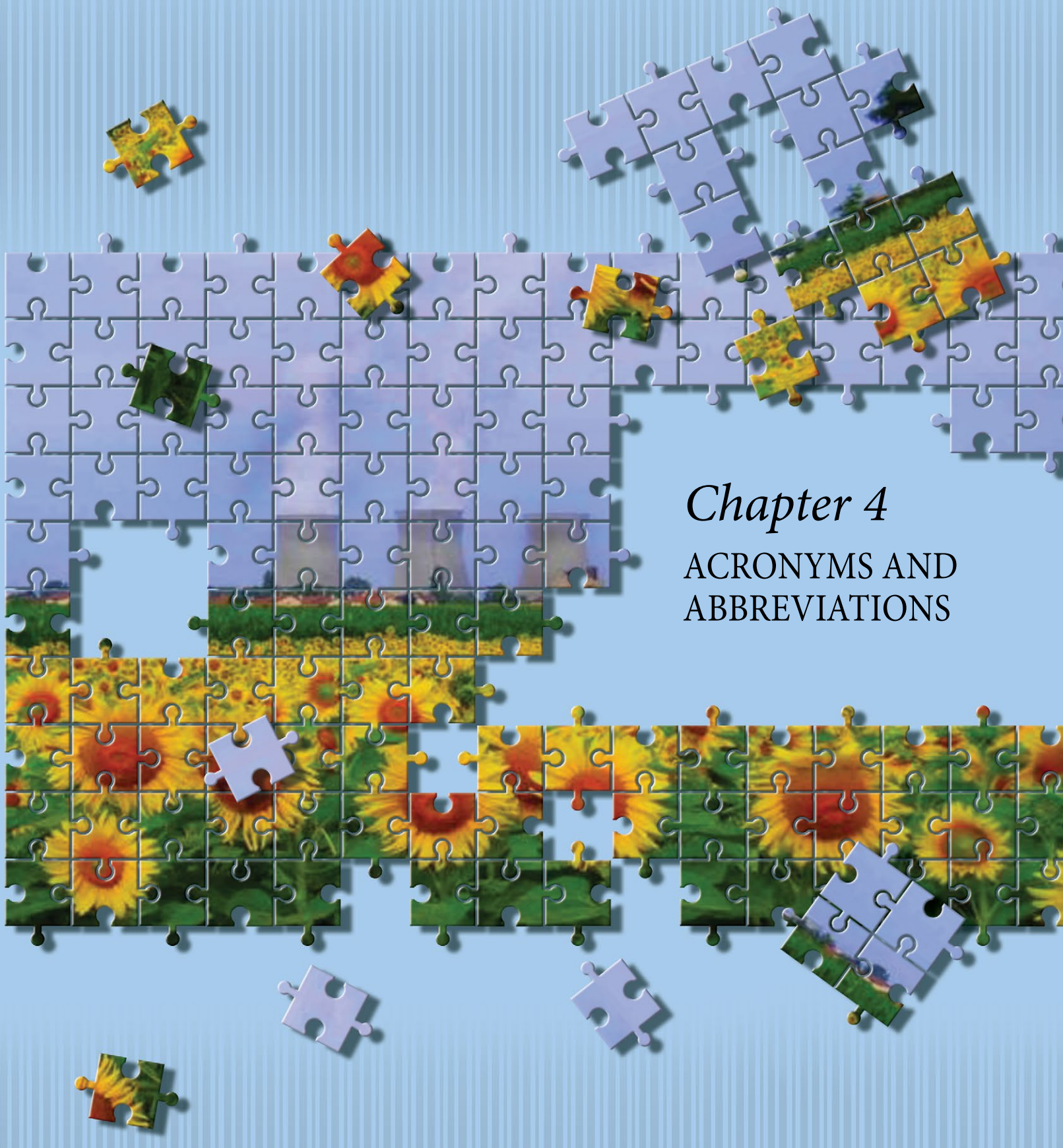
| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| **WHAT MONEY IS AVAILABLE TO SPEND?** | | |
| Total Resources | **$ 1,069,831** | $ 1,108,056 |
| Less Amount Available but Not Agreed to be Spent | **(41,022)** | (61,474) |
| Less Amount Not Available to be Spent | **(1,758)** | (1,430) |
| **Total Amounts Agreed to be Spent** | **$ 1,027,051** | $ 1,045,152 |
| **HOW WAS THE MONEY SPENT?** | | |
| **Spending within NRC Major Programs** | | |
| **Nuclear Reactor Safety and Security** | | |
| Payroll | **$ 463,196** | $ 467,578 |
| Contracts | **257,295** | 239,619 |
| Grants | **11,949** | 20,922 |
| Travel | **18,264** | 21,338 |
| Rent, Communications, and Utilities | **47,583** | 35,572 |
| Structures and Equipment | **4,868** | 32,280 |
| Total money spent for Nuclear Reactor Safety and Security | **803,155** | 817,309 |
| **Nuclear Materials and Waste Safety and Security** | | |
| Payroll | **129,126** | 130,348 |
| Contracts | **71,731** | 66,806 |
| Grants | **3,331** | 5,833 |
| Travel | **5,092** | 5,948 |
| Rent, Communications, and Utilities | **13,265** | 9,916 |
| Structures and Equipment | **1,351** | 8,992 |
| Total money spent for Nuclear Materials and Waste Safety and Security | **223,896** | 227,843 |
| **Total Amounts Agreed to be Spent** | **$ 1,027,051** | $ 1,045,152 |

## Schedule of Spending

*(In Thousands)*

| For the years ended September 30, | 2013 | 2012 |
|---|---|---|
| **WHO DID THE MONEY GO TO?** | | |
| For Profit | **$ 236,663** | $ 230,093 |
| Individuals | **500,746** | 520,878 |
| Federal | **281,328** | 260,209 |
| State & Local Government | **13,210** | 20,675 |
| Other | **(4,896)** | 13,297 |
| **Total Amounts Agreed to be Spent** | **$ 1,027,051** | $ 1,045,152 |

In accordance with OMB Circular A-136 Section 11.5.1, the Schedule of Spending is not a required part of the Financial Statements and, therefore, it is not audited.



# *Chapter 4*

# ACRONYMS AND ABBREVIATIONS





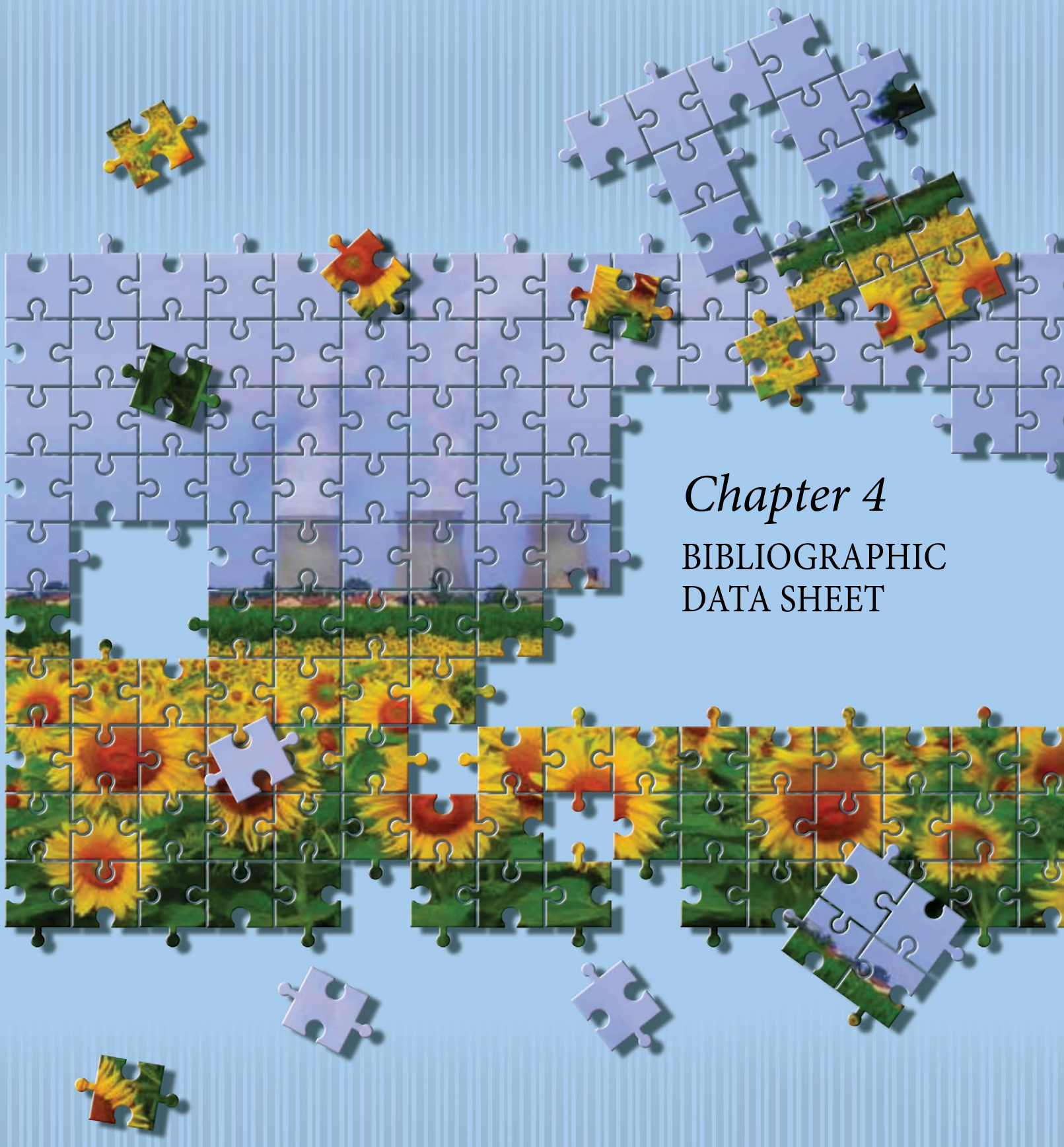


| Acronym | |
|---|---|
| 10 CFR | Title 10 of the *Code of Federal Regulations* |
| ABWR | Advanced Boiling-Water Reactor |
| ACHP | Advisory Council on Historic Preservation |
| ADAMS | Agencywide Documents Access and Management System |
| AGA | Association of Government Accountants |
| AO | Abnormal Occurrence |
| API | application programming interface |
| APT | advanced persistent threat |
| ASME | American Society of Mechanical Engineers |
| ASP | Accident Sequence Precursor |
| BPAS | Business Process Automatic Stack |
| BWR | Boiling-Water Reactor |
| CAP | corrective action program |
| CCDP | conditional core damage probability |
| CFD | computational fluid dynamics |
| CFO | Chief Financial Officer |
| CFR | *Code of Federal Regulations* |
| CFS | Core Financial System |
| CNS | Convention on Nuclear Safety |
| COL | combined license |
| cROP | Construction Reactor Oversight Process |
| CRT | Contingency Response Tool |
| CSRS | Civil Service Retirement System |
| CSS | Content Search Services |
| DC | design certification |
| DHS | U.S. Department of Homeland Security |
| DOE | U.S. Department of Energy |
| DOJ | U.S. Department of Justice |
| DOL | U.S. Department of Labor |
| DOT | U.S. Department of Transportation |
| ECIC | Executive Committee on Internal Control |
| EDO | Executive Director for Operations |
| EEO | equal employment opportunity |
| EPR | Evolutionary Power Reactor |
| EPRI | Electric Power Research Institute |
| ESP | early site permit |

| Acronym | |
|---|---|
| FECA | Federal Employees Compensation Act of 1993 |
| FEIS | final environmental impact statement |
| FEMA | Federal Emergency Management Agency |
| FERS | Federal Employees Retirement System |
| FFMIA | Federal Financial Management Improvement Act of 1996 |
| FICA | Federal Insurance Contributions Act of 1935 |
| FMFIA | Federal Managers' Financial Integrity Act of 1982 |
| FOIA | Freedom of Information Act of 1966 |
| FR | *Federal Register* |
| FTF | F-Tank Farm |
| FY | fiscal year |
| GAAP | Generally Accepted Accounting Principles |
| GAO | Government Accountability Office |
| HRA | human reliability analysis |
| IAEA | International Atomic Energy Agency |
| I&C | instrumentation and controls |
| IEC | International Electrotechnical Commission |
| IG | Inspector General |
| IM | information management |
| IMC | Inspection Manual Chapter |
| IMPEP | Integrated Materials Performance Evaluation Program |
| Integrity Act | Federal Managers' Financial Integrity Act of 1982 |
| IPERA | Improper Payments Elimination and Reporting Act of 2012 |
| IPIA | Improper Payments Information Act of 2002 |
| IPPAS | International Physical Protection Advisory Service |
| IRP | Integrated Response Plan |
| IRRS | Integrated Regulatory Review Service |
| ISA | integrated safety analysis |
| ISG | interim staff guidance |
| ISFSI | independent spent fuel storage installation |
| ISO | International Organization for Standards |

| Acronym | |
|---|---|
| ISR | in-situ recovery |
| IT | information technology |
| ITAAC | inspections, tests, analyses, and acceptance criteria |
| JC | Joint Convention |
| KM | knowledge management |
| LAR | license amendment request |
| LWA | limited work authorization |
| MD | Management Directive |
| MDEP | Multinational Design Evaluation Program |
| MSI | minority serving institution |
| MWe | Megawatt electric |
| MWt | Megawatt thermal |
| NDE | nondestructive examination |
| NEA | Nuclear Energy Agency |
| NFPA | National Fire Protection Association |
| NGNP | Next Generation Nuclear Plant |
| NIST | National Institute of Standards and Technology |
| NPT | Nuclear Non-Proliferation Treaty |
| NRC | U.S. Nuclear Regulatory Commission |
| NUREG | Nuclear Regulatory Commission document identifier |
| NWF | Nuclear Waste Fund |
| OBRA-90 | The Omnibus Budget Reconciliation Act of 1990 |
| OCFO | Office of the Chief Financial Officer |
| OIG | Office of the Inspector General |
| OMB | Office of Management and Budget |
| OPM | U.S. Office of Personnel Management |
| OSART | Operational Safety Review Team |
| PAR | Performance and Accountability Report |
| PC | Portfolio Council |
| PNNL | Pacific Northwest National Laboratory |
| PRA | probabilistic risk assessment |
| PRM | Petition for Rulemaking |
| $RaCl_2$ | radium-223 chloride |

| Acronym | |
|---|---|
| REIRS | Radiation Exposure Information and Reporting System |
| REM | Roentgen Equivalent Man |
| RFCOP | Revised Fuel Cycle Oversight Process |
| RIC | Regulatory Information Conference |
| RIS | Regulatory Issue Summary |
| RMRF | Risk Management Regulatory Framework |
| ROP | Reactor Oversight Process |
| SCIF | secure information conference facility |
| SEIS | supplemental environmental impact statement |
| SDP | Significance Determination Process |
| SECY | Office of the Secretary of the Commission |
| SEIS | supplemental environmental impact statement |
| SER | Safety Evaluation Report |
| SFFAS | Statement of Federal Financial Accounting Standards |
| SMR | small modular reactor |
| SOARCA | State-of-the-Art Reactor Consequence Analyses |
| SONGS | San Onofre Nuclear Generating Station |
| SPID | Screening, Prioritization, and Implementation Details |
| SRM | Staff Requirements Memorandum |
| SRP | Security Review Plan |
| SRS | Savannah River Site |
| TI | Temporary Instructions |
| TVA | Tennessee Valley Authority |
| USAID | U.S. Agency for International Development |
| US-APWR | U.S. Advanced Pressurized Water Reactor |
| WIR | Waste Incidental to Reprocessing |



# *Chapter 4*

# BIBLIOGRAPHIC DATA SHEET

**NRC FORM 335**
(9-2004)
NRCMD 3.7

**BIBLIOGRAPHIC DATA SHEET**

*(See instructions on the reverse)*

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(Assigned by NRC, Add Vol., Supp., Rev., and Addendum Numbers, if any.)
NUREG-1542, Vol. 19

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Fiscal Year 2013
Performance and Accountability Report

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YEAR: 2013

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David Holley, James Coyle, et. al

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7. PERIOD COVERED
Fiscal Year 2013

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Office of the Chief Financial Officer
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

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10. SUPPLEMENTARY NOTES

11. ABSTRACT *(200 words or less)*

The Fiscal Year 2013 Performance and Accountability Report (PAR) presents the agency's program performance and financial management information. The PAR gives the President, Congress, and the American public the opportunity to assess the agency's performance in achieving its mission and the stewardship of its resources.

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# *Chapter 4*

# AVAILABILITY OF REFERENCE MATERIALS IN NRC PUBLICATIONS






# *Chapter 4* | AVAILABILITY OF REFERENCE MATERIALS IN NRC PUBLICATIONS

## NRC Reference Material

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Rockville, MD 20852–2738

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www.ansi.org
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