U.S.NRC

United States Nuclear Regulatory Commission

Protecting People and the Environment

FISCAL YEAR 2016

PERFORMANCE AND ACCOUNTABILITY REPORT

UNITED STATES NUCLEAR REGULATORY COMMISSION

Mission

License and regulate the Nation's civilian use of radioactive materials to protect public health and safety, promote the common defense and security, and protect the environment.

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Commissioner Kristine L. Svinicki

Chairman Stephen G. Burns

Commissioner Jeffrey Baran

The Fiscal Year 2016 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) 2016. This report presents 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 on how we used our resources during FY 2016. The report is available at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1542/.

As an independent regulatory agency, the NRC conducts oversight of the Nation's 99 operating nuclear reactors, 31 research and test reactors, and the six reactors in decommissioning. The NRC continued to review all safety aspects of new reactor designs, environmental siting, combined license applications, and provided oversight for the four nuclear reactors under construction during FY 2016. Further, the agency focused on the safe and secure use of nuclear materials in the medical, and industrial sectors through effective oversight of fuel facilities, uranium recovery sites, decommissioning sites, spent nuclear fuel sites, and nuclear material user licensees.

As a regulator of the nuclear industry, NRC must be trusted in our decision-making process. To achieve this objective, the NRC makes decisions openly and provides clear explanations of our conclusions so the public can understand our actions. Additionally, the NRC works to consistently apply the concept of reasonable assurance of adequate protection to our actions consistent with our statutory authority delineated in the *Atomic Energy Act of 1954*.

The NRC achieved its mission and met all of its strategic goals, objectives, and performance indicator targets in FY 2016. Examples of key NRC FY 2016 regulatory accomplishments included: (1) resolution of multiple Fukushima lessons-learned activities; (2) completing many significant licensing actions, including issuing the construction permit for a first-of-a-kind medical isotope production facility; (3) overseeing the safe startup of Watts Bar Unit 2, the first nuclear power plant to begin commercial operations in 20 years; and (4) completing multiple Project Aim activities designed to improve NRC effectiveness and efficiency and better position the agency to respond to future challenges.

The NRC is committed to good governance and the prudent management of its resources. I am also pleased to report that the NRC effectively managed its internal control environment during FY 2016. Based on the *Federal Manager's Financial Integrity Act of 1982* (FMFIA) assessments, I have concluded 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 am very impressed by the performance and dedication of NRC employees in achieving the agency's safety and security goals and look forward to continuing to provide the high-quality service the American people have come to expect from us.

Stephen G. Burns
Chairman
November 1, 2016

2015 Awards

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United States Nuclear Regulatory Commission
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FISCAL YEAR 2015
Performance and Accountability Report
UNITED STATES NUCLEAR REGULATORY COMMISSION
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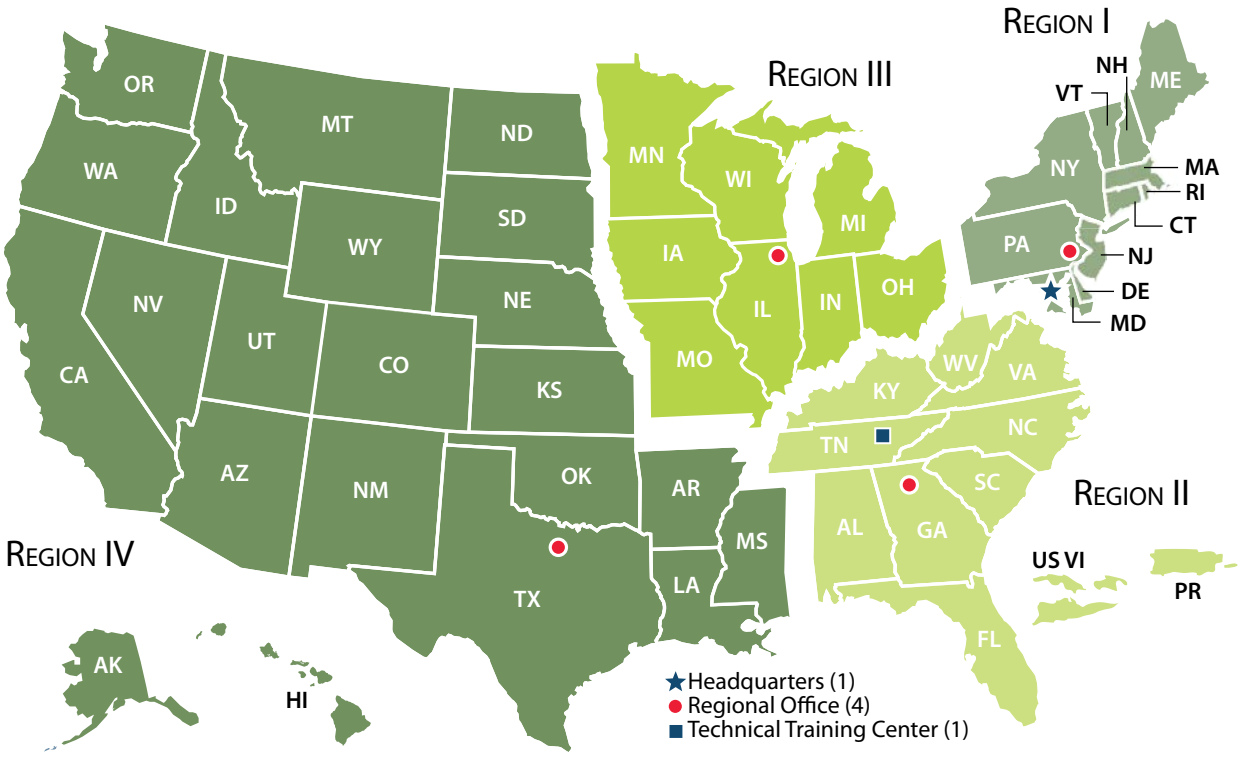
CERTIFICATE OF EXCELLENCE IN ACCOUNTABILITY REPORTING®
Presented to the
U.S. Nuclear Regulatory Commission
In recognition of your outstanding efforts in preparing the agency's Performance and Accountability Report for the fiscal year ended September 30, 2015.
A Certificate of Excellence in Accountability Reporting is presented by AGA to federal government agencies whose annual Performance and Accountability Reports achieve the highest standards demonstrating accountability and communicating results.
Robert F. Dacey, CGFM, CPA
Chair, Certificate of Excellence in Accountability Reporting Board
Ann M. Ebberts, MS, PMP
Chief Executive Officer, 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 (NRC) Performance and Accountability Report (PAR) is an account of the agency's effectiveness in achieving its mission during fiscal year (FY) 2016. The report describes the agency's program and financial management performance during FY 2016, which covers the period from October 1, 2015 to September 30, 2016.

The agency has two strategic goals: Safety and Security. The agency achieved both its Safety and Security goals and met all of its performance indicator targets in FY 2016.

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 unmodified audit opinion on its financial statements from 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 2016. Chapter 2, "Program Performance," describes in detail the agency's success in meeting its goals and describes 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 information 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 our Web site at www.nrc.gov to access this report online (http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1542/) 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. (At the end of FY 2016, two of the five Commissioner positions were vacant.) The Chairman is the chief 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 agency 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 staff the Operations Center 24 hours a day, 7 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 the agency's licensees to ensure safety. The NRC also employs at least two resident inspectors at each of the Nation's nuclear power reactor, new reactor, and fuel fabrication sites.

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The

Commissioner
Vacant

Commissioner

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Executive Director, Advisory Committee on Reactor Safeguards

Andrea Veil

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

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Director, Office of Commission Appellate Adjudication

Brooke Poole Clark

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Eugene Dacus

Director, Office of Public Affairs

David Castelveter

Director, Office of Small Business and Civil Rights

Pamela Baker

Chief Information Officer

David Nelson

Assistant for Operations

Robert lewis

Deputy Executive Director for Reactor and Preparedness Programs

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Regional Administrator Region I

Daniel H. Dorman

Regional Administrator Region II

Catherine Haney

Regional Administrator Region III

Cynthia D. Pederson

Regional Administrator Region IV

Kriss M. Kennedy

Director, Office of New Reactors

Vonna Ordaz (Acting)

Director, Office of Nuclear Security and Incident Response

Brian E. Holian

Director, Office of Nuclear Reactor Regulation

William M. Dean

Commission

Chairman

Stephen G. Burns

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Jeff Baran

Commissioner

Vacant

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.

Chief Financial Officer

Maureen E. Wylie

Inspector General

Hubert T. Bell

General Counsel

Margaret M. Doane

Director, Office of International Programs

Nader L. Mamish

Secretary of the Commission

Annette L. Vietti-Cook

Executive Director for Operations

Victor M. McCree

Deputy Executive Director for Materials, Waste, Research, State, Tribal, Compliance, Administration and Human Capital Programs

Glenn M. Tracy

Director, Office of Nuclear Regulatory Reseach

Michael F. Weber

Director, Office of Enforcement

Patricia K. Holahan

Director, Office of Nuclear Material Safety and Safeguards

Marc L. Dapas

Director, Office of Investigations

Kimberly Howell

Director, Office of Administration

Cynthia A. Carpenter

Chief Human Capital Officer

Miriam L. Cohen

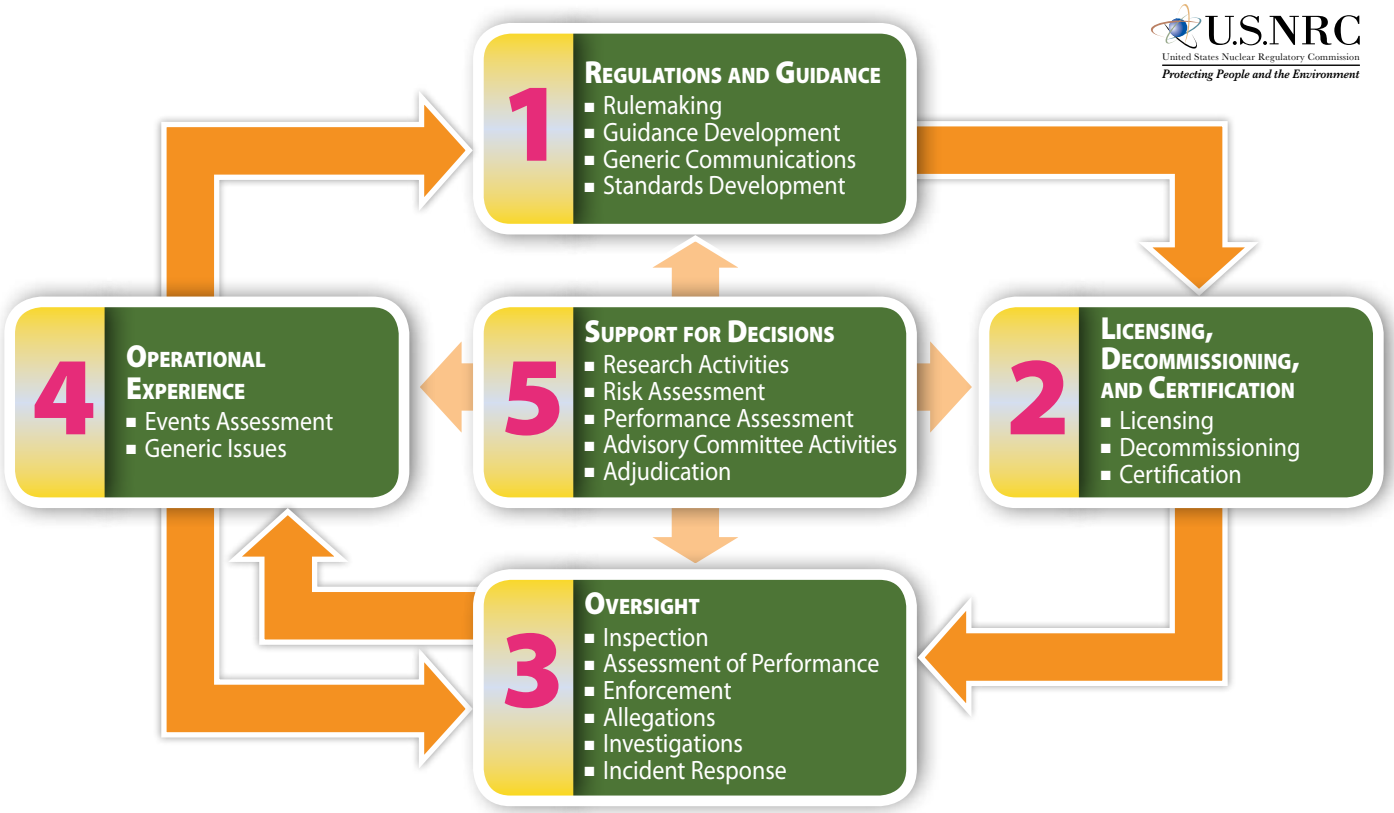
The NRC's budget, which includes the Office of the Inspector General (OIG), for FY 2016 was $1,002.1 million, with a full-time equivalent staff ceiling of 3,595. The NRC is primarily supported by fees collected from its licensees. The agency collected $869.1 million (approximately 90 percent) of its budget from licensees, with the remaining funds provided by the U.S. Treasury.

The NRC's Regulatory Activities

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, construct new 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).

The standards and regulations established by the agency set the rules that users of radioactive materials must

Figure 1 – How We Regulate



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 licensees comply with NRC requirements, responding to incidents, investigating allegations of wrongdoing 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.

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 (one reactor began operation in FY 2016) operating nuclear power plants. In addition, the agency oversees approximately 2,700 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 17,300 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 fuel cycle (see Figure 2). The nuclear material cycle begins with the mining and production of nuclear fuel or the use of 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 fuel cycle.

Figure 2 – The Nuclear Fuel Cycle

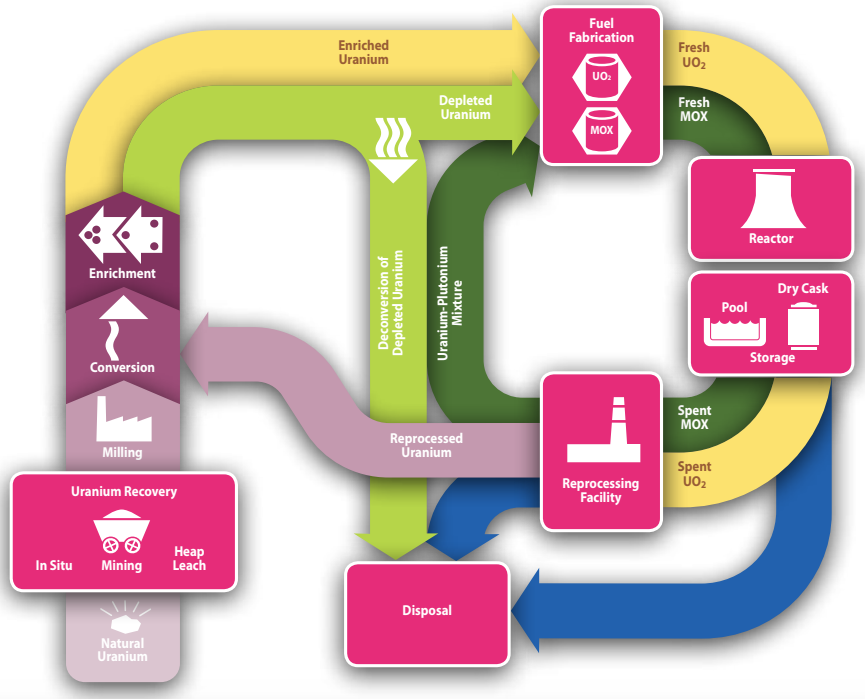


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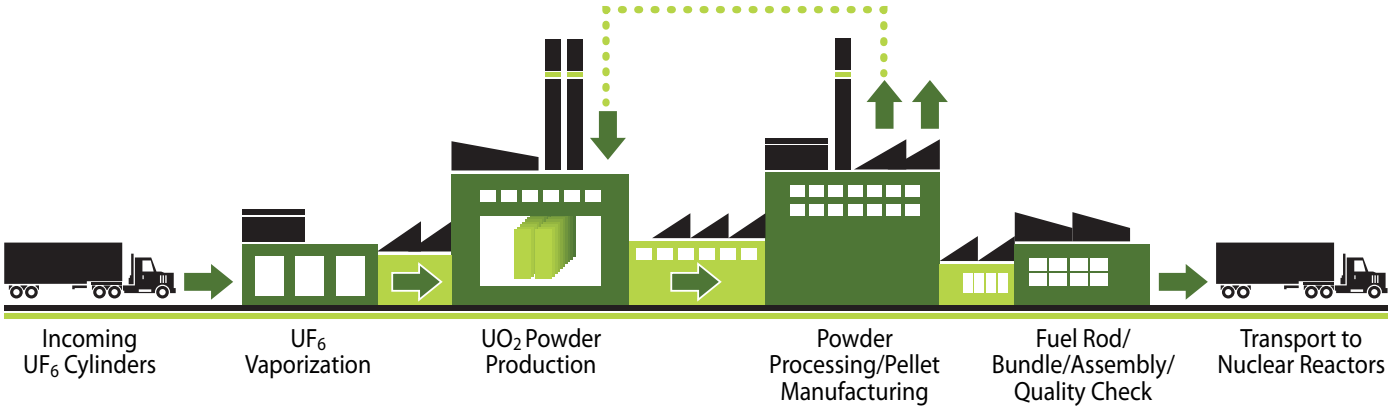
Figure 3 – Simplified Fuel Fabrication Process



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

(1) the chemical conversion of uranium hexafluoride (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

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 gas and loaded into cylinders. The cylinders are sent to a gaseous diffusion plant, 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 3). 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

To generate electricity, 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. 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. Heat energy is not produced by 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, which generates electricity. The radiation energy can be hazardous, and facilities take special precautions at nuclear power plants to protect people and the environment from these hazards (see Figures 4 and 5).

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

Figure 4 – The Boiling-Water Reactor (BWR)

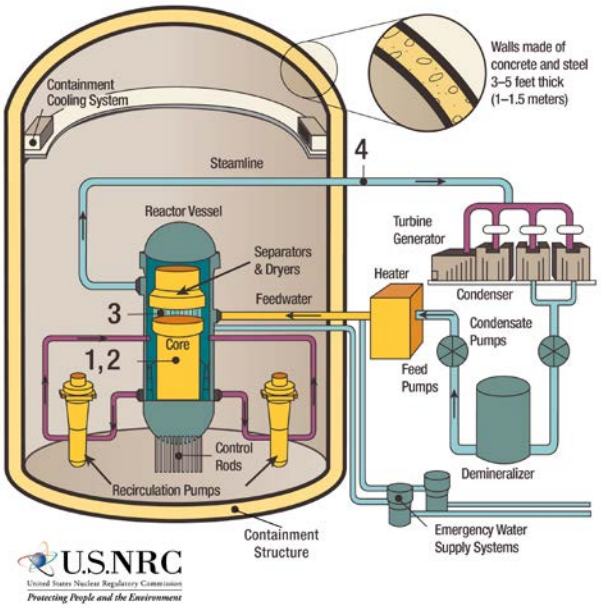
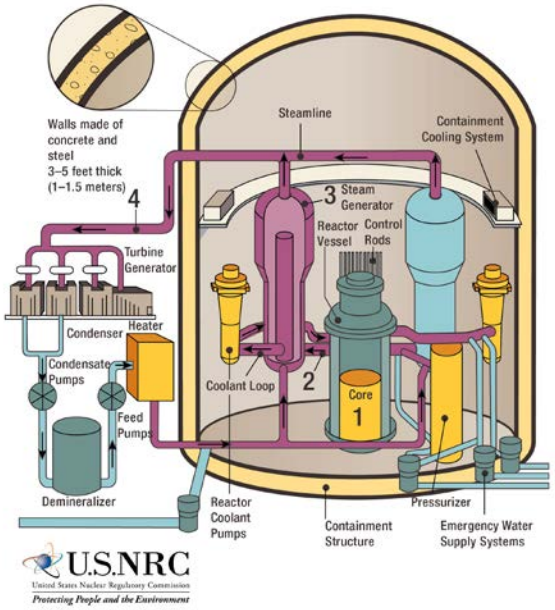


Figure 5 – The Pressurized-Water Reactor (PWR)



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, 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, 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

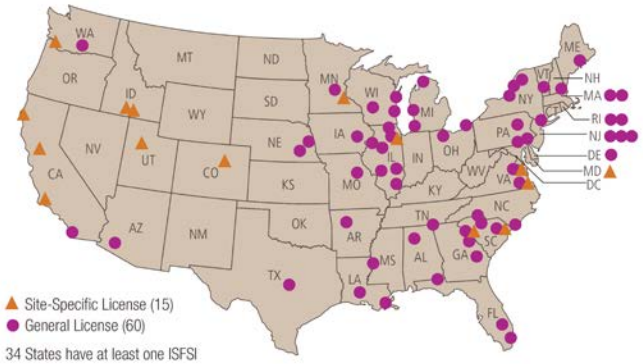
During normal operations, a nuclear power plant generates both high-level radioactive waste, which consists of used fuel (usually called spent fuel), and low-level radioactive waste, which includes contaminated equipment, filters, maintenance materials, and resins used in purifying water for the reactor 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.

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

Figure 6 – Licensed and Operating Independent Spent Fuel Storage Installations by State



▲ Site-Specific License (15)
● General License (60)
34 States have at least one ISFSI

ALABAMA
● Browns Ferry
● Farley

ARIZONA
● Palo Verde

ARKANSAS
● Arkansas Nuclear

CALIFORNIA
▲ Diablo Canyon
▲ Rancho Seco
● San Onofre
▲ Humboldt Bay

COLORADO
▲ Fort St. Vrain

CONNECTICUT
● Haddam Neck
● Millstone

FLORIDA
● St. Lucie
● Turkey Point

GEORGIA
● Hatch
● Vogtle

IDAHO
▲ DOE: TMI-2 (Fuel Debris)
▲ DOE: Idaho Spent Fuel Facility

ILLINOIS
● Braidwood
● Byron
▲ GE Hitachi Morris (Wet)
● Dresden
● La Salle
● Quad Cities
● Zion

IOWA
● Duane Arnold

LOUISIANA
● River Bend
● Waterford

MAINE
● Maine Yankee

MARYLAND
▲ Calvert Cliffs

MASSACHUSETTS
● Yankee Rowe
● Pilgrim

MICHIGAN
● Big Rock Point
● Palisades
● Cook
● Fermi

MINNESOTA
● Monticello
▲ Prairie Island

MISSISSIPPI
● Grand Gulf

MISSOURI
● Callaway

NEBRASKA
● Cooper
● Ft. Calhoun

NEW HAMPSHIRE
● Seabrook

NEW JERSEY
● Hope Creek
● Salem
● Oyster Creek

NEW YORK
● Indian Point
● FitzPatrick
● Ginna
● Nine Mile Point

NORTH CAROLINA
● Brunswick
● McGuire

OHIO
● Davis-Besse
● Perry

OREGON
▲ Trojan

PENNSYLVANIA
● Limerick
● Susquehanna
● Peach Bottom
● Beaver Valley

SOUTH CAROLINA
● ▲ Oconee
● ▲ Robinson
● Catawba

TENNESSEE
● Sequoyah

TEXAS
● Comanche Peak

UTAH
▲ Private Fuel Storage

VERMONT
● Vermont Yankee

VIRGINIA
● ▲ Surry
● ▲ North Anna

WASHINGTON
● Columbia

WISCONSIN
● Point Beach
● Kewaunee
● LaCrosse

Data as of July 2015. NRC-abbreviated site names listed. For the most recent information, go to the Dataset Index Web page at http://www.nrc.gov/reading-rm/doc-collections/datasets/

As of July 2015

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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.

FY 2016 Performance Results

The NRC's FY 2014 – 2018 Strategic Plan describes the agency's mission, goals, and strategies. The Strategic

Plan can be found on the NRC Web site at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1614/v6/. The agency's two strategic goals are focused on Safety and Security. The Safety goal is to *Ensure the safe use of radioactive materials.* The Security goal is to *Ensure the secure use of radioactive materials.*

With the implementation of the Strategic Plan, the agency developed new performance indicators that are more in line with the Plan. Because the nature of the agency's Safety and Security strategic objectives is to prevent or minimize undesirable outcomes, the desired trends for all of its performance indicators are to either maintain these outcomes at zero or at very low levels.

STRATEGIC GOAL 1

Ensure the safe use of radioactive materials.

STRATEGIC OBJECTIVE

Strategic objectives express more specifically the results that are needed to achieve a strategic goal. The strategic objective for Goal 1 is:

Prevent and mitigate accidents and ensure radiation safety.

Minimizing the likelihood of accidents and reducing the consequences of an accident (should one occur) are the key elements for achieving the NRC's safety goal. Such accidents, particularly for large complex facilities like nuclear power plants, have the potential to release significant amounts of radioactive material to the environment and expose facility workers and the public to high levels of radiation. Even in the absence of accidents, radiological hazards exist during routine operations, and the NRC ensures that measures are in place to minimize exposure for workers and the public and prevent unintended releases of radioactive materials to the environment.

FY 2016 RESULTS

In FY 2016, the NRC achieved its safety goal strategic objective. The NRC uses six performance indicators to determine whether it has met its Safety goal. The agency met all six performance indicator targets in FY 2016. Table 1 on pages 13 and 14 shows the outcomes from FY 2011 – FY 2014.

The cost of achieving the agency's Safety goal in FY 2016 was $970.2 million.

SAFETY PERFORMANCE INDICATORS: FY 2015 - FY 2016

The purpose behind the NRC's performance indicators is to prevent or minimize undesirable outcomes. Therefore, the trends indicating the agency's success in accomplishing its mission would be at or near zero.

The following performance indicators were developed in conjunction with the development of the agency's FY 2014–2018 Strategic Plan. More information on the abnormal occurrence (AO) criteria is found in the *Data Sources, Data Quality, and Data Security* section of this chapter.

Safety Objective 1: ***Prevent and mitigate accidents and ensure radiation safety.***

Performance Goal 1: Prevent radiation exposures that significantly exceed regulatory limits.

Performance Indicator: Number of radiation exposures that meet or exceed AO criteria I.A.1 (unintended radiation exposure to an adult), I.A.2 (unintended radiation exposure to a minor), or I.A.3 (radiation exposure that has resulted in unintended permanent functional damage to an organ or physiological system).[1]

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
Operating Reactors	0	0	0	0
New Reactors	0	0	0	0
Fuel Facilities	0	0	0	0
Decommissioning and Low-Level Waste	0	0	0	0
Spent Fuel Storage and Transportation	0	0	0	0
Nuclear Materials Users	≤3	1*	≤3	2

**Reported in the FY 2015 Performance and Accountability Report and the FY 2017 Congressional Budget Justification as 2 due to one event previously labeled as an AO that was reclassified as not meeting the AO threshold upon further investigation.*

[1] *All references to the AO criteria in this section refer to the definitions in Appendix A of the "Report to Congress on Abnormal Occurrences: Fiscal Year 2015," NUREG-0090, Volume 38, published May 2016.*

Discussion: This indicator tracks the effectiveness of the NRC's nuclear safety regulatory programs, in part through the number of significant radiation exposures to the public and occupational workers that exceed AO criteria. This indicator tracks exposures from both nuclear reactors and other nuclear materials use, such as hospitals and industrial users. Only two such significant exposures took place during FY 2016 under the Nuclear Materials Users business line; this is less than the target of three. Incidents of this nature would be included in the NRC's annual report to Congress on AOs, the latest version of which is available at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0090/v38/.

Performance Goal 2: Prevent releases of radioactive materials that significantly exceed regulatory limits.

Performance Indicator: Number of releases of radioactive materials that meet or exceed AO criterion I.B (discharge or dispersal of radioactive material from its intended place of confinement, which results in releases of radioactive material).

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
Operating Reactors	0	0	0	0
New Reactors	0	0	0	0
Fuel Facilities	0	0	0	0
Decommissioning and Low-Level Waste	0	0	0	0
Spent Fuel Storage and Transportation	0	0	0	0
Nuclear Materials Users	0	0	0	0

Discussion: This indicator tracks the effectiveness of the NRC's nuclear material 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 rem in a year, exclusive of dose contributions from background radiation. In FY 2016, there were no releases of this nature.

Performance Goal 3: Prevent the occurrence of any inadvertent criticality events.

Performance Indicator: Number of instances of unintended nuclear chain reactions involving NRC-licensed radioactive materials.

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
Operating Reactors	0	0	0	0
Fuel Facilities	0	0	0	0
Decommissioning and Low-Level Waste	0	0	0	0

Discussion: This indicator tracks the effectiveness of the NRC's criticality safety regulatory programs through the number of unintended self-sustaining nuclear reactions occurring within a fiscal year. Intended criticality events include the startup of a nuclear power reactor. There were no inadvertent criticality events during FY 2016.

Performance Goal 4: Prevent accident precursors and reductions of safety margins at commercial nuclear power plants (operating or under construction) that are of high safety significance.

Performance Indicator: Number of malfunctions, deficiencies, events, or conditions at commercial nuclear power plants (operating or under construction) that meet or exceed AO criteria II.A-II.D (events at commercial nuclear power plant licensees).

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
Operating Reactors	≤3	0	≤3	0
New Reactors	≤3	0	≤3	0

Discussion: The NRC's Reactor Oversight Process (ROP) monitors nuclear power plant performance in three areas: (1) reactor safety, (2) radiation safety, and (3) security. Analysis of individual plant performance is based on both licensee-submitted performance indicators and NRC inspection findings, which are independent assessments of licensee performance that the NRC conducts as the regulatory authority. Each issue is evaluated and assigned one of four categories in order of increasing significance: green, white, yellow, or red. When the rating is higher

(more severe), the NRC applies a greater level of oversight. A red finding or performance indicator is the most severe rating and signals a significant reduction in the safety margin in the measured area. No red findings were issued in FY 2016.

Performance Goal 5: Prevent accident precursors and reductions of safety margins at nonreactor facilities or during transportation of nuclear materials that are of high safety significance.

Performance Indicator: Number of malfunctions, deficiencies, events, or conditions at nonreactor facilities or during transportation of nuclear materials that meet or exceed AO criteria III.A or III.B (events at facilities other than nuclear power plants and all transportation events).

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
Fuel Facilities	0	0	0	0
Decommissioning and Low-Level Waste	0	0	0	0
Spent Fuel Storage and Transportation	0	0	0	0

Discussion: This indicator tracks the effectiveness of NRC's regulatory safety programs for nonreactor facilities or during transportation of nuclear materials through the number of instances in which safety margins at nonreactor facilities are at unacceptable levels. No occurrences of this nature took place during FY 2016.

Table 1 – FY 2011-2014 Safety Performance Indicators

Goal—Safety: Ensure the safe use of radioactive materials

1 Number of New Conditions Evaluated as Red by the NRC's Reactor Oversight Process						
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	≤ 3	≤ 3	≤ 3	≤ 3	Replaced by Safety Performance Goal 4	
Actual	1	1	0	0		

2 Number of Significant Accident Sequence Precursors (ASPs) of a Nuclear Reactor Accident						
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	≤ 0	≤ 0	≤ 0	≤ 0	Replaced by Safety Performance Goal 4	
Actual	0	0	0	0		

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						
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	≤ 3	≤ 3	≤ 3	≤ 3	Replaced by Safety Performance Goal 4	
Actual	2	1	0	0		

4 Number of Significant Adverse Trends in Industry Safety Performance is ≤ 1						
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	≤ 1	≤ 1	≤ 1	≤ 1	Replaced by Safety Performance Goal 5	
Actual	0	0	0	0		

Table 1 – FY 2011-2014 Safety Performance Indicators (continued)

Goal—Safety: Ensure the safe use of radioactive materials

5 Number of Events with Radiation Exposures to the Public or Occupational Workers That Exceed Abnormal Occurrence (AO) Criterion I.A.3							
		FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Reactors	Target	0	0	0	0	Replaced by Safety Performance Goal 1	
Reactors	Actual	0	0	0	0		
Materials	Target	≤ 2	≤ 2	≤ 2	≤ 2	Replaced by Safety Performance Goal 1	
Materials	Actual	0	0	0	0		
Waste	Target	0	0	0	0	Replaced by Safety Performance Goal 1	
Waste	Actual	0	0	0	0		

6 Number of Radiological Releases to the Environment That Exceed Applicable Regulatory Limits							
		FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Reactors	Target	0	0	0	0	Replaced by Safety Performance Goal 2	
Reactors	Actual	0	0	0	0		
Materials	Target	≤ 2	≤ 2	≤ 2	≤ 2	Replaced by Safety Performance Goal 2	
Materials	Actual	0	0	0	0		
Waste	Target	0	0	0	0	Replaced by Safety Performance Goal 2	
Waste	Actual	0	0	0	0		

SAFETY GOAL STRATEGIES

The agency used the following safety strategies from its strategic plan to guide its activities and to achieve its safety goal in FY 2016:

Safety Strategy 1: Enhance the NRC's regulatory programs as appropriate using lessons learned from domestic and international operating experience and other sources.

Safety Strategy 2: Enhance the risk-informed and performance-based regulatory framework in response to advances in science and technology, policy decisions, and other factors.

Safety Strategy 3: Ensure the effectiveness and efficiency of licensing and certification activities to maintain both quality and timeliness of licensing and certification reviews.

Safety Strategy 4: Maintain effective and consistent oversight of licensee performance to drive continued licensee compliance with NRC safety requirements and license conditions.

Safety Strategy 5: Ensure the NRC's readiness to respond to incidents and emergencies involving NRC-licensed facilities and radioactive materials and other events of domestic and international interest.

Safety Strategy 6: Ensure that nuclear facilities are constructed in accordance with approved designs and that there is an effective transition from oversight of construction to oversight of operation.

Safety Strategy 7: Ensure that the environmental and site safety regulatory infrastructure is adequate to support the issuance of new nuclear licenses.

FUKUSHIMA REGULATORY REVIEW

The NRC's efforts to implement the lessons learned from the Fukushima Dai-ichi accident in March 2011 continued during FY 2016. 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 for ensuring 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."

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

STRATEGIC GOAL 2

Ensure the secure use of radioactive materials.

STRATEGIC OBJECTIVES

Strategic objectives more specifically express the results that are needed to achieve a strategic goal. The strategic objectives for Goal 2 are the following two statements in bold text.

1. Ensure protection of nuclear facilities and radioactive materials.

Protecting nuclear facilities and radioactive materials are key elements for achieving the NRC's security goal. Nuclear facilities and materials are protected against hostile intent by two primary means: (1) control of access to facilities and materials; and (2) accountability controls for radioactive materials. These controls are intended to prevent those with hostile intent from either damaging a nuclear facility in such a way that a significant release of radioactive materials to the environment occurs, or obtaining enough radioactive material for malevolent use.

2. Ensure protection of classified and Safeguards Information

Protecting classified and Safeguards Information is another key contributor to achieving the agency's security goal. This is accomplished primarily by controlling access to this information to ensure that potential adversaries cannot use it for malevolent purposes, such as sabotage, theft, or diversion of radioactive materials.

The strategic objectives specify the conditions that must be met for the agency to ensure the secure use of radioactive materials.

FY 2016 RESULTS

In FY 2016, the NRC achieved its Security goal strategic objectives. The NRC also uses three Security goal performance indicators to determine whether the agency has met its security goal. The agency met all three performance indicator targets in FY 2016. Outcomes from FY 2011 – FY 2014 are in Table 2 on pages 16 and 17.

The cost of achieving the agency's Security goal was $45.2 million in FY 2016.

SECURITY PERFORMANCE INDICATORS: FY 2015 - FY 2016

Security Objective 1: Ensure protection of nuclear facilities and radioactive materials.

Performance Goal 1: Prevent sabotage, theft, diversion, or loss of risk-significant quantities of radioactive material.

Performance Indicator: Number of instances of sabotage, theft, diversion, or loss of risk-significant quantities of radioactive material that meet or exceed AO criteria I.C.1 (unrecovered lost, stolen, or abandoned sources), I.C.2 (substantiated case of actual theft or diversion), and the portion of criterion I.C.3 (substantiated loss of a formula quantity) concerning theft or diversion of special nuclear material.

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
All Business Lines	0	0	0	0

Discussion: This indicator measures the agency's effectiveness at preventing sabotage, theft, diversion, or loss of risk-significant quantities of radioactive material through tracking any loss or theft of radioactive nuclear sources that the NRC has determined to be of significant risk. The indicator also measures the agency's performance in ensuring the proper accounting for radioactive sources of significant risk that could be used

for malicious purposes. It also measures 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 and whether special nuclear material (SNM) is accounted for, and that formula-quantity losses of this material do not occur. No such incidents took place during FY 2016.

Performance Goal 2: Prevent substantial breakdowns of physical security, cyber security, or material control and accountability.

Performance Indicator: Number of substantial breakdowns of physical security, cyber security, or material control and accountability that meet or exceed AO criterion I.C.4 (substantial breakdown of physical security or materials control that will include breakdowns of cyber security) and the portion of AO criterion I.C.3 (substantiated loss of a formula quantity) concerning breakdowns of the accountability system for special nuclear material.

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
All Business Lines	≤ 1	0	≤ 1	0

Discussion: This indicator measures the agency's effectiveness in maintaining security by tracking any substantial breakdowns in access control, containment, or accountability systems that significantly weakened the protection against theft, diversion, or sabotage for nuclear materials that the agency has determined to be of significant risk. In FY 2016, there were no incidents of this nature.

Security Objective 2: Ensure protection of classified and Safeguards Information (SGI).

Performance Goal 3: Prevent significant unauthorized disclosures of classified or SGI.

Performance Indicator: Number of significant unauthorized disclosures of classified or SGI by licensees as defined by AO criterion I.C.5 and by NRC employees or contractors as defined by analogous NRC internal criteria.

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
All Business Lines	0	0	0	0

Discussion: This indicator includes significant unauthorized disclosures of classified or Safeguards Information that cause damage to national security or public safety. This indicator reflects whether information that can harm national security (classified information) or cause damage to the public health and safety (SGI) has been protected sufficiently to prevent its disclosure to terrorist organizations, other nations, or personnel without a need to know. No significant unauthorized disclosures occurred in FY 2016.

Table 2 – FY 2011-2014 Security Performance Indicators

Goal: Security: Ensure secure use of radioactive materials

1 Unrecovered Losses of Risk-Significant Radioactive Sources						
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	0	0	0	0	0	Replaced by Security Performance Goal 1
Actual	1*	0	0	0	0	

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

Table 2 – FY 2011-2014 Security Performance Indicators (continued)

Goal: Security: Ensure secure use of radioactive materials

2 Number of Substantiated Cases of Actual Theft or Diversion of Licensed, Risk-Significant Radioactive Sources, or Formula Quantities of Special Nuclear Material or Attacks That Result in Radiological Sabotage						
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	0	0	0	0	0	Replaced by Security Performance Goal 1
Actual	0	0	0	0	0	

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 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	0	0	0	0	0	Replaced by Security Performance Goal 1
Actual	0	0	0	0	0	

4 Number of Substantial Breakdowns of Physical Security or Material Control (i.e., Access Control, Containment, or Accountability Systems) That Significantly Weakened the Protection against Theft, Diversion, or Sabotage						
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	Replaced by Security Performance Goal 2
Actual	0	0	0	0	0	

5 Number of Significant Unauthorized Disclosures of Classified and/or Safeguards Information						
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target					0	Replaced by Security Performance Goal 3
Actual					0	

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 2016:

Security Strategy 1: Ensure the effectiveness and efficiency of the regulatory framework using information gained from operating experience and external and internal assessments and in response to technology advances and changes in the threat environment.

Security Strategy 2: Maintain effective and consistent oversight of licensee performance to drive continued licensee compliance with NRC security requirements and license conditions.

Security Strategy 3: Support U.S. national security interests and nuclear nonproliferation policy objectives within NRC's statutory mandate through cooperation with domestic and international partners.

Security Strategy 4: Ensure material control and accounting for special nuclear materials.

Security Strategy 5: Protect critical digital assets.

Security Strategy 6: Ensure timely distribution of security information to stakeholders and international partners.

Security Strategy 7: Ensure that programs for the handling and control of classified and Safeguards Information are effectively implemented at the NRC and at licensee facilities.

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, maintaining this excellent safety record requires that the agency take a proactive approach to accomplishing its mission. The key challenges that the agency faces as the regulator of nuclear materials are to ensure the safe and secure use of radioactive materials in areas where the NRC regulates.

MARKET PRESSURES ON OPERATING PLANTS AND LICENSE APPLICATIONS

Market forces result in pressures to reduce operating costs. As a result, the NRC needs to be prepared to address potential shutdowns of facilities before license expiration and to continue to ensure that oversight programs identify degrading facility safety and security performance. Conversely, the lower capital costs of small modular reactors (under 300 megawatts) may offer industry a more attractive option to add new capacity. Several entities are seeking to submit license applications for small modular reactors in the next several years. The Department of Energy (DOE) is funding a program "to design, certify and help commercialize innovative small modular reactors (SMRs) in the United States." The NRC is developing a licensing framework for these as well as other advanced reactors.

SIGNIFICANT OPERATING INCIDENT AT A NON-U.S. NUCLEAR FACILITY

A significant incident at a nuclear facility outside the United States could cause the agency to reassess its safety and security requirements, which could change the agency's focus on some initiatives related to its objectives until the situation stabilizes.

SIGNIFICANT OPERATING INCIDENT AT A DOMESTIC NUCLEAR FACILITY

A significant incident at a U.S. nuclear facility could cause the agency to reassess its safety and security requirements, which could change the agency's focus on some initiatives related to its objectives until the situation stabilizes. Because the NRC's stakeholders are highly sensitive to many issues regarding the use of radioactive materials, even events of relatively minor safety significance could potentially require a response that consumes considerable agency resources.

INTERNATIONAL NUCLEAR STANDARDS DEVELOPMENTS

International organizations, such as the International Atomic Energy Agency (IAEA), will continue to develop and issue standards and guidance affecting global commitments to nuclear safety and security. To ensure that the best results are achieved both domestically and internationally, the NRC needs to proactively engage in these international initiatives and to provide leadership in a cooperative and collegial manner.

INTERNATIONAL TREATIES AND CONVENTIONS

As part of the international response to lessons learned from the Fukushima Dai-ichi nuclear accident in Japan, the international nuclear regulatory community is reviewing the Convention on Nuclear Safety. As one of the contracting parties to the Convention, the NRC is a member of the working group that is reviewing the Convention. Likewise, the NRC participates in the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

The ratification by the United States of international instruments related to the security of nuclear facilities or radioactive materials could potentially impose binding provisions on the Nation and the corresponding governmental agencies, such as the NRC and the DOE.

GLOBALIZATION OF THE NUCLEAR TECHNOLOGY AND THE NUCLEAR SUPPLY CHAIN

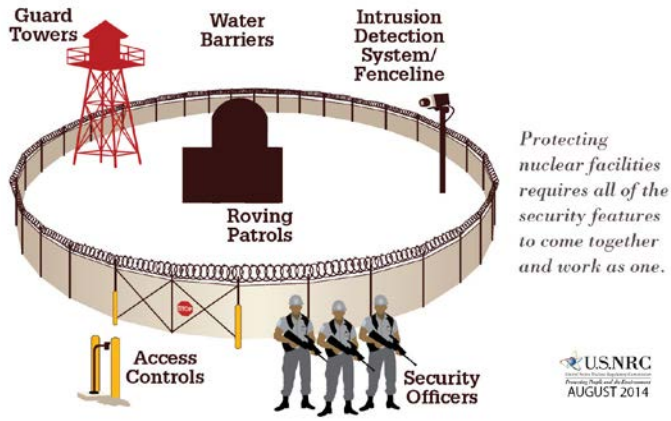
Components for nuclear facilities are increasingly manufactured overseas, resulting in challenges of providing effective oversight to ensure that these components are in compliance with NRC requirements. In addition, the continuing globalization of nuclear

technology is driving the need for increasing international engagement on the safe and secure use of radioactive material.

SIGNIFICANT TERRORIST INCIDENT

A sector-specific credible threat or actual significant terrorist incident anywhere in the United States would result in the Department of Homeland Security (DHS) raising the threat level under the National Terrorism Advisory System (NTAS). In turn, the NRC would similarly elevate the oversight and response stance for NRC-regulated facilities and licensees. Potentially, new or revised security requirements or other policy decisions might affect the NRC, its partners, and the regulated community (see Figure 7). In a similar fashion, a significant terrorist incident at a nuclear facility or activity anywhere in the world would need to be assessed domestically and potentially lead to a modification of existing security requirements for NRC-regulated facilities and licensees.

Figure 7 – Security Components



LEGISLATIVE AND EXECUTIVE BRANCH INITIATIVES

Congressional and Executive Branch initiatives concerning cyber security may potentially impact the NRC's regulatory framework for nuclear security. If the NRC were to become concerned about an aspect of a bill or policy initiative that had been introduced, the staff would consult the Commission to develop a strategy for making such concerns known.

LOST, MISPLACED, INTERCEPTED, OR DELAYED INFORMATION

With the increased use of mobile devices and alternative storage options, the introduction of new communication technologies, and the increased use of telecommunication, there is a heightened risk that sensitive information held by the NRC or its licensees can be lost, misplaced, or intercepted and fall into the hands of unauthorized persons.

PROJECT AIM

Given the effort to improve performance in government, coupled with increased demands on the NRC's resources, the agency is challenged to become more effective, efficient, and timely in its regulatory activities. The NRC's effectiveness initiatives under Project Aim enable the agency's focus on safety and security and ensure that its available resources are optimally directed toward accomplishing the agency's mission. The agency has made significant progress implementing Project Aim tasks that will make the NRC more agile, effective, and efficient in accomplishing its mission for the foreseeable future.

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. More information on the abnormal occurrence criteria may be found at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0090/v38/. "Data Collection Procedures for Verification and Validation of Performance Measures," contains the processes the agency uses to collect, validate, and verify performance data in this report. This report can be found on page 15 of the NRC's FY 2017 Congressional Budget Justification located on the NRC Web site NRC: (NUREG-1100, Volume 32).

Financial Performance Overview

The NRC prepared its principal 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, 2016, the financial condition of the NRC was sound with respect to having sufficient funds to meet program needs and adequate control of these funds in place to ensure obligations did not exceed budget authority.

SOURCES OF FUNDS

Total Budget Authority *(In Millions)*

For the fiscal years ended September 30,	2016	2015
Appropriations		
Salaries and Expenses	**$ 990.0**	$ 1,003.2
Office of the Inspector General	**12.1**	12.1
Total Appropriations	**1,002.1**	1,015.3
Other Budget Authority		
Prior-years Appropriations	**17.3**	40.4
Prior-years Funding for Reimbursable Work	**7.9**	8.3
Prior-years Funding from DOE*	**2.8**	4.8
Spending Authority from Offsetting Collections	**4.8**	4.6
Recoveries of Prior-year Unpaid Obligations	**8.9**	5.0
Recoveries of Prior-year Paid Obligations	**0.2**	3.4
Total Other Budget Authority	**41.9**	66.5
Total NRC Budget Authority	**$ 1,044.0**	$ 1,081.8

**DOE funding for NRC activities associated with the Nuclear Waste Policy Act of 1982, as amended.*

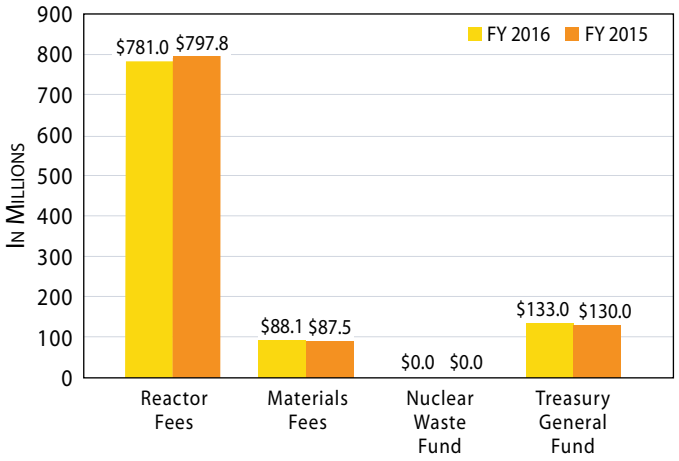
Appropriations. The NRC received two appropriations: (1) for Salaries and Expenses and (2) for the Office of the Inspector General (OIG). The FY 2016 total appropriations were $1,002.1 million, which included $990.0 million for the Salaries and Expenses appropriation and $12.1 million for the OIG.

The NRC's Salaries and Expenses appropriation decreased $13.2 million compared to the prior-year. The appropriation for the OIG stayed at the same level.

The Salaries and Expenses appropriation is available until expended. This includes a provision that not more than $7.5 million be made available for the Office of the Commission as a 2-year (FY 2016/2017) appropriation that is available for obligation by the NRC through September 30, 2017. After September 30, 2017, the remaining funds which have not been obligated for the Office of the Commission are available until expended as part of the Salaries and Expenses appropriation. The OIG appropriation is available to obligate for 2 years (FY 2016/2017) by the OIG through September 30, 2017. This 2-year funding includes $1.0 million for Inspector General (IG) services to be provided to the Defense Nuclear Facilities Safety Board (DNFSB).

The *Omnibus Budget Reconciliation Act of 1990* (OBRA-90), as amended, requires the NRC to collect fees to offset approximately 90 percent of its appropriation, excluding amounts appropriated for Waste Incidental to Reprocessing (WIR), generic homeland security, and IG services for the DNFSB. Funds equal to fees collected are transferred to the NRC's two appropriations, and Treasury issues a negative warrant for the amount of the fee transfer to reduce the NRC's appropriations.

Figure 8 – Sources of Funds for Appropriations



The projected amount to be recovered from fees in FY 2016 was $882.9 million, which included $883.4 million from FY 2016 reactor and materials fees, less $0.5 million from other fees (unpaid current-year invoices and a prior-year billing credit for the Transportation Fee Class; and offset by payments of prior-year invoices in FY 2016). The NRC collected and transferred $869.1 million to the Treasury (see Figure 8), which represents 98.4 percent of the approximately $882.9 million projected to be recovered in FY 2016. The fees collected during FY 2015 and transferred to the Treasury totaled $911.5 million and included $885.3 million transferred for FY 2015 (see Figure 8) and $26.2 million transferred in early FY 2015 for FY 2014.

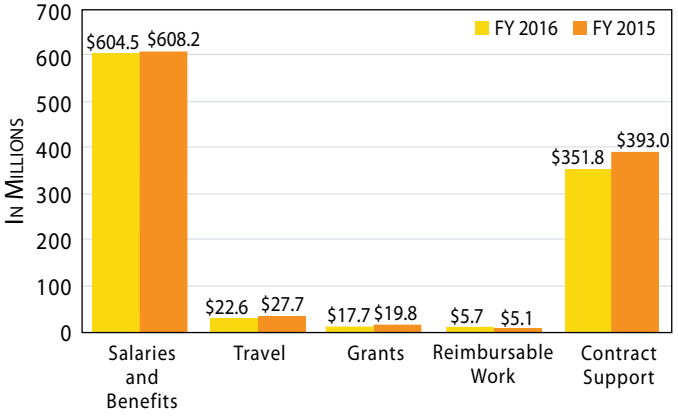
Total Budget Authority. The total budget authority available for the NRC to obligate in FY 2016 was $1,044.0 million and included $1,002.1 million for appropriations, $17.3 million of prior-year appropriations, $7.9 million from prior-year funding for reimbursable work, $2.8 million of prior-year funding for resources received from the DOE to fund the NRC activities associated with the *Nuclear Waste Policy Act of 1982*, $4.8 million from FY 2016 spending authority from offsetting collections (reimbursable work performed for other Federal agencies and commercial customers), $8.9 million of recoveries of prior-year unpaid obligations, and $0.2 million of recoveries of prior-year paid obligations. Funds available to obligate in FY 2016 decreased from the FY 2015 amount of $1,081.8 million by $37.8 million primarily due to decreases of $13.2 million in appropriations, and decreases in the beginning unobligated balances brought forward of $25.5 million.

USES OF FUNDS BY FUNCTION

Funds are used when the NRC incurs obligations against budget authority. Obligations are legally binding agreements that will result in an outlay of funds.

The NRC incurred obligations of $1,002.3 million in FY 2016, which represented a decrease of $51.5 million from FY 2015 (see Figure 9). Approximately 60 percent of obligations in FY 2016 were used for salaries and benefits. The remaining 40 percent were used to obtain technical assistance for the NRC's principal regulatory programs, to conduct confirmatory safety research, to cover operating expenses (e.g., building rentals, transportation, printing, security services, supplies, office automation, and training), and to pay for staff travel.

Figure 9 – Uses of Funds *(Obligations)*



The unobligated budget authority at the end of FY 2016 was $41.6 million which was a $13.6 million increase from the FY 2015 amount of $28.0 million. Of the $41.6 million unobligated balance at the end of FY 2016, $7.0 million was for reimbursable work, $1.4 million was

for the NWF, $4.3 million was for special purpose funds, and $28.9 million was available to fund critical needs of the NRC in FY 2017. The $28.0 million unobligated balance at the end of FY 2015 included $7.9 million for reimbursable work, $2.8 million for the NWF, $4.2 million for special purpose funds, and $13.1 million to fund critical needs of the NRC in FY 2016.

AUDIT RESULTS

The NRC received an unmodified audit opinion on its FY 2016 financial statements and internal controls. The auditors found no reportable instances of noncompliance with laws and regulations during the FY 2016 audit.

A summary of the financial statement audit results is included in Chapter 3, "Financial Statements and Auditor's Report."

LIMITATIONS ON THE FINANCIAL STATEMENTS

The principal 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 the 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 activity and financial 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,	2016	2015
Fund Balance with Treasury	$ 368.2	$ 353.8
Accounts Receivable, Net	86.2	96.0
Property and Equipment, Net	80.8	79.1
Other Assets	14.2	11.3
Total Assets	$ 549.4	$ 540.2

Assets. The NRC's total assets were $549.4 million as of September 30, 2016, representing an increase of $9.2 million from the same period of FY 2015. Changes in major categories include increases of $14.4 million in the Fund Balance with Treasury, $1.7 million in Property and Equipment, Net, and $2.9 million in Other Assets; offset by a decrease of $9.8 million in Accounts Receivable, Net.

The Fund Balance with Treasury was $368.2 million as of September 30, 2016, which accounts for 67 percent of total assets. This account represents appropriated funds, license fee collections, and other funds maintained at the Treasury to pay current liabilities and to finance authorized purchase commitments. The $14.4 million increase in the fund balance is primarily the result of a decrease of $23.6 million in the beginning balance, and a decrease of $13.2 million in appropriations, offset by a decrease in net disbursements (outlays) of $51.2 million, which primarily consists of decreases in salaries and benefits of $10.3 million, $5.7 million for travel and transportation, and $35.2 million for contract services and equipment.

Accounts receivable consists of amounts that other Federal agencies and the public owe to the NRC for license fees. Accounts Receivable, Net, as of September 30, 2016 was $86.2 million, which includes an offsetting allowance for doubtful accounts of $3.9 million. For FY 2015, the year-end Accounts Receivable, Net, balance was $96.0 million, including an offsetting allowance for doubtful accounts of $2.2 million. The net decrease in accounts receivable from the prior year of $9.8 million is primarily due to a decrease of $3.3 million for license fees due from other Federal agencies and $6.5 million for license fees due from the public.

Property and Equipment consists 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 U.S. General Services Administration (GSA).) At the end of FY 2016, net property and equipment was $80.8 million, an increase of $1.7 million from the FY 2015 amount of $79.1 million. The increase is primarily due to an increase of $8.3 million in capitalized software under development; offset by decreases in the net realizable value (original cost less accumulated amortization and depreciation) of $2.1 million for completed software in operation, $0.4 million for equipment, and $4.1 million for completed leasehold improvements and leasehold improvements-in-process.

Liabilities Summary *(In Millions)*

As of September 30,	2016	2015
Accounts Payable	$ 30.9	$ 37.0
Federal Employee Benefits	5.6	6.0
Other Liabilities	91.5	84.9
Total Liabilities	$ 128.0	$ 127.9

Liabilities. Total liabilities were $128.0 million as of September 30, 2016, representing an increase of $0.1 million from the FY 2015 balance of $127.9 million. Accounts Payable, Federal Employee Benefits, and Other Liabilities remained approximately the same as the prior year. For FY 2016, Other Liabilities represents 71 percent of the Total Liabilities and includes $43.7 million in accrued annual leave, $24.8 million in accrued funded salaries and benefits, $15.8 million in grants payable, $4.9 million in advances received by the NRC for services that will be provided, $1.4 million in accrued workers' compensation, and $0.9 million in contract holdbacks, capital lease liability, and miscellaneous liabilities.

Total liabilities include 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 $50.7 million for FY 2016, compared to $54.1 million for FY 2015, a $3.4 million decrease. For FY 2016 the liabilities not covered by budgetary resources represented 40 percent of Total Liabilities and included $43.7 million in unfunded accrued annual leave that has been earned but not yet taken, $1.4 million in accrued workers' compensation included in Other Liabilities, and $5.6 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,	2016	2015
Unexpended Appropriations	$ 297.5	$ 283.2
Cumulative Results of Operations	123.9	129.1
Total Net Position	$ 421.4	$ 412.3

Net Position. The difference between Total Assets and Total Liabilities, Net Position, was $421.4 million as of September 30, 2016, an increase of $9.1 million from the FY 2015 year-end balance. Net Position is comprised of two components: Unexpended Appropriations and Cumulative Results of Operations, the cumulative excess of financing sources over expenses. Additional information is presented in the Analysis of the Statement of Changes in Net Position on pages 24 and 25.

ANALYSIS OF THE STATEMENT OF NET COST

The Statement of Net Cost presents the gross cost of the NRC's two major programs (Nuclear Reactor Safety and Nuclear Materials and Waste Safety) 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, 2016 was $151.3 million, representing a decrease of $31.3 million compared to the FY 2015 net cost of $182.6 million. This includes a decrease in gross costs of $68.1 million and a decrease in earned revenue of $36.8 million, which offset costs.

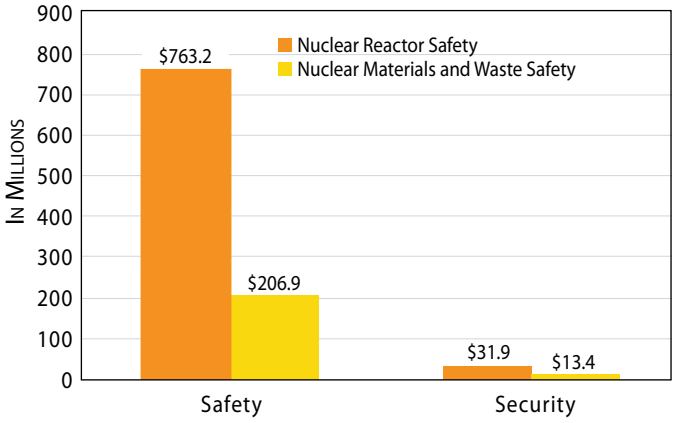
Net Cost of Operations *(In Millions)*

For the fiscal years ended September 30,	2016	2015
Nuclear Reactor Safety	$ 25.3	$ 24.4
Nuclear Materials and Waste Safety	126.0	158.2
Net Cost of Operations	$ 151.3	$ 182.6

Gross Costs. The NRC's total gross costs were $1,015.4 million for FY 2016, a decrease of $68.1 million from the prior-year amount of $1,083.5. The Nuclear Reactor Safety program gross costs for FY 2016 were $795.2 million compared to FY 2015 gross costs of $838.7 million, a decrease of $43.5 million, which includes decreases of $34.0 million for contract services and $9.5 million in salaries and benefits. The Nuclear Materials and Waste Safety program gross costs for FY 2016 were $220.2 million compared to FY 2015 gross costs of $244.8 million, a decrease of $24.6 million, which includes decreases of $20.1 million for contract services and $4.5 million in salaries and benefits.

The cost of achieving the agency's Safety and Security goals for the agency's programs for FY 2016 is the gross cost presented in the Statement of Net Cost. The total cost for achieving the agency's Safety goal was $970.2 million and the cost of achieving the agency's Security goal was $45.2 million. (see Figure 10).

Figure 10 – Gross Costs by Strategic Goals for the Fiscal Year Ended September 30, 2016



Earned Revenue. Total earned revenue for FY 2016 was $864.0 million, a decrease of $36.8 million from the FY 2015 earned revenue of $900.8 million. Revenue for the Nuclear Reactor Safety program in FY 2016 was $769.8 million compared to $814.3 million in FY 2015, a decrease of $44.5 million. The $44.5 million decrease is primarily due to decreases of $50.7 for Operating Reactors licensing fees offset by an increase of $5.8 million for New Reactor licensing fees. Revenue from the Nuclear Materials and Waste Safety program in FY 2016 was $94.2 million compared to $86.6 million in FY 2015, an increase of $7.6 million.

Fees collected (earned primarily in FY 2016) and offset against the NRC appropriations were $869.1 million compared to $911.5 million in FY 2015. The decrease of $42.4 million in license fee collections was the result of a decrease of $16.2 million in current year license fee collections and $26.2 million of prior year license fees collected in the first week of FY 2015 and offset against the NRC prior year appropriations. The NRC is required to collect approximately 90 percent of its appropriation 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 (SCNP) reports the change in net position for the reporting period. Net position is affected by the changes in two components: Cumulative Results of Operations and Unexpended Appropriations. In FY 2016, the NRC had an increase in Net Position of $9.1 million resulting from a decrease of $5.2 million in the Cumulative Results of Operations and an increase of $14.3 million in the Unexpended Appropriations.

The SCNP and the following analysis reflects offsetting adjustments made to the beginning balances for FY 2016 Cumulative Results of Operations and Unexpended Appropriations. The FY 2016 beginning balance of Cumulative Results of Operations was adjusted upward by $3.2 million for prior year license fee transfers recorded to the Office of the Commission two-year accounts that were originally classified as appropriated capital. The FY 2016

beginning balance of Unexpended Appropriations was adjusted downward by $3.2 million.

The decrease in Cumulative Results of Operations of $5.2 million was primarily comprised of a decrease in the adjusted beginning balance of $24.6 million, and a decrease in financing sources of $11.9 million; offset by a decrease of $31.3 million in the net cost of operations. The decrease in financing sources was due to decreases of $11.3 million in appropriations used to finance current operations and $0.6 million in imputed financing for the future cost of employee retirement, health insurance, and life insurance benefits. The decrease in the net cost of operations was due to a decrease of $68.1 million in the gross costs, offset by a decrease of $36.8 million in earned revenue.

The change in Unexpended Appropriations results from appropriations received, net of license fee collections, being more or less than the appropriations used to finance the NRC operations. The increase in FY 2016 Unexpended Appropriations of $14.3 million is due to an increase of $29.3 million in appropriations received, net of license fees collected, and a decrease of $11.3 million in appropriations used to finance the NRC operations; offset by a decrease in the adjusted beginning balance of $26.3 million. The increase in appropriations received, net of license fees collected, is due to appropriations received for FY 2016 of $1,002.1 million, reduced by current year license fee collections of $869.1 million; compared to appropriations received in FY 2015 of $1,015.3 million, reduced by FY 2015 license fee collections of $885.3 million and FY 2014 license fee collections of $26.2 million.

ANALYSIS OF THE STATEMENT OF BUDGETARY RESOURCES

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

The Total Budgetary Resources available in FY 2016 were $1,043.9 million, which was $37.9 million less than the $1,081.8 million available for FY 2015. The two major components of Total Budgetary Resources consists of the beginning unobligated balance brought forward, October 1, and the NRC's current year appropriations. The beginning unobligated balance for FY 2016 was $28.0 million compared to the beginning unobligated balance in FY 2015 of $53.5 million, a decrease of $25.5 million. The NRC's appropriations were $1,002.1 million in FY 2016 compared to $1,015.3 million in FY 2015, accounting for a $13.2 million decrease in funding. The other decreases in funding were recoveries from prior-year paid obligations of $3.2 million; offset by increases in recoveries of prior-year unpaid obligations of $3.8 million and spending authority from offsetting collections for reimbursable work of $0.2 million.

The Status of Budgetary Resources accounts for operational activities funded with NRC's budgetary resources during the fiscal year. The NRC's obligations for FY 2016 totaled $1,002.3 million, a decrease of $51.5 million from the prior-year amount of $1,053.8 million. The decrease is primarily due to decreases in contract obligations of $19.9 million for the Nuclear Reactor Safety program and $8.9 million for the Nuclear Materials and Waste Safety program; $11.8 million in additional expenditures for the acquisition of equipment and software, leasehold improvements to the NRC Headquarters office buildings, and rent related expenses; $5.1 million in Travel expenses, $3.7 million in Salaries and Benefits, and $2.1 million for grants.

The Status of Budgetary Resources also accounts for the funds that were not used in operations during the fiscal year. Total budgetary resources not obligated at the end of the fiscal year were $41.3 million, an increase of $13.3 million from the prior-year balance of $28.0 million. The primary reason for the increase from the prior-year is a $16.6 million increase in unexpired unobligated budgetary resources that were apportioned by OMB. At the end of FY 2016, unexpired unobligated budgetary resources were $39.9 million compared to $23.3 million at the end of FY 2015. The increase is primarily due to a decrease in apportioned budgetary resources of $34.4 million, offset by a decrease of $51.7 million in Category A obligations incurred in FY 2016. Other unobligated resources at the end of FY 2016 included $1.4 million in NWF, which is exempt from apportionment, and $0.4 million from the Office of the Commission and Office of the Inspector General expired two-year appropriation accounts.

Management Assurances, Systems, Controls, And Legal Compliance

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

FEDERAL MANAGERS' FINANCIAL INTEGRITY ACT

The 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.

ENTERPRISE RISK MANAGEMENT AND PROGRAMMATIC INTERNAL CONTROL

Enterprise Risk Management (ERM) consists of an agency-level approach to having appropriate risk management processes and systems in place to identify risks early, bring them to the attention of agency leadership, and develop solutions. A principal component of ERM is Programmatic Internal Control, which consists of the organization, planning, policy, and procedures that help managers achieve intended results and safeguard the integrity of their programs.

On July 15, 2016, OMB issued a revised A-123, complete with specific ERM requirements for Federal agencies. As a result, the NRC began preliminary work developing an ERM framework for the agency. As a regulatory agency, the NRC has followed ERM and Committee of Sponsoring Organization of the Treadway Commission (COSO) based principles. But to fully comply with ERM requirements, the agency shall implement a strategy based on the following:

Leveraging appropriate agency governance organizations and processes currently in place such as the NRC Internal Control Governance Framework, and the Quarterly Performance Reporting meetings

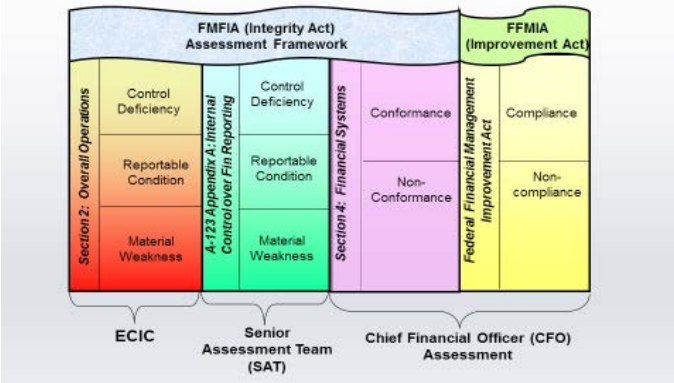
Improving processes and develop solutions where gaps exist

Updating the agency's Internal Control management directive to incorporate ERM

Developing and disseminating ERM and Internal Control awareness training to all NRC management and staff

Incorporating ERM into management's evaluation of NRC's internal control and reasonable assurance processes.

Figure 11 – NRC's FMFIA Governance Framework



Under the current NRC governance framework (see Figure 11), each NRC business line lead prepares an annual assurance certification based on information from all relevant programmatic internal control activities, and activities that have internal control implications, as well as other sources of information provided by the agency's Senior Assessment Team (SAT), and independent audit reports including the Office of the Inspector General Management Challenges and U.S. Government Accountability Office High Risk Reports, and International Atomic Energy Agency reviews and reports. The Executive Committee on Internal Control (the name formally changed to Executive Committee on Enterprise

Risk Management {ECERM} after the issuance of the updated A-123):

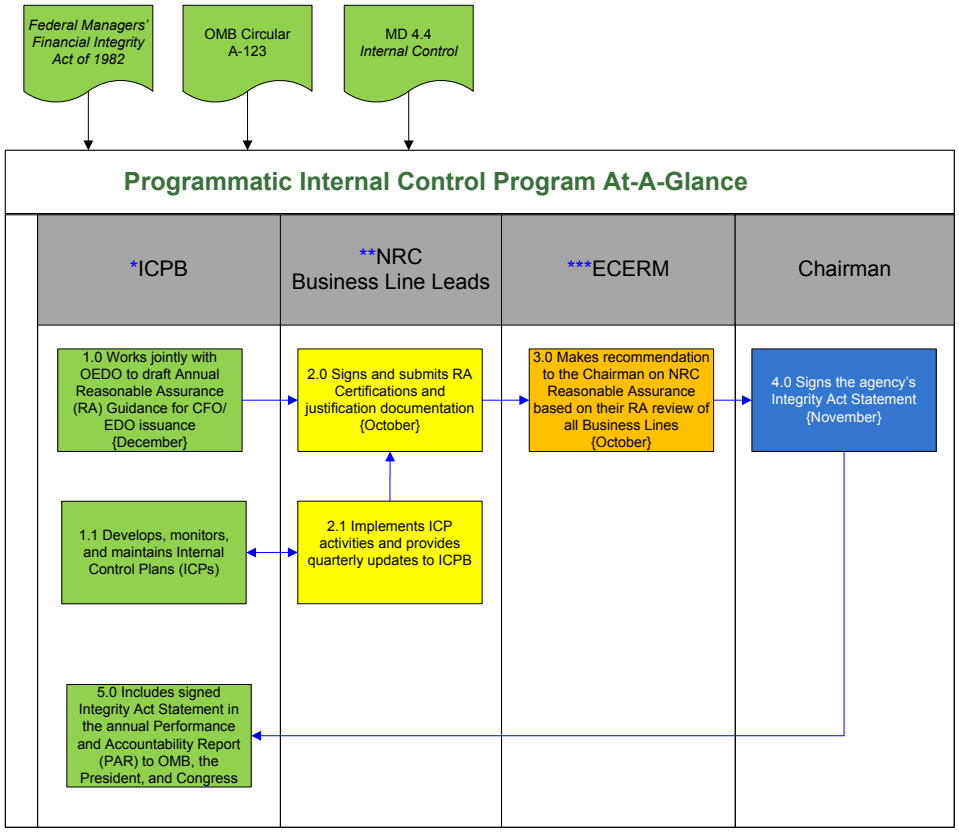
assessed the agencies programmatic operations, financial systems, and internal control over financial reporting

reported to the NRC Chairman that there were no internal control deficiencies serious enough to require reporting as a weakness or noncompliance

and voted to recommend that the Chairman sign the agency's Integrity Act Statement.

The ECERM is chaired by the agency's Executive Director for Operations (EDO) and co-chaired by the Chief Financial Officer (CFO). Members of the ECERM are comprised of senior executives from the Office of the Executive Director for Operations, with the agency's General Counsel and Inspector General serving as advisory members. The SAT is chaired by CFO and is comprised of senior executives from the Office of the Chief Financial Officer as well as the lead senior officials from the agency's corporate support business lines, i.e., the Chief Human Capital Officer, Chief Information Officer, and the Office of Administration, which includes the agency's Division of Acquisitions. Figure 12 is a high-level graphical overview of the entities and processes the NRC uses to support reasonable assurance.

Figure 12 – NRC Programmatic Internal Control Program



*Internal Control and Planning Branch (ICPB) of OCFO supports the overall risk assessment and reasonable assurance process

**NRC Business Line Lead is the NRC Office Director of the responsible lead office for the business line

***Executive Committee on Enterprise Risk Management (ECERM) is comprised of the EDO (Chair), CFO (Co-Chair), Deputy EDOs, Assistant for Operations, and two advisory members, the Inspector General and General Counsel

FY 2016 Integrity Act Results

In accordance with Section 2 of the Integrity Act and under the guidance established in A-123, All NRC business line leads certified that, as of September 30, 2016, 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;

Reliable and timely information was obtained, maintained, reported, and used for sound decision-making, and

Risks were appropriately identified, communicated, and mitigated.

Based on management's certification of reasonable assurance, the NRC is able to provide a statement of assurance that its 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, "MANAGEMENT'S RESPONSIBILITY FOR ENTERPRISE RISK MANAGEMENT AND 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 control over financial reporting and to prepare a separate annual statement of assurance as of June 30, 2016.

The NRC adopted a rotational testing plan to assess the effectiveness of its internal controls over financial reporting. Two of the eight key processes (financial reporting and information technology) were significant enough to include in the testing each year of the test plan cycle. The remaining six key processes (budget execution, disbursements, payroll, procurement, property, and revenue) were to be tested once in a 2-year cycle, three each year. Based on the results of the FY 2016 evaluation, the NRC can provide reasonable assurance that its internal controls over financial reporting were operating effectively as of June 30, 2016, and that the evaluation found no material weaknesses in the design or operation of the internal controls over financial reporting.

U.S. NUCLEAR REGULATORY COMMISSION
FISCAL YEAR 2016
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 of 1982* (Integrity Act). The NRC is able to provide an unqualified statement of assurance that the internal controls and financial management systems meet the objectives of the Integrity Act with no material weaknesses.

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 Enterprise Risk Management and 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 substantial compliance with applicable laws and guidance, and no material weaknesses were found as of September 30, 2016.

In addition, the 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, the NRC can provide reasonable assurance that its internal control over financial reporting as of June 30, 2016, was operating effectively, and no material weaknesses were found in the design or operation of the internal control over financial reporting.

In accordance with guidance established in OMB Circular A-123, Appendix D, the CFO reviewed audit reports and other sources of information, and as of September 30, 2016, can provide reasonable assurance that NRC's financial systems substantially comply with Federal financial system requirements, applicable Federal accounting standards, and the U.S. Treasury standard general ledger at the transaction level, as required by the *Federal Financial Management Improvement Act of 1996.*

Stephen G. Burns
Chairman
U.S. Nuclear Regulatory Commission
November 9, 2016

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

In FY 2011, the NRC completed an initial risk assessment to determine if any programs were susceptible to making significant improper payments in accordance with the *Improper Payments Information Act of 2002* (IPIA) as amended by the *Improper Payments Elimination and Reporting Act of 2010* (IPERA) and the *Improper Payment Elimination and Recovery Improvement Act of 2012* (IPERIA). The results of that assessment allowed the agency to conduct future risk assessments on a triennial basis. In its FY 2014 PAR, the NRC reported on the results of the improper payment risk assessment completed in that year.

The results of the FY 2014 risk assessment did not identify any programs that were susceptible to making significant improper payments. While the results of the FY 2014 risk assessment identified programs as low risk, the NRC continues to monitor its payment processes, in addition to conducting periodic reviews of key controls for IPIA programs identified by management. The NRC will continue to conduct a risk assessment every 3 years, in accordance with the IPIA, as amended by IPERA and

IPERIA and OMB guidance. The next NRC IPIA risk assessment will take place in FY 2017. In addition, the NRC will conduct additional risk assessments, as needed, if there are material changes in the way programs operate or if the NRC establishes new programs.

Additional information is presented in the Required Improper Payments Reporting Details section in Chapter 4 Other Information.

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 2016 FFMIA RESULTS

The Office of Chief Financial Officer (OCFO) successfully completed a system upgrade for its core general ledger system the Financial Accounting and Integrated Management Information System (FAIMIS). The upgrade provides the platform for the required functionality to incorporate the U.S. Treasury Government-wide Treasury Accounting Symbol (GTAS) reporting mandate for FY 2015. The agency successfully migrated to the E-Gov Travel Service 2 (ETS2) in May 2015. The Human Resource Management System (HRMS), formerly known as Time and Labor Modernization (TLM), has completed the upgrade planning and has begun the migration to the new release to address legislative requirements and strengthen controls. Finally, the Budget Formulation System (BFS) has launched a pilot program for interactive reporting to enhance and centralize the agency's resource planning and forecasting business process.

The CFO reviewed audit reports and other sources of information, and as of September 30, 2016, can provide reasonable assurance that NRC's financial systems substantially comply with applicable Federal accounting standards as required by the *Federal Financial Management Improvement Act of 1996*.

FINANCIAL MANAGEMENT SYSTEMS STRATEGIES

For a third consecutive fiscal year, the NRC has completed significant financial system modernization projects in FY 2016. The agency's core general ledger system, FAIMIS, has become the first agency system to migrate to a FedRAMP cloud environment. In FY 2017, the NRC plans to upgrade FAIMIS to obtain required functionality for the FY 2018 U.S. Treasury mandated Internet Payment Platform (IPP) implementation. Furthermore, the FAIMIS upgrade allows the agency to comply with OMB DATA Act mandate. The agency completed its integration of travel credit card activity between FAIMIS and the ETS2 eliminating a long-standing manual NRC business process. The BFS has implemented its integrated reporting dashboard and plans to migrate the system to the most recent vendor version in 2017. Finally, HRMS will complete its migration to the most recent vendor version at the start of 2nd Quarter of 2017.

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 2016, the NRC paid 98 percent of the 7,292 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 2016, delinquent debt was $10.3 million or 1 percent of annual billings. The NRC was able to refer 100 percent of all eligible debt over 180 days delinquent

to the Treasury for collection and 74.5% over 120 days old in accordance with the *Digital Accountability and Transparency Act of 2014*. In addition, the NRC met the collections requirements of *Omnibus Budget Reconciliation Act of 1990* which requires the agency to recover through fees approximately 90 percent of its budget authority in the current fiscal year.

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. On June 24, 2016, the NRC issued a final rule in the Federal Register amending the licensing, inspection, and annual fees charged to its applicants and licensees and can be found at https://www.federalregister.gov/documents/2016/06/24/2016-14490/revision-of-fee-schedules-fee-recovery-for-fiscal-year-2016

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, not including amounts appropriated for Waste Incidental to Reprocessing (WIR), Inspector General Services for the Defense Nuclear Facilities Safety Board (DNFSB) and generic homeland security activities. Based on the Consolidated Appropriations Act, 2016, the NRC's required fee recovery amount for the FY 2016 budget is $882.9 million. After accounting for billing adjustments, the total amount to be billed as fees to licensees is $883.4 million. The NRC Fee Recovery Schedules for FY 2016 were revised in a Federal Register Notice on September 6, 2016. The revision can be found at https://www.federalregister.gov/documents/2016/09/06/2016-21270/revision-of-fee-schedules-fee-recovery-for-fiscal-year-2016-correction

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 (OIG) open audit recommendations. The status of these recommendations can be found at: http://www.nrc.gov/reading-rm/doc-collections/insp-gen.

Chapter 2

Program Performance

U.S. NUCLEAR REGULATORY COMMISSION

Measuring And Reporting

This chapter presents detailed information on the U.S. Nuclear Regulatory Commission's (NRC's) activities and performance in achieving its mission, strategic goals, and strategic objectives during fiscal year (FY) 2016. The agency's FY 2014–2018 Strategic Plan presents the agency's mission, vision, strategic goals, objectives, and strategies. The NRC has implemented improved performance indicators that took effect at the beginning of FY 2015 to reflect the updated Strategic Plan.

The NRC's mission is to license and regulate the Nation's civilian use of radioactive materials to protect public health and safety, promote the common defense and security, and protect the environment. The NRC's vision is to carry out the mission as a trusted, independent, transparent, and effective nuclear regulator. The NRC's strategic goals are to ensure the safe and secure use of radioactive materials.

The NRC carries out its safety and security activities 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 Materials Users, Decommissioning and Low-Level Waste, Spent Fuel Storage and Transportation, and High-Level Waste business lines. The agency accomplishes its mission to ensure safety and security through regulatory activities that include licensing, oversight, and rulemaking. The NRC oversees licensees through inspection, assessment, investigation, and enforcement actions. Investigations and enforcement actions are a subset of oversight in cases of suspected or proven instances of noncompliance with safety or security regulations. The NRC's event response activities prepare for and respond to emergencies involving radioactive materials.

In addition, the NRC's safety research program supports the agency's regulatory activities. The program evaluates and resolves safety issues for nuclear power plants and for the other facilities and materials users that the agency regulates. The research program assesses and confirms existing and potential safety issues; supplies independent expertise, information, and technical judgments to support timely and realistic regulatory decisions; reduces uncertainties in risk assessments; and develops tools, information, and codes and standards. The NRC also engages in cooperative research with other government agencies, the nuclear industry, universities, and international partners.

The following narrative describes the agency's progress during FY 2016 in achieving its safety and security goals through its business lines; the crosscutting strategies of regulatory effectiveness and openness; and its management objectives related to information technology, information management, and human capital. The narrative section presents information on the program evaluations used to assess performance and to develop the agency's annual performance plan and includes discussion of data sources, data quality and completeness, and reliability of performance data.

STRATEGIC OBJECTIVE

Strategic objectives express more specifically the results that are needed to achieve a strategic goal. The strategic objective for Goal 1 is to:

Prevent and mitigate accidents and ensure radiation safety.

Minimizing the likelihood of accidents and reducing the consequences of an accident (should one occur) are the key elements for achieving the NRC's Safety goal. Such accidents, particularly for large, complex facilities like nuclear power plants, have the potential to release significant amounts of radioactive material to the environment and expose facility workers and the public to high levels of radiation. Even in the absence of accidents, radiological hazards exist during routine operations. The NRC ensures that measures are in place to minimize the likelihood of accidents and prevent unintended releases of radioactive materials to the environment.

In FY 2016, the NRC demonstrated that it achieved the Safety strategic objective by meeting the targets for the performance indicators listed below, which became effective in 2015. Because the agency is required to report on performance information for the previous five fiscal years, Table 3 on pages 36 and 37 shows the agency's prior annual safety performance indicators and results for FY 2011–2014.

PERFORMANCE INDICATORS: FY 2015-FY 2016

The purpose of the NRC's performance indicators is to ensure the agency's performance in preventing or minimizing undesirable outcomes. Therefore, successful indicators would have a value at or near zero.

Because the NRC's statutory mission is to be an independent regulator of the civilian use of radioactive materials, the Office of Management and Budget (OMB) has allowed the NRC to be exempt from the *Government Performance and Results Modernization Act of 2010* requirement for establishing agency or cross-agency priority goals. Thus, no such goals are included in this narrative.

The following performance indicators were developed in conjunction with the development of the agency's FY 2014–2018 Strategic Plan. Section 208 of the *Energy Reorganization Act of 1974*, as amended (Public Law 93-438), defines an "abnormal occurrence" (AO) as an unscheduled incident or event that the NRC determines to be significant from the standpoint of public health or safety. More information on the AO criteria appears in the *Data Sources, Data Quality, and Data Security* section of this chapter.

Safety Objective 1: ***Prevent and mitigate accidents and ensure radiation safety.***

Performance Goal 1: Prevent radiation exposures that significantly exceed regulatory limits.

Performance Indicator: Number of radiation exposures that meet or exceed AO criteria I.A.1 (unintended radiation exposure to an adult), I.A.2 (unintended radiation exposure to a minor), or I.A.3 (radiation exposure that has resulted in unintended permanent functional damage to an organ or physiological system).[1]

Timeframe: Annual

Business Line	FY 2015		FY 2016	
Operating Reactors	Target: 0	Actual: 0	Target: 0	Actual: 0
New Reactors	Target: 0	Actual: 0	Target: 0	Actual: 0
Fuel Facilities	Target: 0	Actual: 0	Target: 0	Actual: 0
Decommissioning and Low-Level Waste	Target: 0	Actual: 0	Target: 0	Actual: 0
Spent Fuel Storage and Transportation	Target: 0	Actual: 0	Target: 0	Actual: 0
Nuclear Materials Users	Target: ≤3	Actual: 1*	Target: ≤3	Actual: 2

**Reported in the FY 2015 Performance and Accountability Report and the FY 2017 Congressional Budget Justification as 2 due to one event previously labeled as an AO that was reclassified as not meeting the AO threshold upon further investigation.*

Discussion: This indicator tracks the effectiveness of the NRC's nuclear safety regulatory programs, in part through the number of significant radiation exposures to the public and occupational workers that exceed AO criteria. This indicator tracks exposures from both nuclear reactors and other nuclear materials use, such as hospitals and industrial users. Only two such significant exposures took place during FY 2016 under the Nuclear Materials Users business line; this is less than the target of three. Incidents of this nature would be included in the NRC's annual report to Congress on AOs, the latest version of which is available at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0090/v38/.

Performance Goal 2: Prevent releases of radioactive materials that significantly exceed regulatory limits.

Performance Indicator: Number of releases of radioactive materials that meet or exceed AO criterion I.B (discharge or dispersal of radioactive material from its intended place of confinement, which results in releases of radioactive material).

[1] *All references to the AO criteria in this section refer to the definitions in Appendix A of the "Report to Congress on Abnormal Occurrences: Fiscal Year 2015," NUREG-0090, Volume 38, published May 2016.*

Timeframe: Annual

Business Line	FY 2015		FY 2016	
Operating Reactors	Target: 0	Actual: 0	Target: 0	Actual: 0
New Reactors	Target: 0	Actual: 0	Target: 0	Actual: 0
Fuel Facilities	Target: 0	Actual: 0	Target: 0	Actual: 0
Decommissioning and Low-Level Waste	Target: 0	Actual: 0	Target: 0	Actual: 0
Spent Fuel Storage and Transportation	Target: 0	Actual: 0	Target: 0	Actual: 0
Nuclear Materials Users	Target: 0	Actual: 0	Target: 0	Actual: 0

Discussion: This indicator tracks the effectiveness of the NRC's nuclear material 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 rem in a year, exclusive of dose contributions from background radiation. In FY 2016, there were no releases of this nature.

Performance Goal 3: Prevent the occurrence of any inadvertent criticality events.

Performance Indicator: Number of instances of unintended nuclear chain reactions involving NRC-licensed radioactive materials.

Timeframe: Annual

Business Line	FY 2015		FY 2016	
Operating Reactors	Target: 0	Actual: 0	Target: 0	Actual: 0
New Reactors	Target: 0	Actual: 0	Target: 0	Actual: 0
Fuel Facilities	Target: 0	Actual: 0	Target: 0	Actual: 0
Decommissioning and Low-Level Waste	Target: 0	Actual: 0	Target: 0	Actual: 0

Discussion: This indicator tracks the effectiveness of the NRC's criticality safety regulatory programs through the number of unintended self-sustaining nuclear reactions occurring within a fiscal year. Intended criticality events include the startup of a nuclear power reactor. There were no inadvertent criticality events during FY 2016.

Performance Goal 4: Prevent accident precursors and reductions of safety margins at commercial nuclear power plants (operating or under construction) that are of high safety significance.

Performance Indicator: Number of malfunctions, deficiencies, events, or conditions at commercial nuclear power plants (operating or under construction) that meet or exceed AO criteria II.A-II.D (events at commercial nuclear power plant licensees).

Timeframe: Annual

Business Line	FY 2015		FY 2016	
Operating Reactors	Target: ≤3	Actual: 0	Target: ≤3	Actual: 0
New Reactors	Target: ≤3	Actual: 0	Target: ≤3	Actual: 0

Discussion: The NRC's Reactor Oversight Process (ROP) monitors nuclear power plant performance in three areas: (1) reactor safety, (2) radiation safety, and (3) security. Analysis of individual plant performance is based on both licensee-submitted performance indicators and NRC inspection findings, which are independent assessments of licensee performance that the NRC conducts as the regulatory authority. Each issue is evaluated and assigned one of four categories in order of increasing significance: green, white, yellow, or red. When the rating is higher (more severe), the NRC applies a greater level of oversight. A red finding or performance indicator is the most severe rating and signals a significant reduction in the safety margin in the measured area. No red findings were issued in FY 2016.

Performance Goal 5: Prevent accident precursors and reductions of safety margins at nonreactor facilities or during transportation of nuclear materials that are of high safety significance.

Performance Indicator: Number of malfunctions, deficiencies, events, or conditions at nonreactor facilities or during transportation of nuclear materials that meet or exceed AO criteria III.A or III.B (events at facilities other than nuclear power plants and all transportation events).

Timeframe: Annual

Business Line	FY 2015		FY 2016	
Fuel Facilities	Target: 0	Actual: 0	Target: 0	Actual: 0
Decommissioning and Low-Level Waste	Target: 0	Actual: 0	Target: 0	Actual: 0
Spent Fuel Storage and Transportation	Target: 0	Actual: 0	Target: 0	Actual: 0

Discussion: This indicator tracks the effectiveness of NRC's regulatory safety programs for nonreactor facilities or during transportation of nuclear materials through the number of instances in which safety margins at nonreactor facilities are at unacceptable levels. No occurrences of this nature took place during FY 2016.

Table 3 – FY 2011-2014 Performance Indicators Results

Goal – *Safety:* Ensure safe use of radioactive materials

In FY 2015, the NRC revised performance indicators to align with the agency's FY 2014 - 2018 Strategic Plan. The performance indicators used prior to FY 2015 tracked most of the same outcomes as the current indicators. There is no new data for any of these indicators.

1 Number of New Conditions Evaluated as Red by the NRC's Reactor Oversight Process*

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	≤ 3	≤ 3	≤ 3	≤ 3	Replaced by Safety Performance Goal 4	
Actual	1	1	0	0		

**This measure is the number of new red inspection findings and 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 caused by an issue with the same underlying causes also are considered separate conditions for purposes of reporting for this measure. Red inspection findings are included in the fiscal year in which the final significance determination was made. Red performance indicators are included in the fiscal year in which the ROP external Web page was updated to show the red indicator.*

2 Number of Significant Accident Sequence Precursors (ASPs) * of a Nuclear Reactor Accident

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	≤ 0	≤ 0	≤ 0	≤ 0	Replaced by Safety Performance Goal 4	
Actual	0	0	0	0		

**Significant ASP events have a conditional core damage probability (CCDP) or ΔCDP of greater than 1×10^{-3}. Such events have a 1/1000 (1×10^{-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*

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	≤ 3	≤ 3	≤ 3	≤ 3	Replaced by Safety Performance Goal 4	
Actual	2	1	0	0		

**This measure is the number of plants that have entered the process in Inspection Manual Chapter (IMC) 0350, "Oversight of Reactor Facilities in a Shutdown Condition due to Significant Performance and/or Operational Concerns," dated December 15, 2006; the multiple/repetitive degraded cornerstone column; or the unacceptable performance column during the fiscal year (but were not in these columns or processes the previous fiscal year). Data for this measure are obtained from the NRC's 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*

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	≤ 1	≤ 1	≤ 1	≤ 1	Replaced by Safety Performance Goal 5	
Actual	0	0	0	0		

**Considering all indicators qualified for use in reporting*

Table 3 – FY 2010-2014 Performance Indicators Results (continued)

Goal – *Safety:* Ensure safe use of radioactive materials

5 Number of Events with Radiation Exposures to the Public or Occupational Workers That Exceed Abnormal Occurrence (AO) Criterion I.A.3*							
		FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Reactors	Target	0	0	0	0	Replaced by Safety Performance Goal 1	
Reactors	Actual	0	0	0	0		
Materials	Target	≤ 2	≤ 2	≤ 2	≤ 2	Replaced by Safety Performance Goal 1	
Materials	Actual	0	0	0	0		
Waste	Target	0	0	0	0	Replaced by Safety Performance Goal 1	
Waste	Actual	0	0	0	0		

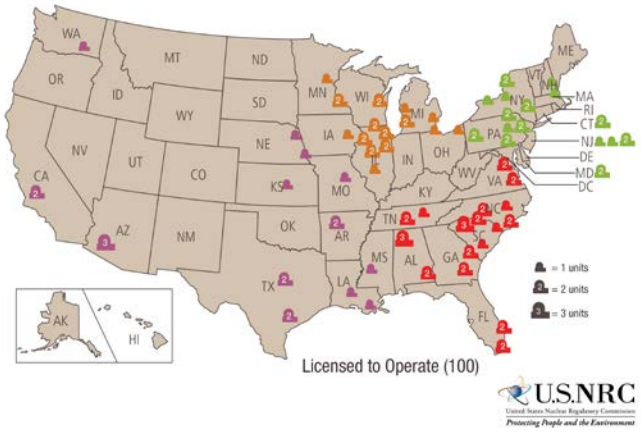
**Releases for which a 30-day report under Title 10 of the* Code of Federal Regulations *(10 CFR Part 20.2203(a)(3) is required.*

6 Number of Radiological Releases to the Environment That Exceed Applicable Regulatory Limits*							
		FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Reactors	Target	0	0	0	0	Replaced by Safety Performance Goal 2	
Reactors	Actual	0	0	0	0		
Materials	Target	≤ 2	≤ 2	≤ 2	≤ 2	Replaced by Safety Performance Goal 2	
Materials	Actual	0	0	0	0		
Waste	Target	0	0	0	0	Replaced by Safety Performance Goal 2	
Waste	Actual	0	0	0	0		

**With no event exceeding AO criterion I.B*

Nuclear Reactor Safety

Figure 13 – U.S. Operating Commercial Nuclear Power Reactors



The NRC regulates activities to ensure the safety and security of 100 operating power reactors during FY 2016 (see Figure 13), 31 operating test and research reactors, and four reactors under construction. The following sections describe the NRC's safety and security activities during FY 2016 that supported the strategic goals, strategic objectives, and performance-indicator targets for the Operating Reactors and New Reactors business lines to ensure the safe use of radioactive materials.

Operating Reactors

NRC-licensed nuclear reactors account for about 20 percent of electricity generated in the United States, providing roughly 770 billion kilowatt-hours of electricity. The agency monitors the safe and secure operation of the 100 operating power reactors. The NRC achieves its strategic goals through its licensing, oversight, rulemaking, research, international activities, event response, and generic homeland security functions.

LICENSING

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 facilities.

The NRC completed licensing and conducted regulatory oversight of the safe startup of the Tennessee Valley Authority's (TVA's) Watts Bar, Unit 2, nuclear power plant. The operating license for the plant was issued in October 2015, initial fuel load was completed in December 2015, and the plant achieved its initial criticality in May 2016. TVA completed its testing of Watts Bar, Unit 2 and achieved commercial operations in October 2016. To date, the NRC has performed over 20,000 hours of inspection activities to verify TVA's safe operation of the plant.

During FY 2016, the agency made significant progress in reducing the backlog of licensing actions that were more than 12 months old. The NRC met all but one of its licensing metrics. The unmet licensing metric was related to the completion time for "other licensing tasks" (complex actions such as backfits, requests for licensing or technical assistance from the Regions to headquarters, and licensing actions that affect multiple plants).

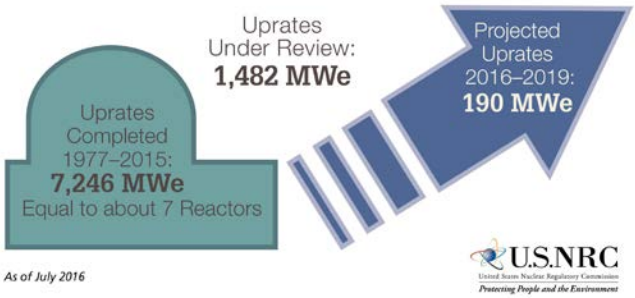
In FY 2016, the NRC issued Construction Permit CPMIF-001 to SHINE Medical Technologies, Inc. (SHINE) under 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities." This construction permit authorizes SHINE to construct a facility in Janesville, Wisconsin, for the production of molybdenum-99 and other radioisotopes. Additionally, the NRC docketed the second part of a two-part construction permit application submitted by Northwest Medical Isotopes for a medical radioisotope production facility to be located in Columbia, Missouri. The NRC also issued a license amendment to Oregon State University (OSU), authorizing the irradiation of prototypical low-enriched uranium targets in the OSU TRIGA® reactor to demonstrate the production of molybdenum-99 in a research reactor.

Calvert Cliffs 1 and 2

POWER UPRATES

Since the 1970s, the Nation's utilities have sought power uprates as a way to generate more electricity from existing nuclear plants. By August 2016, the NRC had approved 157 power uprates, resulting in a gain of 7,346 megawatts electric at existing plants, equivalent to the addition of seven large new power reactors added to the power grid (see Figure 14). The NRC evaluates nuclear reactor power uprate applications to determine whether licensees can safely increase the power output of their plants. During FY 2016, a power uprate was approved for Catawba 1, adding 20 megawatts electric.

Figure 14 – Power Updates: Past, Current, and Future



LICENSE RENEWAL

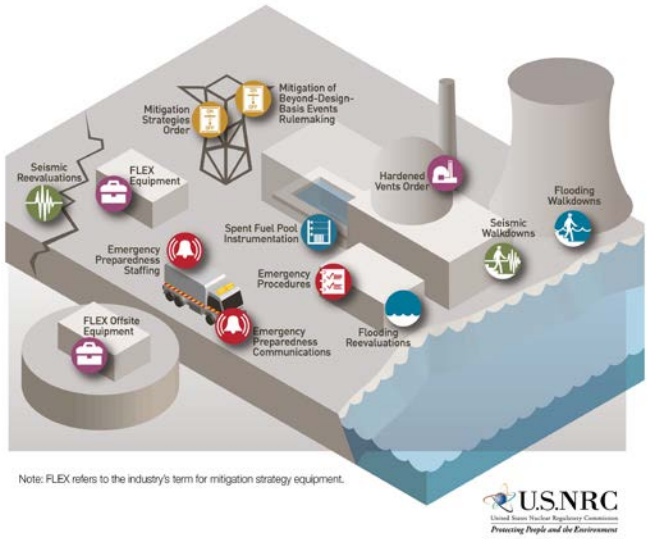
The NRC grants nuclear power reactor operating licenses for 40 years, which can be renewed for additional periods of 20 years. To date, the NRC has issued renewed licenses for 81 power reactor units currently licensed to operate (two additional units permanently shut down after receiving their renewed licenses) and currently has eight license renewal applications for 12 reactor units under review. The NRC issued five renewed licenses in FY 2016: Byron Units 1 and 2, Braidwood Units 1 and 2, and Davis Besse. 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 extended period of operation. Inspectors travel to the nuclear reactor facility to verify the information in the license 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. Additionally, the agency assesses the potential effects of the extended period of operation on the environment. Following the environmental review, the NRC prepares and makes available to the public an environmental impact statement.

POST-FUKUSHIMA ACTIVITIES

The NRC continues to make progress on implementation of the post-Fukushima lessons learned activities (see Figure 15). To date, 72 of the 100 power reactor units are in compliance with the mitigating strategies order, and 93 out of 100 units are in compliance with the spent fuel pool level instrumentation order. The majority of the safety enhancements will be in place by the end of 2016, and the NRC has already started conducting post-compliance verification inspections. The requirements are expected to be fully incorporated into NRC's regulations through the Mitigation of Beyond Design Basis Events (MBDBE) rulemaking.

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

Figure 15 – NRC Post-Fukushima Safety Enhancements



OVERSIGHT

The NRC provides continuous oversight of nuclear reactors through the Reactor Oversight Process (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, performs supplemental inspections, and takes additional actions to ensure that the plants address significant safety issues, consistent with the ROP. The NRC has at least two full-time resident inspectors at each operating nuclear power plant site performing inspections and oversight activities. Inspectors from NRC regional offices and headquarters also conduct inspections at each nuclear power plant site, in accordance with the ROP. The NRC has full authority to take action to protect public health and safety, up to and including shutting the plant down or modifying, suspending, or revoking its license. The NRC also conducts public meetings with licensees to discuss the results of the agency's assessments of their safety performance.

The NRC completed baseline inspections for all operating reactors in FY 2016. In addition, the agency conducted seven special inspections and 20 supplemental inspections where inspection findings showed that additional oversight was needed.

NRC Resident Inspector

INVESTIGATION AND ENFORCEMENT

Compliance with NRC requirements plays an important role in ensuring that the licensee is operating safely and securely. NRC policies deter noncompliance and encourage prompt identification of issues and timely, comprehensive corrective actions. Willful violations are of particular concern. Licensees, contractors, and their employees who do not achieve the high standard of compliance expected by the NRC are subject to enforcement sanctions. Each enforcement action depends on the circumstances of the case. The NRC will not permit licensees to continue to conduct licensed activities if they cannot achieve and maintain adequate levels of safety.

OPERATING REACTORS RULEMAKING

The NRC establishes regulations through rulemaking. As described below, the NRC issued a number of draft or proposed rulemaking documents for public comment in FY 2016.

As a part of the actions taken by the NRC in response to the accident at Fukushima, the Commission published the MBDBE proposed rule for public comment in November 2015. The final MBDBE rule is expected to be provided to the Commission for approval in December 2016.

In March 2016, the NRC published a proposed rule to incorporate by reference three regulatory guides that approve new, revised, and reaffirmed Code Cases published by the American Society of Mechanical Engineers. In addition, during this year, the agency issued draft NUREG-1530, "Reassessment of NRC's Dollar per Person-Rem Conversion Factor Policy, Revision 1," for public comment. This updated guidance will support the NRC staff's development of quantitative assessments of the costs and benefits of rulemaking, among other things.

In November 2015, the NRC published an advance notice of proposed rulemaking related to Regulatory Improvements for Decommissioning Power Reactors. In addition, the NRC resolved five petitions for rulemaking. The final Cyber Security Event Notification rulemaking was published in November 2015.

OPERATING REACTORS RESEARCH

The NRC research program supports the agency mission by providing independent technical advice, expertise, tools, and information for identifying and resolving safety issues, making regulatory decisions, and promulgating regulations and guidance for nuclear power plants and other facilities and materials regulated by the agency. In support of the licensing and oversight of operating reactors, the research program develops technical bases and information to support timely and realistic regulatory decisions and provides confirmatory research to verify licensee submittals independently. The research program also reduces uncertainties in risk assessments and coordinates the development of consensus and voluntary standards for agency use. In FY 2016, the NRC conducted substantive research work in the following technical areas:

- Natural hazards research, including seismic hazard issues, flooding, and tsunami events
- Severe accident and consequence analysis
- Materials degradation
- Nondestructive examination
- Digital instrumentation and control
- Electrical engineering
- Thermal-hydraulic analysis
- Fire safety
- Probabilistic risk assessment
- Radiation protection
- Neutronics and fuels analysis

The NRC issued a comprehensive technical letter report (TLR), "Review of Aging Management Programs (AMP): Compendium of Insights from License Renewal Applications and from AMP Effectiveness Audits Conducted to Inform Subsequent License Renewal Guidance Documents." This report served as a primary foundation for the subsequent license renewal guidance documents such as NUREG-2191, "Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report" and NUREG-2192, "Standard Review Plan for Review of Subsequent License Renewal Applications for Nuclear Power Plants (Draft Report for Comment)."

The agency closed Generic Issue 193, "Boiling Water Reactor Emergency Core Cooling System (ECCS) Pump Suction Concerns." Generic Issue 193 assessed the possible failure of ECCS pumps resulting from the large influx of non-condensable gases into boiling water reactor (BWR) suppression pools during certain accident conditions. The gases could potentially be entrained into the ECCS suction piping and air-bind the pumps, rendering them inoperable. The NRC performed extensive research on this issue, including modelling the accident conditions and validating the model through testing. The agency documented its analysis and results in NUREG-2196, "BWR ECCS Pump Suction Concerns following a LOCA." Based on the analysis, an NRC panel determined that this issue was not a significant safety concern and that no regulatory actions were needed to address the issue.

NRC issued NUREG-2178, "Refining and Characterizing Heat Release Rates from Electrical Enclosures during Fire (RACHELLE-FIRE)" and NUREG/CR-7197, "Heat Release Rates of Electrical Enclosure Fires (HELEN-FIRE)." These reports made major advancements in providing realism to fire probabilistic risk assessments. The project was performed under a memorandum of understanding with Electric Power Research Institute and the National Institute for Standards and Technology (NIST) to quantify the heat release rates and burning behavior of electrical enclosures commonly found in nuclear power plants.

EVENT RESPONSE

The NRC's emergency preparedness and incident response activities ensure that adequate measures can and will be taken to mitigate events and to ensure that the agency responds effectively to events at licensee sites. During FY 2016, the NRC participated in 20 operating reactor exercises. These exercises were primarily designed to demonstrate the response community's ability to adequately assess and respond to a simulated emergency at a reactor site. These activities provided an opportunity to practice, learn, and assess the response program and to confirm and maintain the capabilities of NRC incident response personnel.

In addition to these operating reactor exercises, in coordination with Federal partners, the NRC planned, coordinated, and conducted the biennial, externally-evaluated, full-scale exercise Eagle Horizon 2016 (EH2016). EH2016 was a continuity of operations (COOP) exercise that tested the readiness and ability of the NRC staff to physically relocate to an alternate location and implement operational aspects of the agency's COOP program. The NRC completed all exercise objectives and received high marks for its participation from external evaluators, which included representatives from the Federal Emergency Management Agency and the Department of Energy.

New Reactors

The NRC reviews applications for new reactor standard design certifications (DCs), early site permits (ESPs), limited work authorizations (LWAs), combined licenses (COLs), construction permits, and operating licenses. The current and anticipated applications for new reactors involve both large light water reactor (LLWR) and small modular reactor (SMR) designs and facilities in a variety of locations throughout the United States. As of September 2016, the agency was reviewing two DC applications, one DC renewal application, and four COL applications for seven reactor units. By the end of September NRC staff issued a total of 52 Standard Review Plan (SRP) sections, exceeding its metric for the year. The SRP revisions ensure that DC, COL, and ESP reviews incorporate recent industry experience and the revisions

will improve the efficiency and reliability of future staff reviews. In addition, the NRC continues to prepare to review potential advanced reactor applications effectively and efficiently and to consider anticipated regulatory changes that may be appropriate for these designs. The NRC also oversees construction activities for commercial nuclear power plants that include inspection, licensee performance assessment, investigation of allegations, and enforcement activities. This also includes activities under the NRC's Vendor Inspection Center of Expertise for quality assurance and vendors for both new and operating reactors.

LICENSING

NEW REACTOR DESIGN CERTIFICATIONS

The NRC reviews applications for standard DCs using 10 Part CFR 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants." 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 and can be renewed for an additional 10 to 15 years. The NRC continued to make progress on the Advanced Power Reactor (APR) 1400 DC application submitted by Korea Electric Power Corporation and Korea Hydro & Nuclear Power Co, Ltd. In February 2016, the agency met its Phase 1 public milestone for the APR1400 review by completing the Preliminary Safety Evaluation Reports (SERs) for all of the chapters of the application. Phase 2 of the review is currently underway. The NRC also continued to make progress on the US Advanced Pressurized Water Reactor (US-APWR) DC application review and on the Advanced Boiling Water Reactor (ABWR) DC renewal application.

In FY 2016, the agency continued to prepare to receive the first SMR application by publishing over 100 NuScale Design Specific Review Standard sections in the Federal Register, and issuing a letter to NuScale providing the NRC's expectations regarding availability of on-site and off-site power.

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.

In FY 2016, the agency issued the final SER and published the final Environmental Impact Statement for the Public Service Enterprise Group (PSEG) ESP application. The agency completed a Memorandum of Agreement addressing several historic structures and a supplemental Biological Assessment. The PSEG ESP was then issued in May 2016.

In May 2016, TVA submitted an ESP application for two or more SMRs at the Clinch River site in Tennessee. In August 2016, TVA proposed to provide supplemental information to NRC in support of its application. The NRC responded to TVA by letter and informed TVA that its application will remain in tendered, but not docketed, status until TVA submits supplemental information by December 2016.

COMBINED LICENSES (COLS)

A COL authorizes construction and operation of a nuclear power plant, through the 10 CFR Part 52 licensing process. The application for a COL is one option to request a license; the other is through the conventional process used since the 1960s, 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," which provides a construction permit followed by an operating license. The COL application must include the inspections, tests, analyses, and acceptance criteria (ITAAC) that must be met prior to plant operation to ensure that the plant has been properly constructed and will operate safely.

In FY 2016, the agency issued Final Safety Evaluation Report (FSER) and completed the mandatory hearing for the South Texas Plant combined license application. The NRC then issued combined licenses to Nuclear Innovation North America, LLC, for South Texas Project Units 3 and 4 in February 2016.

In May 2016, the NRC issued the FSER for the Levy Units 1 and 2 COL application. The mandatory hearing for the Levy County COL application was held on July 28, 2016.

In August 2016, the NRC issued the FSER for the Lee Units 1 and 2 COL application. The NRC also engaged in significant prehearing work for the mandatory hearing on the Lee COL application.

The NRC issued the safety evaluation report, dated March 29, 2016, that found the Vogtle Units 3 and 4 simulator facilities suitable for use to administer operator license examinations.

SMALL MODULAR REACTORS

The agency completed development of the NuScale Design Specific Review Standard (DSRS). The completed DSRS reflects the staff's consideration of nearly 700 public comments received on the draft DSRS, which was published in June 2015. The NRC intends to publish the DSRS in the near term. This document will support the technical review of the NuScale design certification application, which the NRC anticipates receiving by the end of 2016. The DSRS, comprised of 73 sections, provides guidance to NRC staff in performing safety reviews of unique features of the NuScale design.

ADVANCED NON-LIGHT WATER REACTORS

In April 2016, the NRC issued for informal public comment the Advanced Reactor Design Criteria for non-light water reactor designs. This was an important milestone within the joint initiative with the Department of Energy (DOE) to develop guidance for advanced reactors. The NRC is considering the public comments as it develops a draft regulatory guide.

In May 2016, the NRC issued a draft "Vision and Strategy for Safely Achieving Effective and Efficient Non-Light Water Reactor Mission Readiness." In July 2016, the NRC published a Federal Register notice requesting public comments on this document. The public comment period closed in September 2016.

In June 2016, the NRC and DOE conducted their second joint workshop on advanced reactors. The purpose of the workshop was to explore options for increased efficiency, from both a technical and regulatory perspective, for safely developing and deploying advanced non-light water reactors. At these events, DOE and NRC staff discussed advanced non-light water nuclear reactor concepts and licensing issues with participants including reactor design vendors, suppliers, electric utilities, academics, national labs, non-government organizations, and other federal agencies. The third joint workshop is scheduled for April 2017.

NEW REACTORS OVERSIGHT

CONSTRUCTION INSPECTION

The NRC continues to inspect construction activities for the four AP1000 units at the Vogtle and Summer sites, primarily through the Region II office in Atlanta, GA. In FY 2016, AP1000 construction activities were focused on the structural modules and concrete pours.

In FY 2016, the agency completed verification of 54 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Closure Notifications. The NRC continues to refine the processes for ITAAC closure, including public meetings with stakeholders to discuss issues such as interpretation of the scope of complex ITAAC and reviews of early submittals of Uncompleted ITAAC Notifications, pursuant to NRC regulations (10 CFR Part 52.99(c)(3)).

VENDOR INSPECTION

Under the Vendor Inspection Program, the NRC conducted 34 vendor and quality assurance implementation inspections in FY 2016. A majority of the inspections were related to ITAAC for the AP1000 standard plant design or were specific to commercial grade dedication. All inspections focused on the design, qualification, and testing of safety-related structures, systems, components, and services. Findings were reported in areas of design control and commercial grade dedication.

INVESTIGATIONS AND ENFORCEMENT

Consistent with the description for investigations and enforcement of operating reactors, the NRC will not permit applicants for or holders of new licenses, nor their contractors and vendors, to continue to conduct licensed activities if they cannot achieve and maintain adequate levels of safety and quality assurance. In FY 2016, the NRC processed three escalated enforcement actions, all of which were supported through investigations. Final enforcement action for one of the cases was placed on hold pending review by the U.S. Department of Justice.

For another case, the NRC issued a Confirmatory Order in April 2016 to a vendor to formalize commitments made by the vendor as a result of an alternative dispute mediation session.

NEW REACTORS RESEARCH

Much of the technical work and research described earlier for operating reactors also applies to new reactors. 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 design certifications. The NRC research program addressed key areas that support the agency's safety mission. In FY 2016, substantive research work was performed in the following technical areas:

- Probabilistic risk assessment
- Natural hazards research, including seismic hazard issues, flooding, and tsunami events
- Severe accident and consequence analysis
- Digital instrumentation and control
- Radiation protection
- Thermal-hydraulic analysis

Research related to Small Modular Reactor (SMR) concepts has focused on identifying phenomenological differences from large reactors and developing and validating tools for analyses to support potential licensing reviews. The research activities completed in FY 2016 include:

- Improved thermal-hydraulic modeling and support for containment and severe accident confirmatory analyses related to the APR 1400.
- Improved simulations of dense gases used in computer models used for confirmations of estimated concentrations of toxic gases in certain postulated accidents.
- Updates to human factors guidance.
- Improvements to probability risk assessment models on new reactors to support agency post-construction inspection oversight efforts.
- Regulatory guidance related to closure of ITAAC.
- Hazard analysis of digital safety systems for SMRs.
- Evaluation of seismic structural regulations and regulatory guidance for SMRs.
- Tsunami hazard assessment study for the Atlantic coast of the United States.

In FY 2016, the NRC also completed thermal-hydraulic computer model development and confirmatory analysis associated with the APR1400 Design Certification Application in support of large break and small break loss of coolant accidents. The results of these analyses will be used in reviewing the Design Certification application.

NEW REACTORS RULEMAKING

In June 2016, the Commission approved the NRC staff's plan and schedule in SECY-16-0069 for a rulemaking pertaining to emergency preparedness for SMRs and other new technologies, such as non-light water reactors and medical isotope production facilities. The Commission also approved the staff's recommendation for the Advisory Committee on Reactor Safeguards to review the regulatory basis, proposed rule, and final rule, as well as

continued interactions with other stakeholders such as the Federal Emergency Management Agency. The NRC is currently developing the draft regulatory basis.

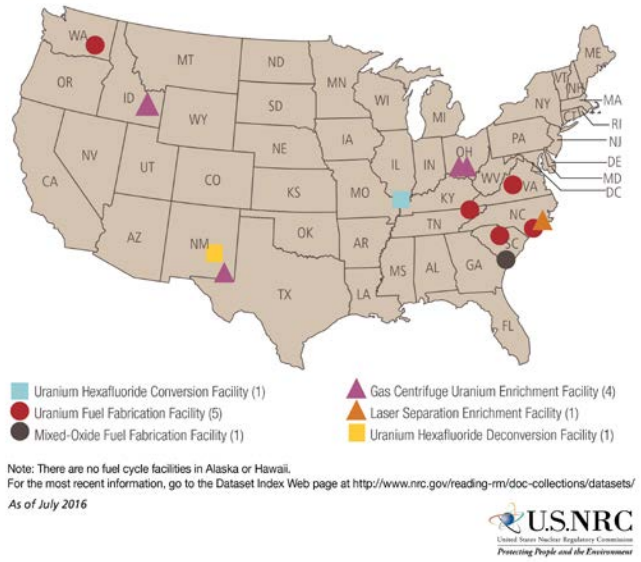
Nuclear Materials and Waste Safety

The following narrative describes major activities and accomplishments under the Nuclear Materials and Waste Safety business lines that contributed to achieving the strategic goal for ensuring the safe use of radioactive materials.

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 (see Figure 16). Licensing activities include detailed health, safety, safeguards, and environmental evaluations. Oversight involves reviews of licensee programs, procedures, operations, and facilities to ensure safe and secure operations. Safety and security are also promoted through rulemaking and event response activities.

Figure 16 – Locations of Fuel Cycle Facilities



Note: There are no fuel cycle facilities in Alaska or Hawaii.
For the most recent information, go to the Dataset Index Web page at http://www.nrc.gov/reading-rm/doc-collections/datasets/
As of July 2016

U.S.NRC
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Protecting People and the Environment

Licensing and Oversight

During FY 2016, the NRC performed a special inspection at BWXT Nuclear Operation Group to review the failure of nuclear criticality controls due to inadequate control of the moderator in a process.

The NRC also performed a special inspection at Westinghouse Electric Company, Columbia Fuel Fabrication Facility to review the causes of a uranium buildup reported to the NRC in July 2016. The objectives of the inspection were to ensure that the causes of the uranium buildup were adequately identified and evaluated and that appropriate corrective actions were implemented to improve compliance with regulatory requirements and the performance of the Nuclear Criticality Safety program.

The NRC continued to make progress implementing the closure of Generic Letter (GL) 2015-01, "Treatment of Natural Phenomena Hazards in Fuel Cycle Facilities." NRC staff completed site visits at Nuclear Fuel Services, BWXT Nuclear Operation Group, and Global Nuclear Fuel to review onsite documentation relating to the response to the GL. The agency also completed inspection activities at Westinghouse Columbia Fuel Fabrication Facility to verify independently the implementation of the responses to the GL.

Rulemaking

In June 2016, the U.S. Government approved the authorization to negotiate and conclude an Amendment to the Small Quantities Protocol to the Agreement between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty for the Prohibition of Nuclear Weapons in Latin America (U.S.-Territories Safeguards Agreement). In July 2016, the Commission approved the NRC staff's rulemaking plan to initiate actions to change domestic regulations in order to implement U.S.-Territories Safeguards Agreement.

Event Response

The NRC's emergency preparedness and incident response activities ensure that adequate measures can and will be taken to mitigate fuel facilities events and to ensure that

the agency can respond effectively to these events. During FY 2016, the NRC participated in two exercises involving fuel facilities. These exercises are primarily designed to demonstrate the response personnel's ability to adequately assess and respond to a simulated emergency at a fuel facility. These activities provide an opportunity to practice, learn, and assess the response program and to confirm and maintain the capabilities of NRC incident response personnel.

Nuclear Materials Users

The focus of the Nuclear Materials Users business line is licensing and oversight of nuclear materials used in medical diagnosis and treatment, academic education and research, and industrial applications, including gauges and manufacturing. The NRC carries out these activities in partnership with Agreement States. Under the NRC's Agreement State program, 37 States have assumed regulatory responsibility for approximately 17,500 licenses for the industrial, medical, and other users of nuclear materials in their States.

Radiological Camera

LICENSING AND OVERSIGHT

The NRC licenses and inspects the commercial use of nuclear material 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 2,750 specific licensees for the use of radioactive materials. The agency reviews Agreement State programs as well as certain NRC licensing and inspection programs through the Integrated Materials Performance Evaluation Program.

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 material licensees to ensure that they are using nuclear materials safely, maintaining accountability of those materials, and protecting public health and safety. The agency also analyzes operational experience from the NRC and Agreement State licensees and regularly evaluates the safety significance of events reported by licensees and Agreement States.

The NRC conducted 950 nuclear materials licensing inspections during FY 2016. This resulted in the issuance of notices of violations to 38 licenses. The agency also performed reactive inspections to seven medical events and two potential occupational overexposures.

The NRC will not permit licensees to conduct licensed activities if they cannot achieve and maintain adequate levels of safety.

RULEMAKING

In 2016, the NRC staff continued work on a substantive revision to the NRC's regulations related to medical licensees, 10 CFR Part 35. This final rule would amend the reporting and notification requirements for a medical event for permanent implant brachytherapy. This rule also would amend the training and experience requirements in multiple sections, establish requirements for measuring molybdenum contamination and the reporting of failed technetium and rubidium generators, and allow licensees to name associate radiation safety officers on a medical license.

EVENT RESPONSE

The NRC's emergency preparedness and incident response activities ensure that adequate measures can and will be taken to mitigate emergencies involving radioactive sources and radioactive material and to ensure that the agency can respond effectively to these events. During FY 2016, the NRC participated in a series of interagency tabletop exercises designed to explore the response to a radiological materials-based event. These exercises were primarily designed to allow experts from the Federal, State, and local response community to examine how a response to such an event would evolve. These activities provided an opportunity to practice, learn, and assess the response program.

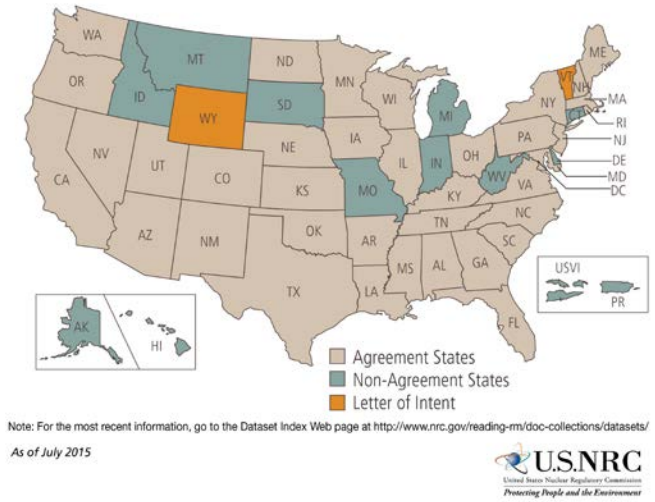
STATE AND TRIBAL PROGRAMS

The NRC completed nine Integrated Materials Performance Evaluation Program reviews and corresponding Management Review Boards for the States of California, Maryland, Nebraska, Tennessee, Arizona, and Rhode Island.

During FY 2016, the NRC issued a proposed revision to the Agreement State Program Policy Statement for public comment. This revision was intended to enhance the definition of terms in the policy statement and to clarify the expectations regarding the compatibility of Agreement State Programs with NRC policy and regulations (see Figure 17). The NRC held public meetings to discuss the proposed revision. The final Agreement State Program Policy Statement document is expected to be issued in FY 2017.

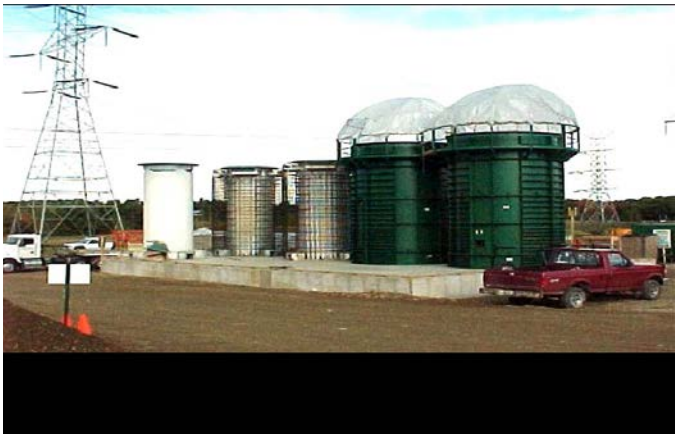
The NRC staff completed a draft final Tribal Policy Statement. The policy would establish principles for the NRC to follow to help ensure effective government-to-government interactions with American Indian and Alaska Native Tribes, and to encourage and facilitate Tribal involvement in the areas over which the Commission has jurisdiction.

Figure 17 – Agreement States



Spent Fuel Storage and Transportation

The NRC conducts detailed technical reviews to ensure that storage and transportation of spent nuclear fuel and other risk-significant radioactive materials are safe and secure and comply with agency regulations. The NRC closely coordinates transportation-related activities with those of the U.S. Department of Transportation and, as appropriate, DOE. The NRC inspects vendors, fabricators, and licensees that build and use storage systems and transportation packages. The NRC also inspects independent spent fuel storage installations (ISFSI) both at and away from reactor sites.



Radioactive Waste Storage

Licensing and Oversight

In FY 2016, the NRC received a license application to construct and generate an away from the reactor storage facility for spent nuclear fuel from Waste Control Specialists (WCS), near Andrews, Texas. During the NRC's acceptance review, the agency determined that WCS would need to supplement the application before it could be accepted for full safety and environmental review. The NRC also issued the renewed material license for Prairie Island Nuclear Generating Plant ISFSI (SNM-2506), authorizing operation for an additional 40 years beyond the original license expiration date.

Based on lessons learned from renewal application reviews and extensive stakeholder involvement, the NRC expanded guidance on renewal application content, scoping, aging management review, time-limited aging analyses, and aging management programs. NRC published NUREG-1927, Revision 1, "Standard Review Plan for Renewal of Specific Licenses and Certificates of Compliance for Dry Storage of Spent Nuclear Fuel," Final Report.

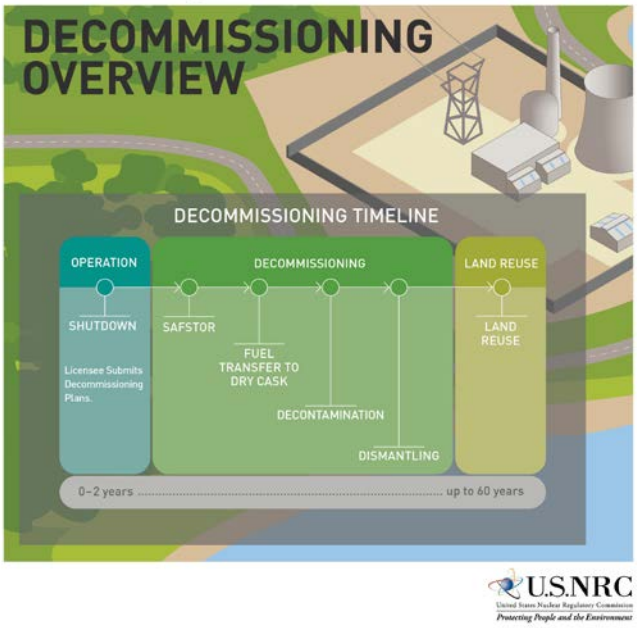
Rulemaking

The NRC published its final decision to deny the remaining two issues of the C-10 Research and Education Foundation, Inc., petition for rulemaking, PRM-72-6 (81 FR 41258). The agency denied the two issues because the proposed changes to the NRC requirements are unnecessary to ensure safe and secure storage and transportation of spent fuel. NRC completed analyses related to work directed by the Commission and described in COMSECY-10-0007, "Project Plan for the Regulatory Program Review to Support Extended Storage and Transportation of Spent Nuclear Fuel." The analyses determined additional work, including rulemaking, was not necessary, so this request was denied.

Decommissioning and Low-Level Waste

Decommissioning involves the removal of radioactive contamination from buildings, equipment, ground water, and soil and achieves 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 to protect the health and safety of the public and the environment. Completing decommissioning, environmental, and performance assessment activities provides assurance that residual radioactivity does not pose an unacceptable risk to the public (see Figure 18).

Figure 18 – Decommissioning Overview Timeline



During FY 2016, the NRC terminated the materials licenses for the Mallinckrodt site in St. Louis, Missouri, and the Stepan Company site in Maywood, New Jersey, which were two longstanding decommissioning projects. The NRC also terminated the operating license for the U.S. Department of Veterans Affairs research reactor in Omaha, Nebraska.

Fansteel, the sole funding agent of FMRI, a subsidiary created to perform decommissioning operations at the Muskogee, Oklahoma site, filed a voluntary petition for reorganization under Chapter 11 of the bankruptcy code

in early September 2016. Prior to the bankruptcy filing, the NRC, Department of Justice (DOJ), and Oklahoma Department of Environmental Quality (ODEQ) were all parties to a series of Forbearance Agreements that established an acceptable funding level for FMRI as well as technical requirements for decommissioning. Currently, Fansteel is funding FMRI at a level that will, at a minimum, maintain the safety and security of the site. The NRC is working with DOJ and ODEQ to ensure that the NRC's interests are represented in the bankruptcy case and that FMRI will continue to safely decommission the Muskogee site.

Low-level waste (LLW) includes items that are contaminated with radioactive material or have become radioactive through exposure to neutron radiation. Although the NRC regulates LLW disposal, currently all commercial LLW disposal sites in the United States are in Agreement States. The NRC's LLW regulatory program includes the following activities:

- Coordinating with, and providing technical assistance to, Agreement States on LLW issues.
- Representing the NRC in international waste management activities.
- Consulting with Federal and State officials and other entities to promote an understanding of LLW issues and resolve concerns in a timely manner.

Under the Waste Incidental to Reprocessing (WIR) program, per Section 3116 of the *Ronald W. Reagan National Defense Authorization Act* of 2005, DOE consults with the NRC on waste determinations in a covered State (Idaho and South Carolina). If the DOE Secretary's final determination is that the waste is WIR, then the NRC monitors DOE disposal actions in coordination with the covered State by assessing the DOE disposal actions to determine compliance with the performance objectives in Subpart C of 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste."

Certain types of uranium recovery (UR), the extraction of uranium ore, are also regulated under the Decommissioning and Low-Level Waste Business Line. The NRC ensures that UR facilities are licensed, operated, decommissioned, and monitored to protect the public and environment. This consists of oversight, inspection, and licensing of operating facilities; licensing of new sites or expansion of existing sites through license amendments; and the management of legacy sites in decommissioning or long term care.

HIGH LEVEL WASTE

In May 2016, NRC issued the "Supplement to the U.S. Department of Energy's Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada," NUREG–2184. This supplements the DOE's 2002 Environmental Impact Statement (EIS) and its 2008 Supplemental EIS for the proposed repository at Yucca Mountain. The scope of the supplement is outlined in the NRC staff's 2008 Adoption Determination Report for DOE's EISs, and evaluates the potential environmental impacts from the proposed repository on groundwater and from surface discharges of groundwater downstream from the repository site boundary. The draft supplement was issued for public comment in August 2015, and the final version addresses the more than 1200 comments received. The NRC staff finds that all of the impacts on the resources evaluated in this supplement would be small.

In August 2016, the NRC made nearly 3.7 million documents from the adjudicatory hearing on the Yucca Mountain application publicly available in its online documents database. The documents were formerly part of the Licensing Support Network (LSN) created to allow various parties and the public access to documents needed for the hearing on DOE's request for a construction authorization for the repository. The LSN was shut down when the hearing was suspended in September 2011. The new LSN Library in ADAMS includes enhanced search capabilities as well as an online user's guide.

STRATEGIC GOAL 2

Ensure the secure use of radioactive materials.

STRATEGIC OBJECTIVE

The strategic objectives specify the conditions that must be met for the agency to ensure the secure use of radioactive materials. The strategic objectives for Goal 2 are the following two statements in bold text.

1. Ensure protection of nuclear facilities and radioactive materials.

Protecting nuclear facilities and radioactive materials are key elements for achieving the NRC's Security goal. Nuclear facilities and materials are protected against hostile intent by two primary means: (1) control of access to facilities and materials, and (2) accountability controls for radioactive materials. These controls are intended to prevent those with hostile intent from either damaging a nuclear facility in such a way that a significant release of radioactive materials to the environment occurs or from obtaining enough radioactive material for malevolent use.

2. Ensure protection of classified and Safeguards Information

Protecting classified and Safeguards information is another key contributor to achieving the agency's Security goal. This is accomplished primarily by controlling access to this information to ensure that potential adversaries cannot use it for malevolent purposes, such as sabotage, theft, or diversion of radioactive materials.

Classified information at the NRC and at the facilities it regulates is primarily of two types. Classified by an Executive Order, national security information could cause damage to the national security if compromised. Restricted Data is information classified by the Atomic Energy Act, the compromise of which could assist in the design, manufacture, or use of nuclear weapons. Safeguards Information (SGI) is a special category of sensitive unclassified information concerning the physical protection of operating power reactors, spent fuel shipments, strategic special nuclear material, or other radioactive material.

In FY 2016, the NRC demonstrated that it achieved the two security strategic objectives by meeting the three performance indicators listed below, which became effective in 2015. Because the agency is required to report on performance information for the previous five fiscal years, Table 4 shows the agency's annual prior Security performance indicators and results for FYs 2011–2014. Prior performance Indicators 1–4 address the first security objective. Prior Indicator 5 addresses the second security objective.

Security Objective 1: *Ensure protection of nuclear facilities and radioactive materials.*

Performance Goal 1: Prevent sabotage, theft, diversion, or loss of risk-significant quantities of radioactive material.

Performance Indicator: Number of instances of sabotage, theft, diversion, or loss of risk-significant quantities of radioactive material that meet or exceed AO criteria I.C.1 (unrecovered lost, stolen, or abandoned sources), I.C.2 (substantiated case of actual theft or diversion), and the portion of criterion I.C.3 (substantiated loss of a formula quantity) concerning theft or diversion of special nuclear material.

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
All Business Lines	T0	0	0	0

Discussion: This indicator measures the agency's effectiveness at preventing sabotage, theft, diversion, or loss of risk-significant quantities of radioactive material through tracking any loss or theft of radioactive nuclear sources that the NRC has determined to be of significant risk. The indicator also measures the agency's performance in ensuring the proper accounting for radioactive sources of significant risk that could be used for malicious purposes. It also measures 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 and whether special nuclear material is accounted for, and it ensures that formula-quantity losses of this material do not occur. No such incidents took place during FY 2016.

Performance Goal 2: Prevent substantial breakdowns of physical security, cyber security, or material control and accountability.

Performance Indicator: Number of substantial breakdowns of physical security, cyber security, or material control and accountability that meet or exceed AO criterion I.C.4 (substantial breakdown of physical security or materials control that will include breakdowns of cyber security) and the portion of AO criterion I.C.3 (substantiated loss of a formula quantity) concerning breakdowns of the accountability system for special nuclear material.

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
All Business Lines	≤1	0	0	0

Discussion: This indicator measures the agency's effectiveness in maintaining security by tracking any substantial breakdowns in access control, containment, or accountability systems that significantly weakened the protection against theft, diversion, or sabotage for nuclear materials that the agency has determined to be of significant risk. In FY 2016, there were no incidents of this nature.

Security Objective 2: *Ensure protection of classified and Safeguards information.*

Performance Goal 3: Prevent significant unauthorized disclosures of classified or SGI.

Performance Indicator: Number of significant unauthorized disclosures of classified or Safeguards Information by licensees as defined by AO criterion I.C.5 and by NRC employees or contractors as defined by analogous NRC internal criteria.

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
All Business Lines	0	0	0	0

Discussion: This indicator includes significant unauthorized disclosures of classified or Safeguards information that cause damage to national security or public safety. This indicator reflects whether information that can harm national security (classified information) or cause damage to the public health and safety (SGI) has been protected sufficiently to prevent its disclosure to terrorist organizations, other nations, or personnel without a need to know. No significant unauthorized disclosures occurred in FY 2016.

Table 4 – FY 2011-2014 Performance Indicators Results

Goal – *Security:* Ensure secure use of radioactive materials

In FY 2015, the NRC revised performance indicators to align with the agency's FY 2014 – 2018 Strategic Plan. The performance indicators used prior to FY 2015 tracked most of the same outcomes as the current indicators. There is no new data for any of these indicators.

1 Unrecovered Losses of Risk Significant* Radioactive Sources

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	0	0	0	0	Replaced by Security Performance Goal 1	
Actual	1*	0	0	0		

**"Risk-significant" is defined as any unrecovered, lost, or abandoned sources that exceed the values listed in Appendix P, "Category 1 and 2 Radioactive Material," to 10 CFR Part 110, "Export and Import of Nuclear Equipment and Material." Excluded from reporting under this criterion are those events involving sources that are lost or abandoned under the following conditions: (1) sources abandoned in accordance with the requirements in 10 CFR Part 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 that 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) a source for which the agency has made a determination that its risk significance is low based on its location (e.g., water depth) or its physical characteristics (e.g., half life and housing) and its surroundings, (6) cases in which all reasonable efforts have been made to recover the source, and (7) the determination was made 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.)*

***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* Cases of Actual Theft or Diversion of Licensed, Risk Significant Radioactive Sources, or Formula Quantities of Special Nuclear Material or Attacks That Result in Radiological Sabotage*****

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	0	0	0	0	Replaced by Security Performance Goal 1	
Actual	0	0	0	0		

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

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

****"Radiological sabotage" is defined in 10 CFR Part 73.2, "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 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	0	0	0	0	Replaced by Security Performance Goal 1	
Actual	0	0	0	0		

**A "substantial breakdown" is defined as a red finding in the security cornerstone of the ROP or any plant or facility that is determined either to 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 or operational events.*

4 Number of Substantial Breakdowns* of Physical Security or Material Control (i.e., Access Control, Containment, or Accountability Systems) That Significantly Weakened the Protection against Theft, Diversion, or Sabotage

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	≤ 1	≤ 1	≤ 1	≤ 1	Replaced by Security Performance Goal 2	
Actual	0	0	0	0		

**A "substantial breakdown" is defined as a red finding in the security cornerstone of the ROP or any plant or facility that is determined either to 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 or operational events.*

Table 4 – FY 2011-2014 Performance Indicators Results (continued)

Goal – *Security:* Ensure secure use of radioactive materials

5 Number of Significant Unauthorized Disclosures * of Classified and/or Safeguards Information						
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Target	0	0	0	0	Replaced by Security Performance Goal 3	
Actual	0	0	0	0		

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

Nuclear Reactor Security

The NRC continues to perform its licensing and oversight functions to ensure protection of public health and safety, promote the common defense and security, and protect the environment. NRC security programs contribute to fulfilling this mission.

The following narrative describes major activities and accomplishments under the Nuclear Reactor Safety business lines that contributed to achieving the strategic goal for ensuring the secure use of radioactive materials.

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:

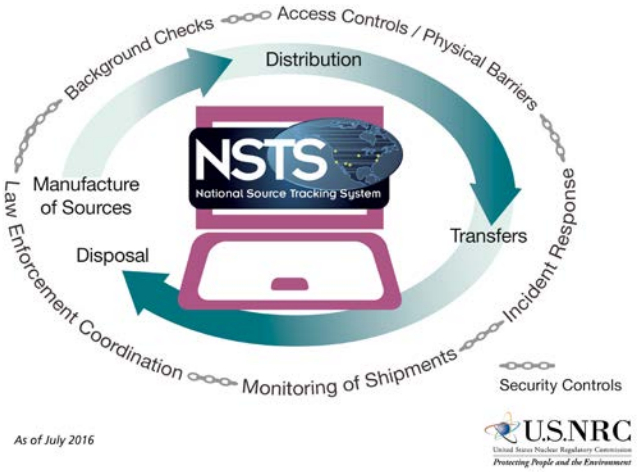
1. Access authorization.
2. Access control.
3. Physical protection systems.
4. Material control and accounting.
5. Response to contingency events.

The agency uses the results obtained from all oversight activities, including baseline security inspections and performance indicators, to determine whether licensees comply with NRC requirements and can provide high assurance of protection against the design-basis threat for radiological sabotage.

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 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 June 2016, the staff provided SECY-16-0073, "Options and Recommendations for Force-on-Force Inspection Program in Response to SRM-SECY-14-0088," to the Commission. This paper analyzed the findings of the Tactics, Techniques, and Procedures Working Group and provided options regarding the security baseline inspection program (including force-on-force) to the Commission for its consideration.

Figure 19 – Life-Cycle Approach to Source Security



INTEGRATED AND COORDINATED SECURITY ACTIVITIES

The Integrated Response Program (IRP) is a partnership between the Federal Government (i.e., the NRC, Federal Bureau of Investigation (FBI), and U.S. Department of Homeland Security (DHS)) and the commercial nuclear power industry. It seeks to leverage existing tactical law enforcement capabilities to respond effectively to significant threats at nuclear power plants. One element of the IRP is the Contingency Response Tool (CRT), which is a computer-aided planning tool to assist tactical law enforcement with planning missions and navigating inside nuclear power plants. In FY 2016, the NRC streamlined its CRT development support activities as the result of agencywide efficiency improvements .

CYBER SECURITY

The NRC has established cyber security requirements for nuclear power plants and developed an oversight program for cybersecurity that includes an inspection program, inspector training, and a process for evaluating the significance of inspection findings. This was accomplished collaboratively with stakeholders, including representatives from the DHS, the Federal Energy Regulatory Commission, NIST, and industry.

During FY 2016, the agency inspected licensees to ensure consistent and effective implementation of cyber security plans.

Nuclear Materials and Waste Security

The following narrative describes major activities and accomplishments under the Nuclear Materials and Waste Safety business lines that contributed to achieving the strategic goal for ensuring the secure use of radioactive materials.

FUEL FACILITIES

The NRC continues to license and oversee security controls at operating fuel cycle facilities. This program includes force-on-force inspections at the fuel facilities that process Category I special nuclear material. The Commission directed the NRC staff to develop an expedited fuel cycle cyber security rulemaking in the Staff Requirements Memorandum to SECY-14-0147, "Cyber Security for Fuel Cycle Facilities." The agency published the regulatory basis for the proposed rulemaking in April 2016. Subsequently, the NRC issued the draft proposed rule language and draft regulatory guide for public comment and held a public meeting in August 2016 to provide stakeholders an opportunity to comment on these draft documents.

NUCLEAR MATERIALS USERS

The NRC verified that all Agreement States implemented Part 37-compatible requirements or equivalent license conditions for licensees possessing aggregated Category 1 and Category 2 quantities of material by the March 2016 deadline for compliance.

In addition, the NRC completed a comprehensive program review of the requirements in 10 CFR Part 37. A paper containing the program review results was provided to the Commission.

During FY 2016, the NRC completed source security actions such as the 2016 National Source Tracking System

(NSTS) Annual Inventory Reconciliation (see Figure 19). NSTS inventories were sent to roughly 1,400 NRC and Agreement State licensees to confirm information about approximately 77,000 Category 1 and Category 2 sources.

International Activities

The NRC participates in a wide range of international activities based on statutory requirements, U.S. Government obligations and commitments, international treaties and agreements, Executive Orders, Presidential Decision Directives, and Commission policy and guidance. International activities are integrated to the mission of the agency. Each business line within the Nuclear Reactor Safety and Nuclear Materials and Waste Safety programs is involved in international activities and, for ease of reference, an agency view of these activities is presented in this section.

In addition to licensing exports and imports of nuclear facilities, equipment, and materials and providing technical support for U.S. nuclear nonproliferation activities, the NRC also engages in bilateral and multilateral cooperation and assistance programs to exchange information, perform collaborative research and support improvements to regulatory infrastructures and programs worldwide. Whether working directly with regulators in other countries through cooperative research or information exchange arrangements or working with multiple regulatory counterparts through the International Atomic Energy Agency (IAEA), the Organisation for Economic Co-operation and Development's Nuclear Energy Agency (NEA) and other multilateral organizations, the NRC helps to ensure that proper attention is devoted to encouraging effective regulatory oversight programs and initiatives worldwide.

International Treaties and Agreements

Several treaties and conventions ratified by the U.S. Government address nuclear safety and security matters that require the NRC to implement rules and hold U.S. licensees accountable to various international norms. These treaties and conventions address various issues including: nuclear non-proliferation, nuclear safety, international safeguards, physical protection, emergency notification and assistance, spent fuel and waste management, and liability for nuclear accidents. In addition to overseeing implementation of these international norms within the United States, these treaties and conventions also obligate the NRC to participate in international meetings to gain and share insights on the issues that other countries may be encountering.

Export and Import Licensing

Through its export and import authority, the NRC upholds the U.S. Government goals of limiting the proliferation of materials that could be used in weapons and supports the safe and secure use of civilian nuclear and radioactive materials worldwide. The NRC continues to work to strengthen the export and import regulations of nuclear equipment and materials and to improve communication between domestic and international stakeholders. The NRC adheres to the relevant export/import guidance associated with Code of Conduct on the Safety and Security of Radioactive Sources and ensures that U.S. licensees adhere to U.S. regulatory requirements including pre-shipment notifications.

International Cooperation and Assistance

There are a wide range of ongoing regulatory programs that enhance the safety and security of peaceful nuclear activities worldwide. With countries that have mature nuclear power or radioactive materials programs, the NRC focuses on sharing information and best practices. With countries that have new programs, the NRC focuses on helping them develop and improve their regulatory infrastructures and programs. The NRC has 45 information sharing agreements with different countries, Taiwan, and the European Atomic Energy Community benefiting both foreign and domestic programs. The NRC engages with over 85 countries that have mature nuclear power or radioactive materials programs; this engagement focuses on sharing operational information and best practices. NRC-supported assistance is provided,

both bilaterally and multilaterally, to approximately 150 countries through training, workshops, peer reviews of regulatory documents, working group meetings, and exchanges of technical information and specialists. The NRC also participates in cooperative research programs with 30 countries and Taiwan through more than 100 multilateral agreements in order to share U.S. research and to learn from the research of other countries.

The NRC has a robust relationship with both the NEA in France and with the IAEA in Austria. The NEA's membership comprises countries with mature nuclear power programs and regulatory organizations, which facilitates beneficial dialogue on significant 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. Due to the more comprehensive international membership of the IAEA, and its much broader focus on safety, security, and safeguards for all uses of nuclear materials and technologies, the NRC is engaged in a more varied number of IAEA activities.

SIGNIFICANT INTERNATIONAL ACCOMPLISHMENTS IN FY 2016

In FY 2016, significant NRC international accomplishments involved the following activities:

- Participating in high level U.S. Government nuclear security initiatives in collaboration with U.S. Executive Branch agencies and regulatory counterparts from other countries through activities such as the 2016 Nuclear Security Summit in Washington, D.C., and the 2016 International Regulators' Conference on Nuclear Security in Spain.
- Leading and supporting U.S. Government delegations in international meetings addressing the following: the Convention on Nuclear Safety; the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management; and the Convention on the Physical Protection of Nuclear Material. The agency also served on multiple IAEA regulatory peer review missions and guidance committees.
- Providing assistance supporting completion of verified national radioactive sources registries, through NRC's Radioactive Sources Regulatory Partnership, with counterparts in six countries and continuing the NRC's International Regulatory Development Partnership, for over 20 countries considering civilian nuclear power programs.
- Maintaining active bilateral information exchange programs including participating with U.S. Executive Branch agencies and others in the first ever U.S.-Republic of Korea High Level Bilateral Commission meeting on civilian nuclear safety.
- Providing technical support to U.S. Executive Branch agencies and participating in bilateral negotiations for the Agreements for Peaceful Nuclear Cooperation between the U.S. Government and Saudi Arabia, Republic of Korea (ROK), Norway and Mexico. The Agreement for Civil Nuclear Cooperation between the Governments of the United States of America and China (i.e., U.S.-China 123 Agreement) entered into force on October 29, 2015. The U.S.-ROK 123 Agreement entered into force on November 25, 2015.

Cross-Cutting Strategies

The NRC has two crosscutting strategies: Regulatory Effectiveness and Openness, which support the fulfillment of the NRC's Safety and Security Objectives.

REGULATORY EFFECTIVENESS

The effort to improve performance in government, coupled with increased demands on the NRC's resources, requires the agency to become more effective, efficient, and timely in its regulatory activities. The NRC's effectiveness initiatives enable the agency's focus on safety and security and ensure that its available resources are optimally directed toward accomplishing the agency's mission.

In late January 2015, the NRC staff sent to the Commission its Project Aim report detailing staff recommendations designed to improve the agency's agility, effectiveness, and efficiency while ensuring

its ability to protect the public health and safety. The Project Aim report recommended a number of strategies under the themes of people, planning, and process to prepare the NRC for the future. The agency has made significant progress implementing Project Aim tasks that will make the NRC more agile, effective, and efficient in accomplishing its mission for the foreseeable future.

The agency has completed a total of 13 of the 19 Project Aim tasks including: establishing the Center of Expertise (COE) for Allegations and creating two additional COEs for Technical Specifications and External Hazards Evaluation; implementing standardized processes and creating more effective and efficient tools for contracts oversight; creating a centralized, one-stop, location to request services across the agency; institutionalizing the common prioritization process to evaluate emerging work; implementing the strategic workforce plan; standardizing or centralizing of specific regional support staff functions and initiating a follow-on effort to further streamline, standardize, and centralize support staff functions throughout the agency; and providing recommendations for consolidation of the Regional Materials Program and the merger of the Office of New Reactors and Office of Nuclear Reactor Regulation. The agency continues to implement strategies to effectively govern resources through position management, hiring externally only to meet critical skills not currently in the agency, and offering early outs and buyouts. The agency also has identified longer-term efficiencies, is addressing Corporate Support services, and has found efficiencies in the NRC's personnel security program. The projected completion date for all tasks is November 2018.

NUCLEAR REACTOR SAFETY

The agency continued to enhance its regulatory processes using lessons learned from the 2011 Fukushima Dai-ichi accident and applying risk insights in making decisions on licensing and inspection efforts to focus on the most critical issues. Additionally, through improved workload management and updated data management tools, the NRC has realized greater efficiencies in its regulatory processes while maintaining the effectiveness of its regulatory activities.

Specific to enhancing effectiveness of the NRC's inspection activities, the agency closed an Office of the Inspector General audit on NRC support provided to resident inspectors (OIG-14-A-12). The audit had two recommendations: (1) identify a formal mechanism for obtaining resident inspectors' perspectives regarding support issues and (2) take measures to ensure that the roles and responsibilities for existing support systems for resident inspectors' needs and concerns are communicated and understood by the appropriate management and staff, and are effectively executed. In response to the recommendations, the agency took the following actions: (1) developed a formal mechanism (through the Reactor Oversight Process (ROP) Digital City website) to provide resident inspectors the ability to offer input and seek support when necessary to enhance their operational effectiveness; and (2) revised IMC 2515, "Light-Water Reactor Inspection Program – Operations Phase," Section 2515-11, "Inspector Policy," to include a specific subsection describing regional management roles and responsibilities in ensuring that existing feedback mechanisms or venues include opportunities for resident inspectors to communicate support needs or concerns.

NUCLEAR MATERIALS SAFETY AND SECURITY

The agency also continued to enhance its regulatory program for nuclear materials. Among the efforts were:

- Revisions of the 21-volume NUREG-1556, "Consolidated Guidance About Material Licenses." This included addition of guidance related to licensee safety culture, update of information regarding new or revised radioactive source security requirements, and clarification of requirements that applicants and licensees must meet in order to hold a license for possession and use of radioactive material.
- Improvement of the Web-Based Licensing (WBL) system in order to help streamline the licensing process and replace multiple legacy systems. This included development and delivery of extensive user training to expand the population of staff using the system, enhancements of the system to improve functionality for planning and tracking of materials inspections,

and an effort to implement standard license and correspondence formats and to issue such documents directly through the WBL system.

- Verification that all Agreement States implemented Part 37-compatible requirements or license conditions for licensees possessing aggregated Category 1 and Category 2 quantities of material by the March 2016 deadline.
- Completion of an effectiveness review of the nuclear material security regulations found in 10 CFR Part 37.

OPENNESS

The openness objective explicitly recognizes that the public and stakeholders 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.

PUBLIC MEETINGS

The agency holds over 1,000 public meetings every year to engage and inform the public about the NRC's regulatory activities. The purpose of the majority of these meetings is for the NRC to meet with licensees, applicants, or other groups. These meetings are conducted in an open manner to increase the transparency of the NRC's actions, and time is set aside for members of the public to ask questions of the NRC. For other public meetings, the NRC is seeking to interact directly with members of the public to inform and educate them on regulatory topics, or, in certain cases, to take public comments.

In the spirit of continual improvement, the agency assembled a task group beginning in June 2014 to complete a comprehensive review of its public meeting policies, processes, and guidance to identify potential improvements. The task group produced a set of recommendations in January 2015. The agency is currently in the process of implementing the Commission's direction on these recommendations. In August 2016, the NRC published for public comment in the Federal Register a draft revision to the Commission's Policy Statement on enhancing public participation in NRC meetings. The revisions are intended to improve the consistency of NRC public meetings and to help individuals better prepare for a meeting by illustrating the level of public participation to be offered for each type of meeting.

In July 2016, the Commission held an all-day meeting where the NRC invited a number of external stakeholders to share their perspectives on the NRC's regulatory programs. The meeting participants included State and tribal representatives, nongovernmental organizations, industry, organized labor, vendors, academia, and the medical community, as well as a former NRC Commissioner and a former NRC Chairman.

2016 Regulatory Information Conference

The NRC held the annual Regulatory Information Conference (RIC) in March 2016. This conference brings together diverse groups of stakeholders to learn, share, and discuss information on significant and timely nuclear regulatory activities and emergent issues. The RIC is a communication vehicle that fosters informal, open dialogue between the public and the NRC, and supports the NRC's strategic objective to ensure openness.

The NRC also conducted significant outreach during FY 2016 in the development of the next NRC Strategic Plan (covering FY 2018-2022). The NRC held a public meeting and webinar on the NRC's Strategic Plan in July 2016 and a government-to-government meeting in August 2016 to solicit input to inform development of the plan. The NRC's Strategic Plan identifies the agency's strategic goals and performance expectations, identifies long-term strategies to guide the agency's activity, and provides a basis for the agency's budget and performance plans.

The agency sponsored the first annual Radiation Protection Computer Code Analysis and Maintenance Program (RAMP) User Meeting in October 2015. The purpose of these annual meetings is to conduct training and exchange technical information on radiation protection, dose assessment, and emergency response computer codes. Over 70 participants from Federal and State agencies and four countries attended the event.

During FY 2016, the NRC conducted outreach efforts associated with the cleanup of military sites with radium contamination (e.g., Organizations of Agreement States (OAS) Conference calls on the MOU; presentation at the Conference of Radiation Control Program Directors for 2016; and presentation at the Organization of Agreement States Annual Meeting).

Management Objectives

This section focuses on the activities related to the key management objectives of human capital and information management and IT. Other management objectives include acquisitions, space and facilities management, and financial management and financial stewardship.

Management Objective 1[2]: *People: Attract, develop, and retain a high-performing, diverse, and engaged workforce with the skills needed to adapt to workload changes and effectively carry out the NRC's mission now and in the future.*

Performance Goal: Sustain average scores and ratings in the OPM indices on the Federal Employee Viewpoint Survey (FEVS).[3]

Performance Indicator: Average scores in the OPM indices on the FEVS

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
Corporate Support	Top 5 ranking among Federal agencies	4	Top 5 ranking among Federal agencies	7

Performance Goal: Meet a specified percentage of key human capital indicators.

Performance Indicator: Percent of key human capital indicators met.[4]

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
Corporate Support	75%	75%	75%	75%

Management Objective 2: *Information Management and IT: Make it easier for NRC staff members to perform their mission and obtain the information they need from authoritative sources anytime, anywhere, on any device, while managing the risk of compromise of sensitive information.*

Performance Goal: Achieve target for aggregate score on agency-specific questions addressing information and IT on the annual FEVS survey.

[2] *A performance indicator reported in the Congressional Budget Justification related to the Safety Culture and Climate Survey was removed because it was discontinued and replaced with an internal indicator starting in FY 16.*

[3] *Examples are Global Satisfaction and Employee Engagement Indices; as well as support for diversity.*

[4] *Examples include retention of professional hires within 3 years, FEVS participation, percent of veterans and employees with targeted disabilities hired, percent of attrition, iLearn user satisfaction, and percent of participants completing development programs.*

Performance Indicator: Score on agency-specific questions addressing information and information technology on the annual FEVS

Timeframe: Annual

Business Line	FY 2015		FY 2016	
	Target	Actual	Target	Actual
Corporate Support	5% increase from FY 2014 FEVS results	1% increase from FY 2014 FEVS results	85% (FY 2015 FEVS result)	90.2%

HUMAN CAPITAL

HUMAN RESOURCES MANAGEMENT

The NRC continued to provide effective human capital programs and services in an effort to maintain its role as a strategic business partner with its stakeholders. As a result of projected decreases in workload, the agency is reducing in size and resources. The Office of the Chief Human Capital Officer (OCHCO) collaborated with offices in the implementation of hiring/full-time equivalent (FTE) controls to achieve the FTE target for FY 2017 and beyond. As a result, the agency continued to focus its efforts to limit external hiring and to focus on implementing the results of the re-baselining effort and strategic workforce planning. The NRC successfully led an agencywide Early Out/Buy Out that resulted in 86 applications being approved. In addition, the agency prepared a staffing plan for 2017 and a Future State Workforce Profile. Staffing plans will provide numbers and skills of agency staff as well as areas of overages and gaps across the agency. The Future State Workforce Profile is designed to be forward looking, and will provide insights into projected workload changes and corresponding workforce needs.

The agency submitted its request to the Office of Personnel Management (OPM) and the Office of Management and Budget (OMB) to renew certification of NRC's Senior Executive Service (SES) performance appraisal system. OCHCO, along with a working group of executives, reviewed FY 2016 SES plans to recommend enhancements and prepare for SES certification submission to OPM and OMB. The agency's Executive Review Board members concurred on a draft revised version of Management Directive 10.137, "Senior Executive Service Performance Management System," which was included in the certification package as a working draft.

The NRC submitted NRC's certification request in June 2016. In September 2016, OPM approved a 1-year provisional certification of the NRC's SES performance appraisal system.

The working group for the Project Clearance Review has completed various activities related to developing new methodology and procedures for re-designating position sensitivity levels as the agency is transitioning to a new environment where security clearances will no longer be a mandatory minimum for all agency employees. To date, the working group has: drafted and submitted a Communication Plan for EDO approval; engaged with NTEU; developed a branding logo; secured an NRC web page where the communication plan and future information will be published; determined the agency will utilize OPM's position designation tool as the new methodology for position designation determinations; decided to conduct a non-binding small scale test with select OCHCO and ADM branches prior to the pilot phase; drafted position designation instructions for supervisors; and drafted an implementation plan.

EMPLOYEE ENGAGEMENT

One aspect of the agency-wide action plan to continue to improve the NRC work environment focuses on improving leadership. Toward that end, as of June 2016, the NRC conducted an Aspiring Leaders Certificate Program with 226 staff enrolled and 40 graduates. Additionally, the agency established a Leaders at All Levels certificate program during the third quarter of FY 2016.

TRAINING AND DEVELOPMENT

To enhance the effectiveness and efficiency of training and development, the NRC is revamping the way it trains and develops agency staff. In FY 2016, the NRC successfully launched H-122, Fundamental Health Physics in the Collaborative Learning Environment (CLE), demonstrating the capability of the CLE to support blended learning and Agreement State training.

The NRC successfully piloted and launched an in-house training course, S-504 – Advanced Cyber Security for Inspectors, utilizing existing resources to avoid the necessity to enter into an inter-agency agreement for training — training essential to support emerging and rapidly changing aspects of the agency's mission. This also supports movement of this training to the agency's CLE. Additionally, the agency is currently piloting remote/distance learning technologies in its presentation of the extensive Westinghouse Pressurized Water Reactor Technology series being taught in the fourth quarter of FY 2016. This similarly supports the agency's pursuit of a CLE solution. In the area of Organizational Development, the NRC successfully coordinated with Towers Watson on the roll-out of the 2015 Safety Culture Climate Survey results and training of Culture Champions and Analysts to support action planning based on the survey results.

The agency also successfully led the KNOWvember campaign conducting 6 agency-wide Knowledge Management (KM) seminars and an additional 11 events on targeted technical subject areas. This year's campaign leveraged a number of existing technologies to conduct these seminars, making them accessible to anyone, anywhere. Additionally, multiple sessions were offered by a former EDO detailing career lessons and seminal events that reinforced a successful model for capturing transient mentoring knowledge.

INFORMATION MANAGEMENT AND INFORMATION TECHNOLOGY

In accordance with the *Federal Information Technology Acquisition Reform Act* (FITARA), the NRC is changing its IT acquisition framework to increase internal controls over IT expenditures and further optimize the value of IT investments. The NRC received a 71 percent FITARA compliance score from OMB, the third highest among CFO Act agencies. The NRC is also in the process of procuring new enterprise-wide IT services that are more cost effective and flexible to support the agency mission.

The agency's Freedom of Information Act (FOIA) program has continued to improve in response times and requestor interactions while at the same time experiencing a 50 percent increase in incoming FOIA requests over the same period last fiscal year. These improvements have garnered positive feedback for the agency.

OTHER MANAGEMENT OBJECTIVES

ACQUISITIONS

The agency recognized the need for clear and consistent guidance for staff engaged in the NRC's acquisition and financial management processes and related efforts following the recent centralization of acquisition and the altered role of Contracting Officer's Representatives (CORs). To accomplish this, the NRC developed and began implementation of an initiative to standardize acquisition and financial management activities across the agency, particularly as they relate to CORs. This effort included reviewing best practices, particularly among comparably-sized agencies to ensure these best practices were considered and incorporated into the recommendations. One significant accomplishment included updating the NRC Enterprise Acquisition Toolset to provide the CORs and other users with a simple, streamlined interface to make it easier to access tools and guidance related to the acquisition process.

ADMINISTRATIVE SERVICES

In response to declining staffing and the need to develop further efficiencies in rent and utility costs, the NRC established the key factors and criteria needed, and developed a plan to provide opportunities for right sizing space, including looking at space utilization, lease costs, lease expiration and terms, dismissal of the space to support release, and marketability of leased space to

other Federal tenants. In addition, in order to ensure the efficiency and effectiveness of the operation of the agency in the Rockville, Maryland, area, a 15-year succeeding lease was signed for the Two White Flint North (TWFN) building between the Lessor and the General Services Administration, and the agency subsequently signed another 15-year occupancy agreement for the TWFN building.

The NRC developed a number of initiatives in order to improve the security of the facilities and the staff. These included developing an Insider Threat Program in accordance with Executive Orders, training for all staff on actions to take in the event of an active shooter, and making other security enhancements.

FINANCIAL MANAGEMENT

During FY 2016, the agency established the formation of the "Programmatic Senior Assessment Team (PSAT)," which will serve as a governance body to direct the assessment of internal control over program operations as required by Management Directive 4.4, "Internal Control." For efficiency, the PSAT will begin meeting as part of the Quarterly Performance Review (QPR) process in Q1 FY 2017.

The NRC published four new Management Directives to update policy and guidance on strategic planning, budget formulation, budget execution, and performance management. This represented an improved description of the agency's integrated process to plan, budget, and assess its performance.

The agency implemented a new Accounts Receivable Dashboard reporting tool, which provides transparency and easy access to important fee billing and collection data, and developed data integrity reports that identify issues with information used to accurately bill licensees. It also developed and implemented a more efficient and streamlined refund process, which reduces processing time by 90 percent.

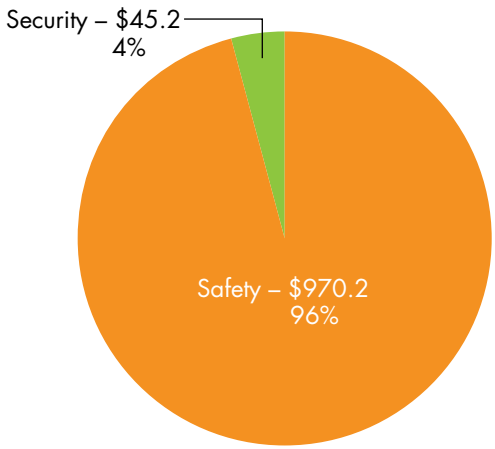
The NRC adapted the funds control in the agency accounting system (FAIMIS) to accommodate new Congressional control point requirements and completed fee billing batch processing enhancements to streamline monthly and quarterly billing cycles. The agency also met all new Federal reporting requirement milestones for SF-133, Government Treasury Account Symbol, and intra-governmental reporting to the U.S. Treasury and OMB and implemented new reporting in OMB-MAX for obligation activity by Treasury Standard General Ledger, Program Activity, and Budget Object Class. In addition, the NRC has developed a plan and is on course to implement the requirements of the *Digital Accountability and Transparency Act* (DATA Act) for its financial reporting in May 2017.

The agency issued the FY 2016 Final Fee Rule. In December 2015, the *Fixing America's Surface Transportation* (FAST) *Act* was passed. Title 41 of FAST created a new governance structure, set of procedures, and funding mechanisms with a goal to improve the timeliness, predictability, and transparency of the Federal permitting and environmental review process for major infrastructure projects (i.e., "covered projects") across a broad range of sectors and project types. The NRC is specifically identified in the statute as one of the Federal Agencies that must participate in the newly-established Federal Permitting Improvement Steering Council.

Costing To Goals

The NRC continues work to improve its cost management capabilities to better align its costs with desired outcomes. This year's PAR presents the full cost of achieving the Safety and Security goals for the NRC's major programs, Nuclear Reactor Safety and Nuclear Materials and Waste Safety. The total cost of achieving the agency's strategic goals was $1,015.4 million. The cost of achieving the agency's Safety goal was $970.2 million and the cost of achieving the agency's Security goal was $45.2 million (see Figure 20).

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



Program Evaluations

The NRC conducted several program evaluations of its regulatory operations during FY 2016. The evaluations were conducted for both the nuclear reactor and the nuclear materials programs.

REACTOR OVERSIGHT PROCESS (ROP) ANNUAL SELF-ASSESSMENT

Objective: The ROP is the foundational program that enables the NRC to successfully complete its reactor oversight mission. The ROP uses risk information, when available, informed by expert judgment, to evaluate inspection findings. Since its introduction in 2000, sufficient experience has accumulated to allow refinement of the thresholds requiring escalation of NRC attention in response to licensee performance. The NRC has formulated a rational means for assessing the current thresholds. Among other activities, the agency examines occasions of escalation, whether escalation was effective, and whether escalation would have occurred for various levels of events in enhancing licensee performance.

Scope: The ROP self-assessment approach was redesigned to better assess the effectiveness of a mature program, focusing on the efficacy of recent changes to the program, performing in-depth reviews of specific areas of interest, and verifying agency adherence to program governance. The new self-assessment approach ensures that the ROP is being implemented reliably (consistently and as designed) across all regional and headquarters offices. Additionally, the new approach ensures that the staff appropriately invests resources on addressing value-added insights that improve the efficiency and effectiveness of the ROP.

Outcome: The ROP self-assessment for calendar year (CY) 2015 was completed in April 2016 (SECY-16-0047). After the one-year suspension of self-assessments in CY 2014 to focus on revising the self-assessment process and implementing other ROP improvements, the staff completed the CY 2015 self-assessment using elements of the revised process. Because CY 2015 was a transition year, the planned self-assessment program was not fully implemented. The results of the CY 2015 self-assessment indicate that the ROP met its program goals and achieved its intended outcomes. The staff found that the ROP also met the agency's strategic goals of ensuring safety and security through objective, risk-informed, understandable, and predictable oversight, as described in the FY 2014–2018 Strategic Plan. The staff implemented several ROP improvements in CY 2015, will continue to solicit input from the NRC's internal and external stakeholders to further improve the ROP, and will seek Commission approval of changes, as appropriate.

CONSTRUCTION REACTOR OVERSIGHT PROCESS (cROP)

Objective: The objectives of the annual cROP self-assessment are as follows:

1. To determine whether the ongoing program is effective in supporting the achievement of the performance goals and the agency's strategic goals
2. To provide timely, objective information to inform program planning and to develop recommended improvements to the cROP
3. Provide the results of the cROP self- assessment program, including any conclusions and resultant improvement actions

Scope: The self-assessment includes the following:

1. Evaluations of the construction inspection program, the construction significance determination process, and the construction assessment and enforcement programs
2. Discussions and assessments of cROP communications, performance metrics, and resource expenditures
3. Updates on the ITAAC and construction experience programs

Outcome: The CY 2015 self-assessment, issued in April 2016, concluded that the cROP met its program goals and the agency's strategic goals of ensuring safety and security through objective, risk-informed, understandable, predictable, open, and effective oversight. For the second year in a row, all 11 performance metrics met the specified criteria, and no changes were recommended to the program.

VENDOR INSPECTION PROGRAM (VIP)

Objective: The annual VIP self-assessment determines if the VIP is meeting the following objectives:

1. Verify that applicants and licensees are providing effective oversight of supply chain
2. Effectively communicate with stakeholders
3. Perform timely and adequate allegation follow-up
4. Ensure that agency staff has necessary knowledge and skills

Scope: The self-assessment evaluates performance metrics under each objective to demonstrate that overarching goals are being supported.

Outcome: The FY 2015 self-assessment, issued in December 2015, demonstrated the VIP met its program goals. Ten of 11 performance metrics met the predetermined criteria, and the agency identified corrective actions for the one that did not. The out-of-standard metric identified in 2014 was met in 2015, demonstrating that the corrective actions implemented last year were successful.

ANNUAL UPDATE ON THE STATUS OF EMERGENCY PREPAREDNESS AND INCIDENT RESPONSE PROGRAM ACTIVITIES

Objective: To update the Commission on the NRC's emergency preparedness (EP) and incident response (IR) program activities for FY 2016 and to provide an assessment of the NRC's EP and IR programs with a focus on current and projected activities.

Scope: The assessment covered maintaining readiness of the NRC response organization and operations centers, enhancing preparedness and response guidance, and ensuring clear expectations and compatibility with stakeholders and broader all-hazards approaches.

Outcome: The FY 2015 report, issued in November 2015, indicates that the NRC's EP and IR program and activities continue to align well with the agency's strategic security and safety goals. The FY 2016 report is expected to show the same results.

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM (IMPEP)

Objective: In cooperation with the Agreement States, the NRC administers the IMPEP program, which consists of detailed team evaluations of NRC and Agreement State licensing and oversight programs on a nominal 4-year cycle with intermediate periodic meetings. This process provides the basis for determining whether each NRC region and Agreement State program remains adequate to protect public health and safety and, for the Agreement States, whether the programs are compatible with the NRC program and regulations.

Scope: All IMPEPs use the following common indicators in the assessment and place primary emphasis on performance:

1. Technical Staffing and Training
2. Status of Materials Inspection Program
3. Technical Quality of Inspections
4. Technical Quality of Licensing Actions
5. Technical Quality of Incident and Allegation Activities

When programmatic weaknesses exist in an Agreement State program, NRC primarily uses two processes, Heightened Oversight and Monitoring, to ensure that an Agreement State program needing improvement is progressing toward re-establishing a fully satisfactory program. Currently, five States are on Monitoring (GA, MA, NH, NY, RI) and none on Heightened Oversight. For Monitoring, a State's managers and staff must participate in quarterly calls with NRC staff to discuss program status. The decision to put an Agreement State program on either Monitoring or Heightened Oversight is made at the direction of the Management Review Board (MRB).

Outcome: In FY 2016, no NRC Regions or other programs were due for this evaluation. NRC Region I was assessed in FY 2015; NRC Region III is the next region due for this assessment in early FY 2017. All NRC programs currently have a finding of "adequate to protect public health and safety." There were nine Agreement States evaluated through the IMPEP process in FY 2016. Of the 37 Agreement State programs, 33 are "adequate to protect public health and safety" while four (KY, MA, NC, and RI) have a finding of "adequate to protect public health and safety but needs improvement." Regarding compatibility, 33 of the 37 Agreement State programs have a program finding of "compatible with NRC's program." Four (CO, NH, NY, and UT) have a program finding of "not compatible with NRC's program" due to differences in legislation or regulations when compared to the NRC's.

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.

As part of the NRC's regulatory requirement under 10 CFR Part 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 millisieverts (5 rem). The agency uses the data in the following ways:

1. As a metric in the agency's ROP to evaluate the effectiveness of licensee programs used to keep 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.
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.

The agency publishes NUREG-0713, "Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities," annually. NUREG-0713, Volume 36, for CY 2014 was issued in April 2016. It is available on the agency's Web site: http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0713/v36/#pub-info. 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 AO 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 38, for FY 2015, issued in May 2016, is available on the agency's Web site: http://www.nrc.gov/docs/ML1614/ML16145A026.pdf.

The NRC finds these data sources credible for the following reasons:

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.
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, nonsensitive reports submitted by Agreement States and NRC licensees are available to the public through ADAMS, accessible through the agency's Web site http://www.NRC.gov/reading-rm/adams.html.

The NRC verifies the reliability and technical accuracy of event information reported to the agency and 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 AO criteria are validated and verified before being reported to Congress.

Additionally, the NRC is 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 published its first dataset in October 2009, and, in response to the Open Government directive, published three additional datasets in January 2010. As of the end of FY 2016, 39 datasets have been published.

The NRC launched its Master Data Management (MDM) Program in January 2015. The goal of the MDM Program is to ensure that mission critical systems and staff have timely access to data collected, stored, and processed across the enterprise. The MDM Program will ensure that agency wide data is accurate; reduce and/or eliminate the storage of duplicate information; provide controls to improve data quality; and provide a foundation for information sharing and exchange. MDM will also be an umbrella where more direct public digital services and their improvements, will be consolidated and integrated. The NRC will continue to encourage public feedback on its high-value information and, consistent with agency policy and guidance provided by data.gov, will continue to add new datasets to its high-value dataset publication plan.

INFORMATION SECURITY

The NRC's information security program performs the following functions:

1. Protect NRC and licensee information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction.
2. Protect electronic control functions from unauthorized access or manipulation.
3. Ensure 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:

1. 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.
2. 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, as well as that similar controls for licensees regulated by the NRC comply with NRC information security regulations.
3. Ensure that suspected or actual information security violations are evaluated and that appropriate sanctions are considered.

4. Ensure that the NRC has made sufficient preparations for information security-related emergencies and incidents.
5. Ensure that internal information security program components complement each other and are periodically evaluated and improved.

PERFORMANCE DATA COMPLETENESS AND RELIABILITY

The NRC assesses 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 assess the completeness and reliability of the performance data used in this report. The process for ensuring that the data are complete and reliable is based upon reporting by the applicable business line leaders at the agency's Quarterly Performance Review meetings. The report, "Data Collection Procedures for Verification and Validation of Performance Indicators," contains the processes the agency uses to collect, validate, and verify performance data. This report is on page 15 of the NRC's FY 2017 Congressional Budget Justification and is located on the NRC Web site at: http://www.nrc.gov/docs/ML1603/ML16036A086.pdf.

DATA COMPLETENESS

The NRC considers data to be 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 indicator. In addition, all of the data are reported for each indicator. As a result, the data presented in this report meet the requirements for data completeness.

DATA RELIABILITY

The NRC considers data to be 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.

U.S. NUCLEAR REGULATORY COMMISSION

Chapter 3

Financial Statements and Auditors' Report

U.S. NUCLEAR REGULATORY COMMISSION

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) 2016 Performance and Accountability Report. An independent auditor has rendered an unmodified opinion on the NRC financial statements for the thirteenth consecutive year. The auditor has also rendered an unmodified opinion on our internal control over financial reporting, and noted no reportable instances of noncompliance with pertinent provisions of laws and regulations.

During FY 2016, the agency continued implementation of its Project Aim initiative to improve efficiency, effectiveness, and agility for responding to a range of possible futures while fulfilling the NRC's mission. NRC staff reviewed agency work to determine what should continue, be re-sized, or be shed and identified approximately $50 million of reductions over 18-months while still accomplishing our safety and security mission. NRC will implement more long term efficiencies in FY 2018 and beyond. More information on these cost saving efforts may be found in SECY-16-0009, "Recommendations Resulting From the Integrated Prioritization and Re-Baselining of Agency Activities" (http://www.nrc.gov/docs/ML1602/ML16028A189.html) and SECY-16-0035, "Additional Re-Baselining Products" (http://www.nrc.gov/docs/ML1607/ML16077A184.html). Also, the NRC looked at how to transform our calculation and transparency of fees for service and annual license fees. This effort evaluated recommendations from NRC staff and outside stakeholders and resulted in over 50 improvement options. The NRC has already begun to implement these changes and is described fully in SECY-16-0097, "Fee Setting Improvements and Fiscal Year 2017 Proposed Fee Rule" (http://www.nrc.gov/docs/ML1621/ML16210A472.html).

In FY 2016, the NRC completed significant financial system improvements. For example, the NRC migrated the agency's core general ledger system, the Financial Accounting and Integrated Management Information System (FAIMIS) to a FedRAMP cloud environment which will provide security cost savings in the future. The NRC will update FAIMIS in FY 2017 to utilize Department of Treasury's Invoice Processing Platform and to implement all *Digital Accountability and Transparency Act of 2014* mandates.

The agency also continued to streamline and improve its Programmatic Internal Control Framework to align with Government Accountability Office's updated Standards for Internal Control in the Federal Government, improve processes, increase management accountability, and provide a more interdependent approach. The NRC remains committed to its mission of ensuring the safety and security of the Nation's civilian use of radioactive materials in the most effective and efficient manner. I am gratified that we have continued using sound business practices to accomplish our regulatory mission and am confident that we will continue such improvements in the future.

Maureen E. Wylie
Chief Financial Officer
November 1, 2016

Financial Statements

Balance Sheet *(in thousands)*

As of September 30,	2016	2015
Assets		
Intragovernmental		
Fund balance with Treasury (Note 2)	**$ 368,237**	$ 353,838
Accounts receivable (Note 3)	**7,754**	11,095
Advances and prepayments	**14,169**	11,269
Total intragovernmental	**390,160**	376,202
Accounts receivable, net (Note 3)	**78,383**	84,944
Property and equipment, net (Note 4)	**80,793**	79,056
Other	**26**	19
Total Assets	**$ 549,362**	$ 540,221
Liabilities		
Intragovernmental		
Accounts payable	**$ 7,729**	$ 13,645
Other (Note 5)	**5,972**	5,215
Total intragovernmental	**13,701**	18,860
Accounts payable	**23,204**	23,366
Federal employee benefits (Note 6)	**5,608**	6,040
Other (Note 5)	**85,486**	79,700
Total Liabilities	**127,999**	127,966
Net Position		
Unexpended appropriations	**297,438**	283,151
Cumulative results of operations (Note 8)	**123,925**	129,104
Total Net Position	**421,363**	412,255
Total Liabilities and Net Position	**$ 549,362**	$ 540,221

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

STATEMENT OF NET COST *(IN THOUSANDS)*

For the fiscal years ended September 30,	2016	2015
Nuclear Reactor Safety		
Gross costs	**$ 795,190**	$ 838,682
Less: Earned revenue	**(769,847)**	(814,280)
Total Net Cost of Nuclear Reactor Safety (Note 9)	**25,343**	24,402
Nuclear Materials and Waste Safety		
Gross costs	**220,165**	244,777
Less: Earned revenue	**(94,167)**	(86,554)
Total Net Cost of Nuclear Materials and Waste Safety (Note 9)	**125,998**	158,223
Net Cost of Operations	**$ 151,341**	$ 182,625

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

Statement of Changes in Net Position *(in thousands)*

For the fiscal years ended September 30,	2016	2015
Cumulative Results of Operations		
Beginning Balance	**$ 129,104**	$ 156,818
Adjustments (Note 8)	**3,180**	-
Beginning Balance, as adjusted	**$ 132,284**	$ 156,818
Budgetary Financing Sources		
Appropriations used (Note 11)	**115,575**	126,879
Nonexchange revenue (Note 11)	**274**	373
Other Financing Sources		
Imputed financing from costs absorbed by others (Note 11)	**27,407**	28,032
Other	**(274)**	(373)
Total Financing Sources	**142,982**	154,911
Net Cost of Operations	**(151,341)**	(182,625)
Net Change	**(8,359)**	(27,714)
Cumulative Results of Operations	**$ 123,925**	$ 129,104
Unexpended Appropriations		
Beginning Balance	**$ 283,151**	$ 306,226
Adjustments (Note 8)	**(3,180)**	-
Beginning Balance, as adjusted	**$ 279,971**	$ 306,226
Budgetary Financing Sources		
Appropriations received	**133,042**	103,804
Appropriations used (Note 11)	**(115,575)**	(126,879)
Other adjustments	**-**	-
Total Budgetary Financing Sources	**17,467**	(23,075)
Total Unexpended Appropriations	**297,438**	283,151
Net Position	**$ 421,363**	$ 412,255

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

Statement of Budgetary Resources *(in thousands)*

For the fiscal years ended September 30,	2016	2015
Budgetary Resources		
Unobligated balance brought forward, October 1	**$ 28,000**	$ 53,464
Recoveries of prior-year unpaid obligations	**8,858**	5,047
Recoveries of prior-year paid obligations	**156**	3,372
Unobligated balance from prior-year budget authority, net	**37,014**	61,883
Appropriations	**1,002,136**	1,015,301
Spending authority from offsetting collections	**4,794**	4,629
Total Budgetary Resources	**$ 1,043,944**	$ 1,081,813
Status of Budgetary Resources		
New obligations and upward adjustments (total) (Note 12)	**$ 1,002,317**	$ 1,053,813
Unobligated balance, end of year		
Apportioned, unexpired accounts	**39,880**	23,259
Exempt from apportionment, unexpired accounts	**1,382**	2,837
Unapportioned, unexpired accounts	**-**	1,904
Unexpired unobligated balance, end of year	**41,262**	28,000
Expired unobligated balance, end of year	**365**	-
Unobligated balance, end of year (total)	**41,627**	28,000
Total Status of Budgetary Resources	**$ 1,043,944**	$ 1,081,813
Change in Obligated Balance		
Unpaid obligations		
Unpaid obligations brought forward, October 1	**$ 327,652**	$ 325,876
New obligations and upward adjustments (total) (Note 12)	**1,002,317**	1,053,813
Outlays (gross)	**(992,146)**	(1,046,990)
Recoveries of prior-year unpaid obligations	**(8,858)**	(5,047)
Unpaid obligations, end of year	**328,965**	327,652
Uncollected payments		
Uncollected payments, Federal sources, brought forward, October 1	**$ (1,814)**	$ (1,949)
Change in uncollected payments, Federal sources	**(541)**	135
Uncollected payments, Federal sources, end of year	**$ (2,355)**	$ (1,814)
Memorandum entries:		
Obligated balances, start of year	**$ 325,838**	$ 323,927
Obligated balances, end of year	**$ 326,610**	$ 325,838
Budget Authority and Outlays, Net		
Budget Authority, gross	**$ 1,006,930**	$ 1,019,930
Actual offsetting collections	**(4,409)**	(8,136)
Change in uncollected payments, Federal sources	**(541)**	135
Recoveries of prior year paid obligations	**156**	3,372
Budget Authority, Net	**$ 1,002,136**	$ 1,015,301
Outlays, gross	**$ 992,146**	$ 1,046,990
Actual offsetting collections	**(4,409)**	(8,136)
Outlays, net	**987,737**	1,038,854
Distributed offsetting receipts	**(869,094)**	(911,501)
Agency Outlays, Net	**$ 118,643**	$ 127,353

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

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 U.S. Federal Government that the Congress created to regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of the 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) has provided a transfer of funds 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 for FY 2016 and FY 2015 (prior- year) are presented on a comparative basis. They 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 generally accepted accounting principles (GAAP) for Federal entities of the United States and the form and content for entity financial statements specified by the Office of Management and Budget (OMB) in Circular 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 the agency's operations and mission.

Presentation of the budget accounts on the Combining Statements of Budgetary Resources aggregates the 2-year Office of the Commission funds with the no-year Salaries and Expenses appropriation. The statement also aggregates the no-year and 2-year Office of the Inspector General funds.

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.

Congress passed the *Consolidated Appropriations Act, 2016* that funded the NRC's budget request of $990 million for FY 2016, not more than $7.5 million of the budget may be made available for the Office of the Commission as a 2-year appropriation that is available for obligation by the NRC through September 30, 2017. Additionally, Congress enacted a 2-year appropriation of $12.1 million for the OIG, which is available for obligation by the NRC through September 30, 2017.

In FY 2015, Congress passed the *Consolidated Appropriations Act, 2015* that funded the NRC's budget request of $1.00 billion for FY 2015, not more than $7.5 million of the budget may be made available for the Office of the Commission as a 2-year appropriation that is available for obligation by the NRC through September 30, 2016. Additionally, Congress enacted a 2-year appropriation of $12.1 million for the OIG, which is available for obligation by the NRC through September 30, 2016.

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 (SBR) presents budgetary resources available to the NRC and changes in obligations during the year.

E. REVENUES AND OTHER FINANCING SOURCES

The NRC is required to offset its appropriations by revenue received during the FY from the assessment of fees. The NRC assesses two types of fees to recover its appropriation:

1. Fees assessed to recover the NRC's costs of providing individually identifiable services to specific applicants and licensees under Title 10 of the *Code of Federal Regulations* (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*.

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 Materials 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 NRC invoices licensees for materials annual fees 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 a financing source (appropriations used) at the time goods and services are received. Periodically during the FY, appropriations recognized are reduced by the amount of assessed fees collected during the FY to the extent of new budget authority for the year. Collections that exceed 90 percent of the NRC's appropriation, excluding amounts appropriated for Waste Incidental to Reprocessing, generic homeland security, and Inspector General services for the Defense Nuclear Facility Safety Board, 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 the 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 leased through the General Services Administration (GSA), for 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 of the asset. 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 calculates the accounts payable amount using an average based on the historical trend of validated accruals. The estimation methodology is validated quarterly.

K. LIABILITIES NOT COVERED BY BUDGETARY RESOURCES

Liabilities not Covered by Budgetary Resources represents the amount of future funding needed to pay the accrued unfunded expenses as of the end of the FY. These liabilities are not funded from current or prior-year appropriation and assessments, but are funded from future appropriations and assessments.

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. Liabilities cannot be paid by the NRC without an appropriation. Liabilities for which an appropriation has not been enacted are classified as "Liabilities Not Covered by Budgetary Resources."

Intragovernmental

The NRC records a liability to the 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 is 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

This category includes the amount of accrued annual leave earned by the NRC employees, but not yet taken; and contingent liabilities which have the probable likelihood of an adverse outcome.

L. CONTINGENCIES

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. Accounting treatment of the contingency depends on if the likely outcome is considered probable, reasonably possible, or remote.

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. This type of contingency is recorded in the financial statements as a contingent liability (included in Other Liabilities) and as an expense, and 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 reasonably possible when the chance of the future confirming event or events occurring is more than remote but less than probable. This type of contingency is disclosed in the notes to the financial statements (Note 17) 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 remote when the chance of the future event or events occurring is slight. This type of contingency is not recognized as a liability and as an expense in the financial statements, nor disclosed in the notes when the chance of the future event or events occurring is remote.

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 the U.S. Office of Personnel Management (OPM). The portion of the current and estimated future outlays for FERS and CSRS not paid by the NRC is included in NRC's financial statements as an imputed financing source in the Statement of Changes in Net Position and as program costs on the Statement of Net Cost.

The NRC employees make mandatory contributions through payroll deductions to their retirement plan as required by law. For employees belonging to FERS and receiving an appointment prior to January 1, 2013, the NRC withheld 0.8 percent of base pay earnings and provided 13.7 percent in 2016 and 13.2 percent in 2015 for the employer contribution. Per *Public Law 112-96, Section 5001 of the Middle Class Tax Relief and Job Creation Act of 2012*, employees hired after January 1, 2013, as Federal Employees Retirement System - Revised Annuity Employees (FERS-RAE) must pay 3.1 percent of their salary to retirement contributions with 11.9 percent in 2016 and 11.1 percent in 2015 for employer matching 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 2016 and FY 2015.

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, but is subject to the maximum contribution of $18.0 thousand in 2016 and 2015. For employees participating in FERS, the NRC automatically contributes 1 percent of base pay to the employee's 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 the NRC's contributions is transferred to the Federal Retirement Thrift Investment Board.

O. LEASES

The NRC has two types of leases: Capital leases and Operating leases (Note 7):

Capital Leases

Capital leases are leases that transfer substantially all the benefits and risks of ownership to the lessee. Capital leases are reported in the Balance Sheet as an asset under Property and Equipment and a liability (Other Liabilities). If at its inception, a lease meets one or more of the following four criteria, the lease should be classified as a capital lease by the lessee:

1. The lease transfers the ownership of the property to the lessee by the end of the lease term.
2. The lease contains an option to purchase the leased property at a bargain price.
3. The lease term is equal or greater than 75 percent of the estimated economic life of the leased property.
4. The present value of rental or other minimum lease payments, excluding that portion of the payments representing executor cost, equals or exceeds 90 percent of the fair value of the leased property.

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

Operating Leases

The Federal Accounting Standards Advisory Board (FASAB) defines an operating lease as a lease in which the Federal entity does not assume the risks of ownership of the property, plant, and equipment (PP&E). It is an agreement conveying the right to use property for a limited time in exchange for periodic rental payments.

Operating leases at the NRC consist of real property leases with GSA. The leases are for the NRC's Headquarters,

regional offices, and TTC. 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 unliquidated obligations and expenditures not yet disbursed. 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. TRANSFERS

The NRC is a party to nonexpenditure transfers of funds, as a receiving entity, with the USAID. 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. Transfers are legal delegations by one agency of its authority to obligate budget authority and outlay funds to another agency.

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 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 the public health and safety, and the environment, and protects against radiological sabotage and theft or diversion of special nuclear materials. The Nuclear Reactor Safety program contains the following activities: operating reactors and new reactors.

The Nuclear Materials and Waste Safety program encompasses all the NRC efforts to protect the public health and safety and the environment and ensures the secure use and management of radioactive materials. The Nuclear Materials and Waste Safety program contains the following activities: fuel facilities, nuclear materials users, decommissioning and low-level waste, spent fuel storage and transportation, and 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,	2016	2015
Fund Balances		
Appropriated funds	**$ 366,751**	$ 350,368
Nuclear Waste Fund	**1,486**	3,470
Other fund types	**-**	-
Total	**$ 368,237**	$ 353,838
Status of Fund Balance with Treasury		
Unobligated balance		
Available - Appropriated funds	**$ 41,262**	$ 26,096
Unavailable		
Unapportioned, unexpired accounts	**-**	1,904
Expired accounts	**365**	-
Obligated balance not yet disbursed	**326,610**	325,838
Total	**$ 368,237**	$ 353,838

The Fund Balance with Treasury consists of the unobligated and obligated budgetary account balances, to including NWF activity. The NWF unobligated balance is $1.4 million and $2.8 million as of September 30, 2016, and 2015, respectively.

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

Note 3 – Accounts Receivable

As of September 30,	2016	2015
Intragovernmental		
Fee receivables and reimbursements	**$ 7,754**	$ 11,095
Receivables with the Public		
Materials and facilities fees-billed	**$ 9,101**	$ 7,049
Materials and facilities fees-unbilled	**73,077**	79,913
Other	**118**	161
Total Receivables with the Public	**82,296**	87,123
Less: Allowance for uncollectible accounts	**(3,913)**	(2,179)
Total Receivables with the Public, Net	**$ 78,383**	$ 84,944
Total Accounts Receivable	**$ 90,050**	$ 98,218
Less: Allowance for uncollectible accounts	**(3,913)**	(2,179)
Total Accounts Receivable, Net	**$ 86,137**	$ 96,039

NOTE 4 – PROPERTY AND EQUIPMENT, NET

As of September 30,				2016	2015
Fixed Assets Class	**Service Years**	**Acquisition Value**	**Accumulated Depreciation and Amortization**	**Net Book Value**	**Net Book Value**
Equipment	5-8	$ 8,477	$ (7,791)	**$ 686**	$ 1,080
Leased equipment	5-8	1,318	(619)	**699**	672
IT software	5	58,906	(52,700)	**6,206**	8,338
IT software under development	-	12,901	-	**12,901**	4,596
Leasehold improvements	20	119,250	(64,316)	**54,934**	56,885
Leasehold improvements in progress	-	5,367	-	**5,367**	7,485
Total		$ 206,219	$ (125,426)	**$ 80,793**	$ 79,056

In FY 2009, the NRC signed an Interagency Agreement with the GSA to fund the buildout of the NRC office space for the Three White Flint North (3WFN) office building. The NRC capitalized the cost of the buildout as a leasehold improvement, for an original total cost of $51.7 million. However, to comply with the OMB's Freeze the Footprint initiative, the U.S. Congress determined that the NRC should only occupy 6 of the 14 floors of the 3WFN office building. Subsequently, the GSA leased 8 of the 14 floors to the U.S. Food and Drug Administration (FDA). The FDA occupied 4 floors during the 4th quarter of FY 2014, and 4 additional floors as well as the cafeteria space during the 3rd quarter of FY 2015. Accordingly, the NRC recognized a loss of $12.4 million in FY 2015 for the remaining net realizable value of the buildout cost for the 4 floors of the 3WFN office space and cafeteria occupied by the FDA.

In accordance with Statement of Federal Financial Accounting Standards (SFFAS) No. 44, Accounting for Impairment of General Property, Plant, and Equipment Remaining in Use, the NRC repairs or replaces capital assets as required and does not recognize any other impairment losses.

NOTE 5 – OTHER LIABILITIES

As of September 30,	2016	2015
Intragovernmental		
Liability to the U.S. Treasury General Fund for miscellaneous receipts	**$ 36**	$ 35
Liability for advances from other agencies	**20**	15
Accrued workers' compensation	**1,361**	1,522
Accrued unemployment compensation	**29**	18
Employee benefit contributions	**4,526**	3,625
Total Intragovernmental Other Liabilities	**$ 5,972**	$ 5,215
Other Liabilities		
Accrued annual leave	**$ 43,740**	$ 46,491
Accrued salaries and benefits	**19,585**	14,058
Contract holdbacks, advances, capital lease liability, and other	**6,383**	7,008
Contingent Liabilities	**-**	-
Grants Payable	**15,778**	12,143
Total Other Liabilities	**$ 85,486**	$ 79,700
Total Intragovernmental and Other Liabilities	**$ 91,458**	$ 84,915

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

Note 6 – Liabilities Not Covered by Budgetary Resources

As of September 30,	2016	2015
Intragovernmental		
FECA paid by DOL	**$ 1,361**	$ 1,522
Accrued unemployment compensation	**29**	18
Federal Employee Benefits		
Future FECA	**5,608**	6,040
Other		
Accrued annual leave	**43,740**	46,491
Contingent Liabilities	**-**	-
Total Liabilities Not Covered by Budgetary Resources	**50,738**	54,071
Total Liabilities Covered by Budgetary Resources	**77,261**	73,895
Total Liabilities	**$ 127,999**	$ 127,966

Liabilities not Covered by Budgetary Resources represents the amount of future funding needed to pay the accrued unfunded expenses as of September 30, 2016, and 2015. 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 2016, projected annual payments were discounted to present value based on the OMB's interest rate assumptions, which were interpolated to reflect the average duration in years for income payments and medical payments. The interest rate assumptions used for FY 2016 discounting were 3.134 percent in year 1 and year 2 for wage benefits, and 2.496 percent in year 1 and year 2 for medical benefits.

Note 7 – Leases

As of September 30,	2016	2015
Assets under capital leases:		
Copiers and booklet maker	**$ 1,318**	$ 1,462
Accumulated depreciation	**(619)**	(790)
Net assets under capital leases	**$ 699**	$ 672

As of September 30,				2016	2015
Future Lease Payments Due:	**Fiscal Year**	**Capital**	**Operating**		
	2016	$ -	$ -	**$ -**	$ 39,928
	2017	293	39,058	**39,351**	39,262
	2018	298	35,504	**35,802**	35,711
	2019	75	24,288	**24,363**	22,815
	2020 and thereafter	-	290,641	**290,641**	135,464
	Total Lease Liability	666	389,491	**390,157**	273,180
Subtract: Imputed Interest		(14)	-	**(14)**	(19)
Total Future Lease Payments		$ 652	$ 389,491	**$ 390,143**	$ 273,161

The Capital Lease Liability of $690 thousand for reproduction equipment is included in Other Liabilities (Note 5). For Future Lease Payments, the NRC calculates the Capital Lease Liability and subtracts the imputed interest to arrive at the Total Future Lease Payments. The reproduction equipment is depreciated over 5 years using the straight-line method with no salvage value.

The land and buildings in which the NRC operates are leased through the GSA. The NRC Headquarters complex consists of three office buildings and a warehouse located in Rockville, MD, with one of the headquarters office buildings jointly leased with the FDA. The NRC has four regional offices located in King of Prussia, PA, Atlanta, GA, Lisle, IL, and Arlington, TX. In addition, the NRC operates and maintains a Technical Training Center (TTC) located in Chattanooga, TN.

In 3WFN, the NRC occupies 138,035 useable square feet consisting of 42.8% of the building and the NRC is no longer the primary tenant. FDA occupies the other floors. Future plans to reduce the NRC footprint call for the NRC to release one floor of the 3WFN office building per year in years 2018 thru 2021. The NRC will not recognize savings for these floors until another federal agency leases the space.

The NRC leases for land and buildings do not have renewal options or contingent rental restrictions. The joint lease for the 3WFN office building with the FDA and the leases for the four regional office buildings have escalation clauses. The leases for the two remaining headquarters office buildings, the warehouse, and the TTC do not have escalation clauses.

NOTE 8 – CUMULATIVE RESULTS OF OPERATIONS

As of September 30,	2016	2015
Liabilities not covered by budgetary resources (Note 6)	**$ (50,738)**	$ (54,071)
Investment in property and equipment, net (Note 4)	**80,793**	79,056
Contributions from foreign cooperative research agreements	**5,581**	4,833
Nuclear Waste Fund	**1,486**	3,470
Office of the Commission (financed by Fees)	**1,198**	-
Accounts receivable - fees	**85,557**	95,814
Other	**48**	2
Cumulative Results of Operations	**$ 123,925**	$ 129,104

The FY 2016 beginning balance of Cumulative Results of Operations was adjusted upward by $3.2 million for prior year license fee transfers recorded to the Office of the Commission 2-year accounts that were originally classified as appropriated capital. The FY 2016 beginning balance of Unexpended Appropriations was adjusted downward by $3.2 million.

NOTE 9 – STATEMENT OF NET COST

For the fiscal years ended September 30,	2016	2015
Nuclear Reactor Safety		
Intragovernmental gross costs	**$ 227,113**	$ 243,406
Less: Intragovernmental earned revenue	**(53,919)**	(57,412)
Intragovernmental net costs	**173,194**	185,994
Gross costs with the public	**568,077**	595,276
Less: Earned revenues from the public	**(715,928)**	(756,868)
Net costs with the public	**(147,851)**	(161,592)
Total Net Cost of Nuclear Reactor Safety	**$ 25,343**	$ 24,402
Nuclear Materials and Waste Safety		
Intragovernmental gross costs	**$ 56,548**	$ 64,238
Less: Intragovernmental earned revenue	**(6,505)**	(7,122)
Intragovernmental net costs	**50,043**	57,116
Gross costs with the public	**163,617**	180,539
Less: Earned revenues from the public	**(87,662)**	(79,432)
Net costs with the public	**75,955**	101,107
Total Net Cost of Nuclear Materials and Waste Safety	**$ 125,998**	$ 158,223

"Nuclear Reactor Safety" and "Nuclear Materials and Waste Safety" represent the NRC's two major programs as identified in the NRC Annual Performance Plan.

Note 10 – Exchange Revenues

For the fiscal years ended September 30,	2016	2015
Fees for licensing, inspection, and other services	$ 858,851	$ 896,184
Revenue from reimbursable work	5,163	4,650
Total Exchange Revenues	$ 864,014	$ 900,834

Note 11 – Financing Sources Other Than Exchange Revenue

For the fiscal years ended September 30,	2016	2015
Appropriations Used		
Collections are used to reduce the fiscal year's appropriations recognized:		
Funds consumed	$ 987,845	$ 1,041,101
Less: Collection of fees assessed	(869,089)	(911,501)
Less: Nuclear Waste Funding Expense	(1,983)	(2,721)
Less: Office of the Commission (financed by Fees)	(1,198)	-
Total Appropriations Used	$ 115,575	$ 126,879

Funds consumed include $25.9 million and $50.7 million through September 30, 2016, and 2015, respectively, of available funds from prior years.

For the fiscal years ended September 30,	2016	2015
Non-Exchange Revenue		
Civil penalties	$ 109	$ 195
Miscellaneous receipts	165	178
Non-Exchange Revenue	274	373
Contra-Revenue	(274)	(373)
Total Non-Exchange Revenue, Net of Funds Returned to the U.S. Treasury General Fund	$ -	$ -

For the fiscal years ended September 30,	2016	2015
Imputed Financing		
Civil Service Retirement System	$ 5,526	$ 6,976
Federal Employees Retirement System	2,295	3,282
Federal Employee Health Benefit	19,500	17,686
Federal Employee Group Life Insurance	86	87
Judgments/Awards	-	-
Total Imputed Financing	$ 27,407	$ 28,031

Note 12 – Total Obligations Incurred

For the fiscal years ended September 30,	2016	2015
Direct Obligations		
Category A	$ 994,840	$ 1,046,459
Exempt from Apportionment	1,772	2,295
Total Direct Obligations	996,612	1,048,754
Reimbursable Obligations	5,705	5,059
Total Obligations Incurred	$ 1,002,317	$ 1,053,813

Obligations exempt from apportionment represent funds derived from the NWF. Category A Obligations consist of the NRC appropriations only.

Note 13 – Undelivered Orders at the End of the Period

For the fiscal years ended September 30,	2016	2015
Undelivered Orders - Unpaid		
Salaries and Expenses	**$ 255,560**	$ 257,171
Inspector General	**1,019**	1,517
Nuclear Waste Fund	**105**	633
Total Undelivered Orders - Unpaid	**$ 256,684**	$ 259,321
Undelivered Orders - Paid		
Salaries and Expenses	**$ 13,756**	$ 10,885
Inspector General	**413**	384
Nuclear Waste Fund	**-**	-
Total Undelivered Orders - Paid	**14,169**	11,269
Total Undelivered Orders	**$ 270,853**	$ 270,590

Note 14 – Nuclear Waste Fund

For FY 2016 and FY 2015, the NRC's budget did not include funds from the NWF. The funding provided to the NRC prior to FY 2014 and carried forward to subsequent years was for the purpose of performing activities associated with the U.S. Department of Energy's (DOE) application for a high- level waste repository at Yucca Mountain, NV.

The 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 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 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. In order 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, 2016, and 2015, are shown in the following table:

For the fiscal years ended September 30,	2016	2015
Appropriations Received	**$ -**	$ -
Expended Appropriations	**$ 1,983**	$ 2,722
Obligations Incurred	**$ 1,772**	$ 2,295
Unobligated Balances (includes recoveries of prior-year obligations)	**$ 1,382**	$ 2,836

Note 15 – Explanation of Differences Between the Statement of Budgetary Resources and the Budget of the U.S. Government

SFFAS No. 7, "Accounting for Revenue and Other Financing Sources" and OMB Circular A-136 require the NRC to reconcile the budgetary resources reported on the SBR to the actual budgetary resources presented in the President's Budget and explain any material differences.

The reconciliation was based on FY 2015 results because the Budget of the United States (also known as the President's Budget), with actual numbers for FY 2016, was not published at the time that these financial statements were issued.

The NRC currently has two material differences between the budgetary resources reported on the SBR for FY 2015 and the President's Budget for FY 2015 as summarized in the chart below.

Explanation of Differences (In millions)	Distributed Offsetting Receipts
Combined Statement of Budgetary Resources - FY 2015 Actual	$ (911)
Difference #1:	
The Budget of the U.S. Government "Special and Trust Fund Receipts" schedule is missing Line 2101 for the Salaries and Expenses Appropriation. This line represents FY 2015 license fees collected during FY 2015 and applied to the FY 2015 Salaries and Expenses appropriations.	$ (875)
Difference #2:	
The Budget of the U.S. Government "Special and Trust Fund Receipts" schedule should include an additional Line 2101 for the FY 2014 license fees collected in FY 2015 between October 1 and October 3, 2014, and applied to the FY 2014 Salaries and Expenses appropriation. The General Counsels for the NRC and the OMB determined that FY 2014 fees received during this period should be applied to the NRC FY 2014 appropriation in order to avoid an overstatement of the amount transferred to reduce the NRC FY 2015 appropriation. The transfer of fees collected and the reduction of the FY 2014 appropriation was recorded under Legal Authority 1: PL 113- 76, 128 STAT 181.	$ (26)
The actual amount reported in the Budget of the U.S. Government "Special and Trust Fund Receipts" schedule on Line 2101 is $10 million. The amount represents license fees collected during FY 2015 and applied to the FY 2015 Office of the Inspector General appropriation.	$ (10)

The differences, noted in the chart above, reflect license fees collected that should have been applied to appropriations in the Special and Trust Fund Receipts schedule for FY 2015 Actual amounts in the FY 2017 President's budget. The line items for the two amounts were inadvertently omitted in the Special and Trust Fund Receipts schedule because of an oversight due to OMB system programming changes. In the FY 2018 President's Budget, the two differences will be included as adjustments to the FY 2016 Actual amounts to adjust the balance at the start of the year.

The FY 2016 actual budgetary resources numbers will be available in the FY 2018 President's Budget which is expected to be published in February 2017, and will be available on the OMB Web site http://www.whitehouse.gov/omb and through the U.S. Government Printing Office.

Note 16 – Reconciliation of Net Cost of Operations to Budgetary Resources

For the fiscal years ended September 30,	2016	2015
Budgetary Resources Obligated		
Obligations incurred (Note 12)	**$ 1,002,317**	$ 1,053,813
Less: Spending authority from offsetting collections and recoveries	**(13,808)**	(13,046)
Less: Distributed offsetting receipts, current year	**(869,094)**	(885,338)
Less: Distributed offsetting receipts, prior year	**-**	(26,162)
Net Obligations	**119,415**	129,267
Other Resources		
Imputed financing from costs absorbed by others	**27,407**	28,033
Non-Exchange Revenue	**274**	373
Funds returned to U.S. Treasury General Fund	**(274)**	(373)
Net Other Resources Used to Finance Activities	**27,407**	28,033
Total Resources Used to Finance Activities	**146,822**	157,300
Resources Used to Finance Items Not Part of the Net Cost of Operations	**(17,170)**	(3,209)
Total Resources Used to Finance the Net Cost of Operations	**129,652**	154,091
Components of the Net Cost of Operations that will not require or generate resources in the current period	**21,689**	28,534
Net Cost of Operations	**$ 151,341**	$ 182,625

Distributed offsetting receipts of $869.1 million were collected and transferred to offset the FY 2016 NRC appropriations through September 30, 2016. Upon transfer, the U.S. Treasury issued a negative warrant for the amount of the transfer to reduce the NRC appropriations.

Note 17 – 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, 2016, and 2015, the NRC is one of three government agencies that are involved in a case in which the likelihood of loss is reasonably possible. NRC's portion of the loss could be up to $21.3 million and any loss would be paid out of the judgement fund.

REQUIRED SUPPLEMENTARY INFORMATION

COMBINING STATEMENT OF BUDGETARY RESOURCES *(IN THOUSANDS)*

For the fiscal year ended September 30, 2016	Salaries and Expenses	Office of Inspector General	Nuclear Facility Fees	Total
Budgetary Resources				
Unobligated balances, brought forward, October 1	$ 25,722	$ 2,278	$ -	**$ 28,000**
Recoveries of prior-year unpaid obligations	8,138	720	-	**8,858**
Recoveries of prior-year paid obligations	156	-	-	**156**
Unobligated balance from prior-year budget authority, net	34,016	2,998	-	**37,014**
Appropriations	990,000	12,136	-	**1,002,136**
Spending authority from offsetting collections	4,794	-	-	**4,794**
Total Budgetary Resources	$ 1,028,810	$ 15,134	$ -	**$ 1,043,944**
Status of Budgetary Resources				
New obligations and upward adjustments (total) (Note 12)	$ 990,184	$ 12,133	$ -	**$ 1,002,317**
Unobligated balance, end of year				
Apportioned, unexpired accounts	37,181	2,699	-	**39,880**
Exempt from apportionment, unexpired accounts	1,382	-	-	**1,382**
Unapportioned, unexpired accounts	-	-	-	**-**
Unexpired unobligated balance, end of year	38,563	2,699	-	**41,262**
Expired unobligated balance, end of year	63	302	-	**365**
Unobligated balance, end of year	38,626	3,001	-	**41,627**
Total Status of Budgetary Resources	$ 1,028,810	$ 15,134	$ -	**$ 1,043,944**
Change in Obligated Balance				
Unpaid obligations				
Unpaid obligations, brought forward, October 1	$ 325,804	$ 1,848	$ -	**$ 327,652**
New obligations and upward adjustments (Note 12)	990,184	12,133	-	**1,002,317**
Outlays, gross	(980,271)	(11,875)	-	**(992,146)**
Recoveries of prior-year unpaid obligations	(8,138)	(720)	-	**(8,858)**
Unpaid obligations, end of year	$ 327,579	$ 1,386	$ -	**$ 328,965**
Uncollected payments				
Uncollected customer payments from Federal sources, brought forward, October 1	$ (1,814)	$ -	$ -	**$ (1,814)**
Change in uncollected customer payments, from Federal sources	(541)	-	-	**(541)**
Uncollected payments, Federal sources, end of year	$ (2,355)	$ -	$ -	**$ (2,355)**
Memorandum entries:				
Obligated balances, start of year	$ 323,990	$ 1,848	$ -	**$ 325,838**
Obligated balances, end of year	$ 325,224	$ 1,386	$ -	**$ 326,610**
Budget Authority and Outlays, Net				
Budget Authority, gross	$ 994,794	$ 12,136	$ -	**$ 1,006,930**
Actual offsetting collections	(4,409)	-	-	**(4,409)**
Change in uncollected customer payments, from Federal sources	(541)	-	-	**(541)**
Recoveries of prior year paid obligations	156	-	-	**156**
Budget Authority, Net	$ 990,000	$ 12,136	$ -	**$ 1,002,136**
Outlays, gross	$ 980,271	$ 11,875	$ -	**$ 992,146**
Actual offsetting collections	(4,409)	-	-	**(4,409)**
Outlays, net	975,862	11,875	-	**987,737**
Distributed offsetting receipts	-	-	(869,094)	**(869,094)**
Agency Outlays, Net	$ 975,862	$ 11,875	$ (869,094)	**$ 118,643**

COMBINING STATEMENT OF BUDGETARY RESOURCES *(IN THOUSANDS)*

For the fiscal year ended September 30, 2015	Salaries and Expenses	Office of Inspector General	Nuclear Facility Fees	Total
Budgetary Resources				
Unobligated balances, brought forward, October 1	$ 50,843	$ 2,618	$ 3	**$ 53,464**
Recoveries of prior-year unpaid obligations	5,036	11	-	**5,047**
Recoveries of prior-year paid obligations	3,362	10	-	**3,372**
Unobligated balance from prior-year budget authority, net	59,241	2,639	3	**61,883**
Appropriations	1,003,233	12,071	(3)	**1,015,301**
Spending authority from offsetting collections	4,629	-	-	**4,629**
Total Budgetary Resources	$ 1,067,103	$ 14,710	$ -	**$ 1,081,813**
Status of Budgetary Resources				
New obligations and upward adjustments (total) (Note 12)	$ 1,041,381	$ 12,432	$ -	**$ 1,053,813**
Unobligated balance, end of year				
Apportioned, unexpired accounts	20,985	2,274	-	**23,259**
Exempt from apportionment, unexpired accounts	2,837	-	-	**2,837**
Unapportioned, unexpired accounts	1,900	4	-	**1,904**
Unexpired unobligated balance, end of year	25,722	2,278	-	**28,000**
Expired unobligated balance, end of year	-	-	-	**-**
Unobligated balance, end of year	25,722	2,278	-	**28,000**
Total Status of Budgetary Resources	$ 1,067,103	$ 14,710	$ -	**$ 1,081,813**
Change in Obligated Balance				
Unpaid obligations				
Unpaid obligations, brought forward, October 1	$ 324,913	$ 963	$ -	**$ 325,876**
New obligations and upward adjustments (Note 12)	1,041,381	12,432	-	**1,053,813**
Outlays, gross	(1,035,454)	(11,536)	-	**(1,046,990)**
Recoveries of prior-year unpaid obligations	(5,036)	(11)	-	**(5,047)**
Unpaid obligations, end of year	$ 325,804	$ 1,848	$ -	**$ 327,652**
Uncollected payments				
Uncollected customer payments from Federal sources, brought forward, October 1	$ (1,949)	$ -	$ -	**$ (1,949)**
Change in uncollected customer payments, from Federal sources	135	-	-	**135**
Uncollected customer payments, from Federal sources	$ (1,814)	$ -	$ -	**$ (1,814)**
Memorandum entries:				
Obligated balances, start of year	$ 322,964	$ 963	$ -	**$ 323,927**
Obligated balances, end of year	$ 323,990	$ 1,848	$ -	**$ 325,838**
Budget Authority and Outlays, Net				
Budget Authority, gross	$ 1,007,862	$ 12,071	$ (3)	**$ 1,019,930**
Actual offsetting collections	(8,126)	(10)	-	**(8,136)**
Change in uncollected customer payments, from Federal sources	135	-		**135**
Recoveries of prior year paid obligations	3,362	10	-	**3,372**
Budget Authority, Net	$ 1,003,233	$ 12,071	$ (3)	**$ 1,015,301**
Outlays, gross	$ 1,035,454	$ 11,536	$ -	**$ 1,046,990**
Actual offsetting collections	(8,126)	(10)	-	**(8,136)**
Outlays, net	1,027,328	11,526	-	**1,038,854**
Distributed offsetting receipts	-	-	(911,501)	**(911,501)**
Agency Outlays, Net	$ 1,027,328	$ 11,526	$ (911,501)	**$ 127,353**

Deferred Maintenance and Repairs

DEFERRED MAINTENANCE AND REPAIRS FOR GENERAL PROPERTY, PLANT, AND EQUIPMENT (G-PP&E)

Deferred maintenance and repairs information is a requirement under SFFAS No. 42, Deferred Maintenance and Repairs (DM&R).

SFFAS No. 42 defines DM&R as "maintenance and repairs that were not performed when they should have been or were scheduled to be and which are put off or delayed for a future period." Maintenance and repairs (M&R) are defined as activities directed toward keeping fixed assets in an acceptable condition. Activities include preventive maintenance; replacement of parts, systems, or components; and other activities needed to preserve or maintain the asset. M&R, as distinguished from capital improvements, exclude activities directed towards expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than, its current use.

DM&R should include funded and unfunded M&R activities that have been delayed to a future period. DM&R on inactive and/or excess G-PP&E should be included to the extent that it is required to maintain inactive or excess G-PP&E in acceptable condition.

The NRC has performed an evaluation of DM&R activities for leased facilities, the multiple components of the agency IT infrastructure, and individual capital asset purchases with a cost equal to or greater than $50,000. The NRC did not include noncapitalized PP&E with a cost of less than $50,000, which are deemed immaterial.

DEFERRED MAINTENANCE AND REPAIRS FOR THE NRC FACILITIES, OTHER STRUCTURES, AND CAPITAL EQUIPMENT

For the NRC leased facilities and capital equipment purchases, the NRC typically does not have any deferred maintenance or repairs. The NRC had no DM&R for Facilities, Other Structures, and Capital Equipment as of September 30, 2016 and 2015.

DEFINING AND IMPLEMENTING M&R POLICIES IN PRACTICE

For the Headquarters facilities, the NRC uses the GSA guidelines for maintenance activities along with industry best practices to determine the preventative maintenance activities to perform and the schedule for those activities. For the building structures and systems, the maintenance contractor performs all required periodic maintenance to keep the systems and buildings in a good state of repair. The contractor is held to a 98 percent scheduled completion rate with all the preventative maintenance completed within a reasonable time. When equipment reaches the end of its useful life, it is generally replaced with like kind or upgraded equipment. For any type of an emergent failure to facilities, the NRC would request additional funding, as needed, for repairs or replacement to structures and equipment.

For the regional offices, the building management (lessor) is responsible for performing all required periodic maintenance to keep the systems and buildings in a good state of repair. Generally, fixed assets are contained within the regional leases, including equipment purchased to support the operations of our leased space, such as diesel generators and chillers for the Incident Response Center (IRC), and the Local Area Network (LAN) and power cooling. Equipment requiring repair results in a service repair call. For those instances where equipment is purchased to support the NRC regional operations, maintenance contracts are put in place to provide periodic service and maintenance on the equipment. When equipment reaches the end of its useful life, it is generally replaced with like kind or with upgraded equipment. For any type of an emergent failure, the NRC would request additional funding, as needed, for repairs or replacement of equipment.

The TTC facility and associated systems are leased and maintained by the lessor. This includes any emergent repairs that may occur, as well as any scheduled maintenance. Assets within the TTC are predominantly maintained by facilities personnel or in some cases, such as simulator systems, contractor personnel perform all required emergent and periodic maintenance to keep the simulator systems in a good state of repair. When

equipment reaches the end of its useful life, it is replaced with like kind or upgraded equipment.

RANKING AND PRIORITIZATION OF M&R ACTIVITIES

Personnel safety is a top priority at the NRC leased facilities. Maintenance activity, such as fire alarms and emergency exits, are given top priority. If a preventative maintenance activity must be deferred, which is typically only for 2 to 4 weeks, the impact to personnel safety and building functionality are considered during the review. Other maintenance and repair activities are executed as required so that there is no disruption to the NRC operations and the TTC training schedules.

FACTORS CONSIDERED IN DETERMINING ACCEPTABLE CONDITION

The NRC has a Facilities Management Branch at the headquarters facilities to perform the daily inspections and maintenance of the buildings and major systems. The NRC internally reviews planned maintenance activity records and historical logs of maintenance and repairs to monitor condition information on equipment. Based on the information gathered, the NRC will determine if planning for replacement or upgrade is needed. Additionally, the GSA conducts onsite inspections every 3 to 5 years at the headquarters facilities to assess the overall condition of the buildings and to determine when major systems and components need to be scheduled for replacement. For the TTC and regional offices, the NRC has a Facilities Management staff person onsite to work with the GSA to manage the buildings with support from the lessors. As a result, the GSA performs more frequent onsite inspections of the facilities. The NRC works in close coordination with GSA to ensure maintenance and repair activities are performed on a timely basis to all NRC-occupied facilities.

DEFERRED MAINTENANCE AND REPAIRS FOR INFORMATION TECHNOLOGY (IT) INFRASTRUCTURE AND SYSTEMS

DM&R for IT Infrastructure and Systems is $3.3 million as of September 30, 2016. The DM&R includes upgrading the Human Resource Management System (HRMS) for $1.2 million and the Video Teleconference (VTC) and Voicemail systems for $2.1 million. The HRMS upgrade is to move from version 9.0, which is currently unsupported, to version 9.2. The VTC and Voicemail system upgrade is to move from a server platform that is no longer supported. The NRC had no DM&R for IT Infrastructure and Systems as of September 30, 2015.

The NRC IT infrastructure is a network of multiple equipment, software, and service components, taken as a whole, which provides the critical communication network that allows the NRC to accomplish its mission. The NRC IT infrastructure encompasses the following:

- End-User Systems and Support and End-User hardware includes desktop, laptop, handheld devices, peripherals (local printers, shared printers), software (personal computer operating systems, office automation suites, messaging, and groupware), and hardware and software for help desks. Also included are network operations command centers, wire closets, and cable management. For regional offices, this includes regional end-user support similar to that provided by the Customer Support Center at Headquarters, including contract support and FTE.

- Telecommunications Services includes data networks and telecommunications (including wireless, multimedia, and local and long distance telephone); hardware and software operations; licenses; maintenance; and backup, continuity of operations, and disaster recovery. For regional offices, this includes local telecommunications, including contract support and FTE.

- Production Operations includes mainframes and servers (including Web hosting, but not Web content development and management); hardware and software operations; licenses; maintenance; and backup, continuity of operations, and disaster recovery. Also included are Homeland Security Presidential Directive-12 resources, which requires all Federal Executive Departments and Agencies to implement a government wide standard for secure and reliable forms of identification for access to Federal facilities and information systems.

The NRC relies on the asset Project and Program Managers to execute the maintenance budget and to establish and modify the M&R schedule as needed. Ranking factors that may impact the M&R schedule include personnel safety, age of the asset, scheduled replacement date, budget constraints, and unforeseen or unexpected events.

Additionally, for IT systems, whether computer-off-the-shelf or internally developed software, the NRC relies on the Project and Program Managers to establish an M&R budget and schedule. Minor repairs, enhancements, and upgrades are completed internally through the regular M&R operations process. For major upgrades and replacement systems, the Project Manager must submit a request to perform the work to the appropriate IT governance boards for their approval.

DEFINING AND IMPLEMENTING M&R POLICIES IN PRACTICE

All of the NRC IT infrastructure M&R activities are performed under various contracts. For example, the main IT infrastructure and support services contract (ITISS) includes leasing of servers, computers, printers, and software; and provides provisions for periodic monitoring, maintenance, and repairs. Replacement of miscellaneous equipment components and software are scheduled for replacement as needed when the equipment reaches the end of its useful life and before the equipment and software become obsolete. Desktops and laptops are upgraded on a 3-year rolling schedule so that they do not become obsolete.

RANKING AND PRIORITIZATION OF M&R ACTIVITIES

The NRC Program Managers determine the requirements for ranking, scheduling, and performing IT infrastructure M&R activities and include them in the contractor statement of work. For the critical ITISS contract, the main ranking factor is the age of the asset (e.g. desktop, laptop, printer, BlackBerry, etc.), followed by cost/budget constraints. However, when applicable, personnel safety is considered and is the highest priority.

FACTORS CONSIDERED IN DETERMINING ACCEPTABLE CONDITION

In determining acceptable condition, the NRC mainly considers the asset's age, remaining useful life, and compatibility with current and required software.

INSPECTOR GENERAL'S LETTER TRANSMITTING INDEPENDENT AUDITORS' REPORT

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

OFFICE OF THE
INSPECTOR GENERAL

November 15, 2016

MEMORANDUM TO: Chairman Burns

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 2016 AND 2015 (OIG-17-A-04)

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 is CLA's report which contains the following:

- 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 Fiscal Years (FY) 2016 and 2015.

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;
- standards applicable to the financial audits, contained in 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. 15-02, *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.

FY 2016 Audit Results

The results are as follows:

Financial Statements

- Unmodified opinion.

Internal Controls

- Unmodified opinion.

Compliance with Laws and Regulations

- No lack of compliance noted.

Office of the Inspector General Oversight of CLA Performance

To fulfill our responsibilities under the *CFO Act* and related legislation for ensuring the quality of the audit work performed, we monitored CLA's audit of NRC's FY 2016 and FY 2015 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 report to ensure compliance with Government Auditing Standards and OMB Bulletin No. 15-02.
- Coordinating the issuance of the audit report.
- Performing other procedures deemed necessary.

CLA is responsible for the attached auditors' report, dated November 8, 2016, 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.
- 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 November 8, 2016, 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 her response, the Chief Financial Officer agreed with the report. The full text of her 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 Baran
M. Wylie, OCFO
R. Lewis, OEDO
H. Rasouli, OEDO
J. Jolicoeur, OEDO
J. Bowen, OEDO
S. Hudson, OCFO
EDO_ACS Distribution
RidsOCFOMailCenter Resource

CliftonLarsonAllen LLP
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INDEPENDENT AUDITORS' REPORT

Inspector General
United States Nuclear Regulatory Commission

Chairman
United States Nuclear Regulatory Commission

Report on the Financial Statements

We have audited the accompanying financial statements of the United States Nuclear Regulatory Commission (NRC), which comprise the balance sheets as of September 30, 2016 and 2015, and the related statements of net cost, changes in net position, and combined statements of budgetary resources for the years then ended, and the related notes to the financial statements (financial statements).

Management's Responsibility for the Financial Statements

NRC management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America (U.S.); this includes the 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.

Auditors' Responsibilities

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of the financial statements in accordance with auditing standards generally accepted in the U.S., the standards applicable to the financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, and Office of Management and Budget (OMB) Bulletin No. 15-02, *Audit Requirements for Federal Financial Statements* (OMB Bulletin 15-02). Those standards and OMB Bulletin 15-02 require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances. An audit of financial statements also involves evaluating the appropriateness of the accounting policies used and the reasonableness of significant accounting

INDEPENDENT AUDITORS' REPORT, CONTINUED

estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion on the Financial Statements

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the United States Nuclear Regulatory Commission as of September 30, 2016 and 2015, and its net costs, changes in net position, and combined statements of budgetary resources for the years then ended, in accordance with accounting principles generally accepted in the U.S.

Other Matters

Required Supplementary Information
Accounting principles generally accepted in the U.S. require that NRC's Management Discussion and Analysis (MD&A) and other Required Supplementary Information (RSI), including the Combining Statement of Budgetary Resources, and Deferred Maintenance and Repairs, be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Federal Accounting Standards Advisory Board, which 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 audits of the financial statements. We do not express an opinion or provide any assurance on the RSI because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information
The fiscal year 2016 NRC Performance and Accountability Report contains other information including the cover, table of contents, Message from the Chairman, Chapter 2 (Program Performance), Message from the Chief Financial Officer, the Inspector General's letter transmitting the Independent Auditors' Report, management's response to the audit report, and Chapter 4 (Other Information). In addition, management has included references to information on websites or other data outside of the Performance and Accountability Report. This other information is presented for purposes of additional analysis and is not a required part of the financial statements or RSI. This other information has not been subjected to the auditing procedures applied in the audits of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Report on Internal Control Over Financial Reporting

We have audited NRC's internal control over financial reporting as of September 30, 2016, based on criteria established under 31 U.S.C. 3512 (c) and (d) commonly known as the Federal Managers' Financial Integrity Act of 1982 (FMFIA) and OMB Circular A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control* (OMB Circular A-123).

Management's Responsibility for Internal Control

NRC management is responsible for maintaining effective internal control over financial reporting, evaluating the effectiveness of internal control over financial reporting based on the criteria described

INDEPENDENT AUDITORS' REPORT, CONTINUED

above, and for its statement of assurance on the effectiveness of internal control over financial reporting.

Auditors' Responsibilities

Our responsibility is to express an opinion on NRC's internal control over financial reporting based on our audit. We conducted our audit of internal control over financial reporting in accordance with attestation standards established by the American Institute of Certified Public Accountants and contained in *Government Auditing Standards*.

An audit of internal control over financial reporting includes obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and evaluating the design, and testing the operating effectiveness of internal control over financial reporting based on the assessed risk. Our audit of internal control also considered the entity's process for evaluating and reporting on internal control over financial reporting based on the criteria described above. Our audit also included performing such other procedures as we considered necessary in the circumstances.

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 whether effective internal control over financial reporting was maintained, in all material respects. Consequently, our audit may not identify all deficiencies in internal control over financial reporting that are less severe than a material weakness.

Definition and Inherent Limitations of Internal Control Over Financial Reporting

An entity's internal control over financial reporting is a process effected by those charged by governance, management, and other personnel, designed to provide reasonable 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 other applicable laws, regulations, contracts, and grant agreements that could have a direct and material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent, or detect and correct, misstatements due to fraud or error. We also caution that projecting our audit results to future periods is subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with controls may deteriorate.

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, 2016, based on criteria established under FMFIA and OMB Circular A-123.

INDEPENDENT AUDITORS' REPORT, CONTINUED

Report on Compliance Based on an Audit of Financial Statements Performed in Accordance With *Government Auditing Standards*

Compliance With Laws, Regulations, Contracts, and Grant Agreements

As part of obtaining reasonable assurance about whether NRC's financial statements are free from material misstatement, we performed tests of NRC's compliance with certain provisions of laws, regulations, contracts, and grant agreements consistent with our professional responsibilities discussed below. The results of our tests for the year ended September 30, 2016, disclosed no instances of noncompliance that are required to be reported in accordance with *Government Auditing Standards.*

We also performed tests of compliance with certain provisions of the Federal Financial Management Improvement Act (FFMIA). 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 United States Standard General Ledger (USSGL) at the transaction level.

Management's Responsibility for Compliance

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, regulations, contracts, and grant agreements that have a direct effect on the determination of material financial statement amounts and disclosures.

We did not test compliance with all laws, regulations, contracts, and grant agreements applicable to NRC. We limited our tests of compliance to certain provisions of laws, regulations, contracts, and grant agreements noncompliance with which could have a direct effect on the determination of material financial statement amounts and disclosures. 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. We caution that noncompliance with laws, regulations, contracts, and grant agreements 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.

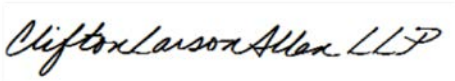
Purpose of the Report on Compliance

The purpose of the Report on Compliance is solely to describe the scope of our testing of compliance with laws, regulations, contracts, and grant agreements and the result of that testing, and not to provide an opinion on 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.

INDEPENDENT AUDITORS' REPORT, CONTINUED

Management's Response to the Independent Auditors' Report

Management's response to our report is presented in the Performance and Accountability Report. We did not audit NRC's response and, accordingly, we express no opinion on it.



CliftonLarsonAllen LLP

Arlington, Virginia
November 8, 2016

MANAGEMENT'S RESPONSE TO THE INDEPENDENT AUDITORS' REPORT ON THE FINANCIAL STATEMENTS

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

November 7, 2016

MEMORANDUM TO: Brett M. Baker
Assistant Inspector General for Audits
Office of the Inspector General

FROM: Maureen E. Wylie ***/RA/***
Chief Financial Officer

SUBJECT: AUDIT OF THE FISCAL YEAR 2016 AND 2015 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 2016 and 2015 financial statements and are in agreement with it.

cc: V. McCree, EDO
R Lewis, AO/OEDO
H. Rasouli, DAO/OEDO
J. Jolicoeur, OEDO
J. Bowen, OEDO

Chapter 4

Other Information

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U.S. NUCLEAR REGULATORY COMMISSION

Inspector General's Assessment of the Most Serious Management and Performance Challenges Facing the NRC

U.S. NUCLEAR REGULATORY COMMISSION

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

October 3, 2016

OFFICE OF THE
INSPECTOR GENERAL

MEMORANDUM TO: Chairman Burns

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

SUBJECT: INSPECTOR GENERAL'S ASSESSMENT OF THE MOST SERIOUS MANAGEMENT AND PERFORMANCE CHALLENGES FACING THE NUCLEAR REGULATORY COMMISSION (OIG-17-A-01)

In accordance with the *Reports Consolidation Act of 2000*, I am providing what I consider to be the most serious management and performance challenges facing the U.S. Nuclear Regulatory Commission (NRC) in Fiscal Year (FY) 2017. Congress left the determination and threshold of what constitutes a most serious management and performance challenge to the discretion of the Inspectors General. 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.*

INTRODUCTION

NRC is an independent Federal agency established to license and regulate the Nation's civilian use of radioactive materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment.

NRC performs critical functions to ensure the safe and secure use of radioactive materials in the United States and to protect both the public and radiation workers from radiation hazards that could result from the use of radioactive materials. NRC provides licensing and oversight activities for approximately 100 commercial nuclear power

reactors; research, test, and training reactors; and radioactive materials used in medicine, academia, and industry.

NRC's principal regulatory functions are to establish regulatory requirements and conduct confirmatory research to support requirements; issue licenses to facility operators and owners, possessors, and users of nuclear materials; oversee these licensees to ensure they are in compliance with NRC requirements and operate safely and securely; and respond to emergencies involving regulated activities. NRC also participates in international work that is integral to the agency's mandate to protect public health and safety and promote the common defense and security. To carry out its mission, NRC's FY 2017 budget is approximately $982.4 million, including 3,525 full-time equivalent positions.

Based on NRC's mission and objectives, the Office of the Inspector General (OIG) annually identifies what it considers to be the most serious management and performance challenges facing NRC. Our goal is to focus attention on these issues to enhance the effectiveness of NRC programs and operations.

MANAGEMENT CHALLENGES

The FY 2017 management and performance challenges are directly related to NRC's mission areas (commercial nuclear reactors and nuclear materials) and address security, information technology, financial programs, and administrative functions. Our work in these areas indicates that while program improvements are needed, NRC is continually making progress to address OIG recommendations and improve the efficiency and effectiveness of its programs. The FY 2017 management and performance challenges are as follows:

1. Regulation of nuclear reactor safety programs.
2. Regulation of nuclear materials and radioactive waste programs.
3. Management of security over internal infrastructure (personnel, physical, and cyber security) and nuclear security.
4. Management of information technology and information management.
5. Management of financial programs.
6. Management of administrative functions.

These challenges represent what OIG considers to be inherent and continuing program challenges relative to maintaining effective and efficient oversight and internal

management controls. As a result, it is likely they will continue to be challenges from year to year. Challenges do not necessarily equate to problems.

Attached is a brief synopsis of each management and performance challenge along with summaries of OIG audits and planned work that has informed the decision-making process. A complete list of reports can be found at: http://www.nrc.gov/reading-rm/doc-collections/insp-gen/2016/.

1. Regulation of nuclear reactor safety programs.

NRC is responsible for maintaining an established regulatory framework for the safe and secure use of civilian nuclear reactors, including commercial nuclear power plants as well as research, test, and training reactors. There are currently 100 nuclear power reactors licensed to operate in the United States, which generate about 20 percent of the nation's electrical use, as well as 4 units under construction (Vogtle 3 and 4, Summer 2 and 3). There are also 31 licensed research and test reactors. NRC's regulatory oversight responsibilities in the reactor arena include developing policy and rulemaking, licensing and inspecting reactors, licensing reactor operators, and enforcing regulations. The agency implemented its nuclear reactor safety program in FY 2016 with approximately 76 percent ($760 million) of its total budget authority and 76 percent (2,780 full-time equivalent employees) of its total staff. Thus, it is of paramount importance that the agency implement these programs as effectively and efficiently as possible.

Key reactor safety oversight challenges for NRC include the following:

- Ensuring an adequate and efficient reactor and operator licensing process, accounting for safety impacts of major changes to plant configuration, and sufficiently evaluating older plants for license extensions.

- Providing an adequate number of trained inspectors for sufficient oversight, and ensuring inspection procedures are adequate and are being followed.

- Ensuring adequate construction oversight of new power reactors, adequately reviewing and approving design changes that are occurring concurrent with the construction, and verifying whether plants are built in accordance with the intended design.

- Ensuring appropriate and reasonable application of the agency's Reactor Oversight Process and Construction Reactor Oversight Process, including through use of the Significance Determination Process or Enforcement Policy for determining regulatory violation severity, and application of the safety culture policy and Alternative Dispute Resolution.

- Incorporating operational experience from the domestic and international nuclear industries into NRC's regulatory program, including lessons learned from Fukushima and other events.

The following audit report synopses are examples of work OIG has completed or is underway pertaining to nuclear reactor safety programs.

Audit of NRC's Operator Licensing Program for the AP1000 Power Reactor
OIG-16-A-08, February 8, 2016

Four Advanced Passive 1000 (AP1000) Pressurized Water Reactors are under construction in the United States. This is a new reactor design for which operators have never been licensed. An operator's license authorizes the license holder to manipulate the controls of the facility, which directly affect the reactivity or power level of the reactor. By the year 2020, approximately 70 licensed operators will be needed for the AP1000.

OIG's review found that the efficiency and effectiveness in NRC's licensing of AP1000 reactor operators can be improved. Specifically, key questions concerning the new reactor operator licensing requirements governing the time interval between administration of the written examination and operating test are unresolved. Additionally, requirements for qualifying new simulators for use during the AP1000 operating test are unclear. In the meantime, one AP1000 licensee has administered the written exam to its operator candidates without having a simulator approved for use in the operating test.

These program weaknesses have occurred because NRC management and staff responsible for licensing operators held differing interpretations of regulations and guidance pertaining to the AP1000 operator licensing process, and key decisions related to examination timing and simulator requirements were undocumented.

Agency management generally agreed with the report's findings and recommendations and is taking action to address the recommendations.

The full report is available at: http://www.nrc.gov/docs/ML1603/ML16039A297.pdf

Audit of NRC's Reactor Oversight Process: Reactor Safety Baseline Inspection Procedures, OIG-16-A-12, April 6, 2016

NRC's Reactor Oversight Process is a risk-informed, performance-based, tiered approach to assessing nuclear power plant safety. Baseline inspections are the minimum level of inspection required to ensure plant safety and security, and are common to all operating nuclear plants. They focus on activities and systems that are "risk significant."

The audit found that NRC needs to ensure mandatory and discretionary language used in inspection procedures is clear and consistent for inspectors and managers responsible for performing and overseeing baseline inspections. Completion of inspection procedures is a key input into NRC's assessment of whether nuclear reactor licensees operate safely. OIG did not identify specific instances where unclear language led to inadequate assessments; however, there is risk associated with how NRC is assured inspectors perform activities deemed mandatory in inspection procedures. For example, there is a risk that inspectors will perform unneeded discretionary activities at the expense of mandatory activities because the distinction between mandatory and discretionary activities are unclear. NRC also risks inconsistent inspections across regions. The audit report made recommendations to make baseline inspection procedures clearer for inspectors and managers performing and overseeing baseline inspections.

Agency management generally agreed with the report's finding and recommendations and is taking action to address the recommendations.

The full report is available at: http://www.nrc.gov/docs/ML1609/ML16097A515.pdf

Audit of NRC's Oversight of 10 CFR 50.59, "Changes, tests and experiments"
OIG 16-A-19, August 24, 2016

NRC oversees nuclear power plant licensees' compliance with requirements stipulated in *Title 10, Energy, Code of Federal Regulations*, Section 50.59, "Changes, tests, and experiments" (10 CFR 50.59). 10 CFR 50.59 establishes the conditions under which licensees may make changes to their facilities or procedures, and conduct tests or experiments, without prior NRC approval for a license amendment. When implementing the provisions of 10 CFR 50.59 process, licensees use the 10 CFR 50.59 process which involves applicability review, screening, evaluation, documentation, and reporting.

In 2015 NRC staff estimated the number of licensee 10 CFR 50.59 implementation actions for each operating reactor unit to be approximately 475 screenings annually, from which result about 5 evaluations. This amounts to a combined total of about 49,000 screenings and evaluations annually.

The audit found programmatic weakness within NRC's 10 CFR 50.59 process pertaining to coordinated communication among inspectors, and headquarters and regional staff regarding 10 CFR 50.59 process related information. This weakness occurred because NRC does not employ a well-structured approach for 10 CFR 50.59 process management and NRC's 10 CFR 50.59 training was limited to the agency's immediate focus on addressing San Onofre Nuclear Generating Station lessons learned through targeted training.

Adoption of a more structured approach for managing the 10 CFR 50.59 oversight processes as well as requiring recurring formal training on the 10 CFR 50.59 process would enhance NRC's regulatory consistency and effectiveness. This is particularly important given the multiple NRC headquarters and regional organizations that play different, yet complementary, roles in the agency's oversight of licensees' compliance with 10 CFR 50.59. Additionally, NRC would be better positioned to provide nuclear power plant licensees throughout its four regions with consistent and predictable regulatory positions on 10 CFR 50.59 compliance and enforcement matters.

The audit report made recommendations to strengthen coordinated communication of 10 CFR 50.59 guidance and process-related information among involved staff and enhance the agency's post-qualification 10 CFR 50.59 training to include recurring formal training.

Agency management generally agreed with the audit reports finding and recommendations and is taking action to address the recommendations.

The full report is available at: http://www.nrc.gov/docs/ML1623/ML16237A039.pdf

Audit of NRC's Significance Determination Process
OIG-16-A-21, September 26, 2016.

The Significance Determination Process (SDP) is a process used by NRC to determine the safety significance of inspection findings identified within the Reactor Oversight Process cornerstones of safety, security, emergency preparedness, and health physics. Before the SDP is conducted, inspectors located at reactor sites and NRC regional offices perform inspections and identify potential performance deficiencies. Performance deficiencies are licensee failures to meet a regulatory requirement or self-imposed standard that a licensee should have met. NRC staff uses screening questions to assess performance deficiencies as either minor or more-than-minor. The SDP is then conducted for more-than-minor performance deficiencies or findings that are categorized from least safety significant to most safety significant, as Green, White, Yellow, or Red. Generally, findings of greater significance require more NRC oversight, which can result in additional inspection hours. Findings of greater than Green significance are subject to independent NRC audits during periodic ROP self-assessments.

The audit found programmatic weaknesses in NRC's SDP resource tracking, issue screening, and documentation of independent audits. With regard to resource tracking, NRC does not have complete information regarding time needed to complete various steps within the process. Although NRC plans to implement new SDP timeliness metrics and process enhancements, the agency has not regularly evaluated resources needed for SDP workflow and has not established or communicated clear expectations to staff and managers. Consequently, NRC could miss opportunities to identify and remedy SDP workflow problems. Regarding issue screening, the audit found that inspectors sometimes have difficulty determining whether issues should be categorized as minor or more-than-minor because issue screening instructions are unclear. As a result, staff might devote unnecessary resources to documenting minor issues, and risk inconsistent performance deficiency screening. Lastly, NRC lacks controls to ensure that independent audits of greater than Green findings are performed and documented. As a result, NRC risks misrepresenting agency performance in periodic self-assessments, and could miss opportunities to implement programmatic changes identified through independent audits.

The audit report made recommendations to strengthen NRC's management of the SDP by assessing workflow under the new timeliness metrics and process enhancements, communicating clear and consistent workflow expectations, clarifying issue screening instructions, and ensuring independent audits are performed and documented.

Agency management generally agreed with the audit report's findings and recommendations, but issued formal comments with additional detail that staff deemed necessary to reflect the status of planned and ongoing SDP enhancement activities. OIG incorporated these comments into the final report.

The full report is available at: http://www.nrc.gov/docs/ML1627/ML16270A359.pdf

2. Regulation of nuclear materials and radioactive waste programs.

NRC is responsible for maintaining an established regulatory framework for the safe and secure use of nuclear materials; medical, industrial, and academic applications, uranium recovery activities; and for the storage and disposal of high-level and low-level radioactive waste. 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. NRC's oversight of material licensees is done through its regional offices; specifically, Region I, Region III, and Region IV. Region I handles the oversight for materials licensees in the Region II area. Under Project Aim, NRC is evaluating the regional materials program to determine whether further consolidation would be more efficient. Staff recently completed its evaluation and provided a recommendation regarding consolidation of the materials program to the Commission as noted in SECY-16-0083.

Upon a State's request, NRC may enter into an agreement to relinquish its authority to the State to regulate certain radioactive materials 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 and 2 States that have submitted letters of intent to become Agreement States.

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 material 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 radioactive waste becomes harmless only through decay (which can take hundreds of thousands of years for high-level waste), the material must be stored, and ultimately disposed of in a way that provides adequate protection of the public for a very long time. Due to the uncertainty surrounding Yucca Mountain, the proposed permanent repository for high-level radioactive waste, NRC has been reviewing the issues associated with storing high-level radioactive waste at reactor sites for the foreseeable future.

Low-level radioactive waste is typically produced at nuclear power reactors, hospitals, research facilities, and clinics from the use of nuclear materials for industrial and medical purposes. NRC or Agreement States regulate the management, storage, and disposal of radioactive waste produced as a result of licensed activities. Low-level radioactive waste includes contaminated protective clothing, equipment and tools, medical supplies, and laboratory animal tissues. Currently, all of the country's low-level radioactive waste disposal facilities are located in, and licensed by, Agreement States.

Key nuclear materials and radioactive waste oversight challenges for NRC include the following:

- Ensuring that licensing activities are conducted consistent with NRC requirements.
- Providing effective oversight of licensees' radioactive materials programs to preclude loss or theft.
- Ensuring that Agreement State programs are adequate to protect public health and safety and the environment, and are compatible with NRC's program.
- Providing effective oversight for the safe and secure interim storage of increasing quantities of high-level radioactive waste until a permanent repository for high-level radioactive waste is operational.
- Ensuring programs for the safe storage and disposal of low-level radioactive waste produced as a result of licensed activities are being implemented in accordance with NRC regulations.

The following audit report synopses are examples of work OIG has completed or is underway in the nuclear materials and radioactive waste programs.

Audit of NRC's Oversight of Medical Uses of Nuclear Material
OIG-16-A-02, October 8, 2015

NRC provides adequate oversight of the medical uses of radioactive isotopes to protect public health and safety; however, opportunities for improvement exist with regard to clarifying NRC's medical event policy, periodically assessing medical event reporting, and providing better feedback to the Advisory Committee on the Medical Uses of Isotopes (ACMUI).

Medical event reporting requirements are inconsistently understood by licensees and NRC staff. This inconsistent understanding is due to a general lack of clarity surrounding NRC's requirements and purpose for reporting medical events. Furthermore, NRC provides insufficient medical event data to medical licensees. As a result, NRC is not effectively achieving all the possible benefits of medical event reporting.

NRC has not conducted a periodic self-assessment of its medical events reporting requirements to determine if they are effectively meeting their intended purpose. As a result, NRC is not in a position to make any informed conclusions regarding the effectiveness of its approach to collecting information on medical events.

NRC does not routinely provide sufficiently detailed feedback to ACMUI despite relying on it as a key advisory body. This lack of sufficiently detailed feedback is a result of NRC not having current, formalized policies and procedures that clearly articulate the expectations for providing feedback to ACMUI. As a result, the benefits of having the ACMUI provide expert advice may not be fully realized and the potential for miscommunication and misunderstanding remains.

Agency management generally agreed with the report findings and recommendations. All recommendations based on the report's findings have been closed.

The full report is available at: http://www.nrc.gov/docs/ML1528/ML15281A331.pdf

Audit of NRC's Oversight of Low-level Radioactive Waste Disposal and Waste Blending (*Ongoing audit*)

Low-level radioactive waste (LLRW) is typically produced at nuclear power reactors, hospitals, research facilities, and clinics from the use of nuclear materials for industrial and medical purposes. LLRW disposal occurs at commercially operated disposal facilities that must be licensed by either NRC or an Agreement State. LLRW is classified at the time of disposal in terms of the concentration of specific radioactive isotopes in the waste. Most LLRW (about 95 percent) has the lowest concentration and is Class A. Class B and Class C wastes may have higher concentrations. Currently, there are four LLRW disposal facilities, all of which are licensed and regulated by Agreement States.

Blending of LLRW means mixing wastes of different concentrations to create products with more uniform radionuclide concentrations. Blending higher activity and lower activity waste can average the concentration of radioactivity, making it suitable for disposal at more locations and at a lower cost. Disposal of LLRW is an expensive endeavor for licensees, and waste blending could be a cost-cutting solution. NRC's oversight of licensees is important to ensure that concentration averaging requirements for licensees result in the safe and effective disposal of both blended and non-blended LLRW.

The audit objective is to determine if the disposal and waste blending processes at disposal facilities are done safely and effectively.

3. Management of security over internal infrastructure (personnel, physical, and cyber security) and nuclear security.

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 oversight of protecting operating and decommissioned nuclear facilities and nuclear materials, the sharing of sensitive information, as well as emergency preparedness and incident response.

Key security oversight challenges for NRC include the following:

- Increasing numbers, types, and sophistication of cyber threats underscore the need to reinforce the security over NRC's information systems. For example, advanced persistent threats where an adversary that possesses sophisticated levels of expertise and significant resources can attack using multiple means such as cyber, physical, or deception to achieve its objectives, pose increasing risks.

- Directing agency-wide information resource planning to ensure that agency information technology, information management, and information technology security resources are selected and managed to provide maximum value to the agency.

- Executing the insider threat prevention and detection program for detecting, deterring, and mitigating insider threats to address protection of classified and safeguards information from exploitation, compromise, or unauthorized disclosure.

- Continuing to pursue the need for new regulations focused on unique requirements of decommissioned nuclear power plants, which present different security considerations than operating plants.

- Ensuring effective oversight of physical and personnel security at nuclear power plants.

- Executing the *Federal Information Security Modernization Act of 2014*, to strengthen the security of computer networks.

The following audit report synopses are examples of work that OIG has completed in the agency's security programs.

Audit of NRC's Networks Security Operations Center
OIG-16-A-07, January 11, 2016

NRC's Network Security Operations Center (SOC) is responsible for securing the agency's network infrastructure and monitoring the network for suspicious activity. The SOC accomplishes this through the use of automated security tools, analysis of network activity data, and participation in incident response efforts. The SOC is primarily staffed by contractors working under the Information Technology Infrastructure Support Services (ITISS) contract.

Robust SOC capabilities are particularly crucial given the sensitivity of the unclassified information processed on NRC's network, and the increasing volume of attacks carried out against Federal Government computer systems.

NRC staff described several areas in which the SOC does not meet agency needs, including proactive analysis and timely, detailed reports. This occurs because although the contract performance criteria are aligned with National Institute of Standards and Technology and NRC internal guidance, the contract does not clearly define SOC performance goals and metrics that can be used to determine whether agency needs are being met.

Additionally, SOC staff and NRC stakeholders expressed differing expectations of SOC roles and responsibilities. This occurs due to a lack of adequate definitions in agency policies and undifferentiated functional descriptions between different entities responsible for securing NRC's network.

Agency management generally agreed with the report's findings and recommendations and is taking action to address the recommendations.

The full report is available at http://www.nrc.gov/docs/ML1601/ML16011A319.pdf

Audit of NRC's Personal Identity Verification (PIV) Card Access System
OIG-16-A-10, March 7, 2016

NRC's PIV card access system meets its operational requirements and there is some coordination among offices. However, opportunities exist to (1) strengthen processes to ensure a greater percentage of PIV card retrieval upon termination, and (2) establish a uniform and effective way for the designated representative to notify security officials of changes to contractor and employee access rights for restricted areas.

PIV cards for terminated contractors and employees are not always retrieved. Despite having a process in place to prepare an employee to terminate from the agency, PIV card retrieval does not always occur, and retrieval procedures have not been established to ensure collection. The OIG identified that of 1,452 terminated PIV cards over a 22-month period (January 2014 through November 2015), approximately 33 percent were not physically collected or retrieved from the terminated contractor or employee. As a result, there is a risk of unauthorized physical access to NRC and other Federal facilities.

In addition, NRC receives inconsistent notification of (1) changes in staff/contractor access rights for restricted areas, and (2) a change to the designated representative for a restricted area. Consequently, the potential exists for unauthorized physical access into a restricted area by a contractor or employee who should no longer have access.

Agency management generally agreed with the report's findings and immediately sought to implement recommendations to retrieve a greater percentage of PIV cards upon termination and also to ensure that access to restricted areas is tightened.

The full report is available at http://www.nrc.gov/docs/ML1606/ML16067A349.pdf

4. Management of information technology and information management.

Technology advances rapidly. The challenge is supporting a future-ready workforce equipped with modern tools, technologies, skills, and knowledge necessary to meet both current and future mission needs. NRC must also meet the regulatory and statutory federal mandates for information technology/Information Management (IT/IM). The responsibility of the NRC's IT/IM program is to maintain and enhance services and infrastructure to enable the mission. This goal reflects the NRC's commitment to openness and is essential for effective agency operations.

Key information technology and information management challenges for NRC include the following:

- Ensuring that data is securely accessible from anywhere, at any time, on any device to support the agency's mobile workforce.

- Leveraging innovative technologies to coordinate and share information on the safety/security interface with both domestic and international partners.

- Managing risk-based information security strategies to protect against sophisticated cyber-attacks.

The following audit report synopses are examples of work that OIG has completed in the IT/IM programs.

Evaluation of NRC's Agencywide Documents Access and Management System (ADAMS) Functional and Operational Capabilities
OIG-16-A-06, November 30, 2015

The Agencywide Documents Access and Management System (ADAMS) is NRC's repository for official agency records. It has been in place since November 1999 and must meet NRC's document management needs while also complying with Federal mandates for electronic recordkeeping and public access requirements. The Office of Information Services manages ADAMS and staff at headquarters and regional offices use ADAMS for their daily mission-related activities. The public uses NRC's public site to access Web-Based ADAMS.

OIG contracted AEGIS.net, Inc., to evaluate if ADAMS meets its required operational capabilities as the agency's repository for official agency records and provides adequate functionalities such as searching, usability, document storage and retrieval, availability, performance, contingency planning, and security.

The evaluation team examined ADAMS' functionality and operational capabilities in each of three areas: Federal and NRC Guidance, User Requirements, and Information Technology (IT) System Requirements. Based on this work, the evaluation team found that ADAMS satisfies applicable records management requirements to serve as the agency's repository for official agency records. However, opportunities exist to improve ADAMS' records management, search and retrieval functionality, and management oversight over ADAMS operation.

Agency management generally agreed with the Evaluation's findings and recommendations and is taking action to address the recommendations.

The full report is available at http://www.nrc.gov/docs/ML1533/ML15334A112.pdf

Audit of NRC's Implementation of Federal Classified Information Laws and Policies
OIG-16-A-17, June 8, 2016

The *Reducing Over-Classification Act of 2010* mandated that the Inspectors General of all Federal agencies with original classification authority perform at least two evaluations over proper use of classified information. The Act found that over-classification of information negatively affects dissemination of information within the government, increases information security costs, and improperly limits stakeholder and public access to information.

NRC OIG issued the first mandatory audit report in 2013. The report's recommendations have been implemented by NRC. This report represents the results of OIG's second mandatory review.

NRC's implementation of Federal classified information laws and policies protects classified information. Document reviews of NRC classification actions reported from April 2013 through January 2016 revealed no systematic misclassification. However, there are opportunities for improvement of records management of classified information at NRC.

Currently, the lack of records management of classified information within NRC has prevented timely disposition and declassification. NRC has not reviewed classified records for disposition and declassification as required and is not prepared for mandatory reviews.

Federal guidance requires agencies to implement a schedule for proper disposition. Effective records management supports timely review of classified information for exemption from automatic declassification and for disposition. However, NRC lacks a cohesive approach to records management of classified information which fosters inadequate understanding of and preparation for records management of classified information.

Agency management generally agreed with the report's findings and recommendations and is taking action to address the recommendations.

The full report is available at http://www.nrc.gov/docs/ML1616/ML16160A373.pdf

5. Management of financial programs.

NRC is required by the *Omnibus Budget Reconciliation Act of 1990* to collect fees totaling approximately 90 percent of its annual budget authority. The agency's budget authority for FYs 2015 and 2016 was $1,015.3 million and $990 million, respectively. NRC estimated that $885.3 million for FY 2015 and $872.8 million for FY 2016 should be recovered from invoiced fees. NRC is required to establish a schedule of charges that fairly and equitably assesses the fees to license holders and license applicants. In recent years, multiple external stakeholders have questioned NRC's budget and fee structure. Moreover, in recent years, NRC has been reducing its budget and full-time equivalents. To maintain transparency, NRC must continue to implement solid internal controls over financial management and reporting.

Key financial management and reporting challenges include the following:

- Developing and implementing the agency's budget in accordance with Federal laws, regulations, and guidelines.
- Maintaining a fee structure in accordance with laws and regulations and that is fair to agency licensees.
- Improving controls over license fee billing.
- Maintaining effective controls over financial reporting, contracts, and grants.

The following audit report synopses are examples of completed or planned OIG work pertaining to financial programs.

Audit of NRC's Decommissioning Funds Program
OIG-16-A-16, June 8, 2016

NRC regulates the decommissioning of nuclear power plants, material sites, fuel cycle facilities, research and test reactors, and uranium recovery facilities, with the ultimate goal of license termination. NRC maintains strict rules governing nuclear power plant and material site decommissioning. These requirements were developed to protect workers and the public during the entire decommissioning process and after the license is terminated.

The agency has adequate processes in place for coordinating with licensees to address possible decommissioning fund shortfalls. However, OIG identified multiple opportunities for improvement in the agency's decommissioning funds review process. Specifically, NRC needs to (1) develop guidance on processing power reactor exemptions to reactor licenses, (2) re-evaluate the minimum decommissioning funding estimate formula, (3) strengthen user controls and guidance on conducting decommissioning financial assurance reviews, and (4) consistently document decommissioning financial assurance reviews for material licensees and inventory reviews of financial instruments.

The report makes recommendations to improve internal controls related to decommissioning funds reviews. When implemented, these recommendations will strengthen the agency's decommissioning funds review process.

Agency management generally agreed with the report's findings and recommendations and is taking action to address the recommendations.

The full report is available at: http://www.nrc.gov/docs/ML1616/ML16160A208.pdf

Audit of NRC's Process for Managing Intra-Government Payment and Collection System Payments
(To be initiated in FY 2017)

Federal agencies frequently provide services to other agencies. These services require an exchange of money when the agencies enter into an agreement and services are performed. Federal agencies use the Department of Treasury's Intra-Government Payment and Collection (IPAC) system to transfer funds from one agency to another with standardized descriptive data. While the Department of Treasury administers the IPAC system, NRC has to ensure that transactions in the system are accurate and paid in a timely manner. NRC processes approximately $80 million a year through the IPAC system. The agency's Office of the Chief Financial Officer receives the IPAC payment or reimbursement request and then forwards the IPAC action to the corresponding NRC Contracting Officer's Representative (COR) for review and approval.

In recent years, there have been concerns about IPAC payment requests being sent to incorrect NRC CORs, payments not being submitted in a timely manner, and insufficient data being provided to review IPAC transactions.

The audit objective is to assess whether NRC has established and implemented an effective process to ensure that IPAC payments are processed in a timely and accurate manner.

Audit of NRC's Exercise of Its Buyout Authority
(To be initiated in FY 2017)

NRC received authority from the U.S. Office of Personnel Management and the Office of Management and Budget to offer a limited number of early outs and/or buyouts to eligible employees in covered positions. Over 2,000 employees were eligible to apply for up to a maximum of 212 early out and/or buyout opportunities and were encouraged to make their requests from May 6 through June 3, 2016. In mid-June, NRC notified employees whether their requests were approved or denied. Ninety-nine employees submitted applications and the process determined that only ninety-three of those employees were eligible for an early out/buyout slot. However, only a total of 86 employees were approved. Of this total, 85 employees requested the buyout and 21 of them took advantage of the early out option.

The agency requested the early out/buyout authority to help reduce the size of and reshape the workforce consistent with their Project Aim and right-sizing efforts. Early out/buyout is part of NRC's plan to accelerate attrition and move NRC forward with reducing the size of the organization.

The audit objective is to assess NRC's early out/buyout policies and procedures to determine if workforce planning documentation, personnel staffing plans, or similar documents, were developed, communicated, and applied as permitted by applicable guidance and regulation in a way that did not adversely impact the agency's mission.

6. Management of administrative functions.

NRC should continue exploring ways to gain administrative efficiencies while maintaining the appropriate corporate support to carry out agency operations. During FY 2016, NRC workforce totaled approximately 3,600 staff positions. To support the agency's technical staff, NRC provides corporate support services such as contract support and multiple human resource programs. While NRC has implemented multiple programs to support agency staff, NRC continues to operate in a Federal Government environment of stagnant or reduced agency budgets, and increasing pressure to reduce corporate support costs. Because of this, the agency needs to have an appropriate balance between administrative functions and technical needs. In addition, NRC must be able to effectively recruit, train, and transfer knowledge to new hires, if applicable. This includes maintaining up-to-date guidance to effectively transfer knowledge and train current staff. NRC initiated Project Aim with the purpose of, among other things, identifying inefficiencies in work processes, and right-sizing the agency to retain skill sets needed to accomplish the agency's mission.

Key NRC corporate support function challenges include the following:

- Reducing related costs while continuing to provide essential administrative functions that help the agency carry out its mission.
- Maintaining agency headquarters operations while complying with Federal space utilization guidelines and carbon footprint reduction targets.
- Recruiting, training, and effectively transferring knowledge to NRC new hires, if applicable.
- Providing current staff with the training and tools to maintain and/or improve the skills needed to effectively perform their jobs.
- Keeping NRC policies and procedures current.

The following audit report synopses are examples of work that OIG will conduct that pertain to NRC's administrative functions.

Audit of NRC's PMDA and DRMA Functions
(To be completed in FY 2017)

The Program Management, Policy Development and Analysis (PMDA) function at NRC headquarters offices and the Division of Resource Management and Administration (DRMA) function at NRC regional offices manage service delivery in such support areas as administration, human capital, budget, contract management, and information management/technology. These organizations exist across the agency and evolved over time to address individual office support needs depending on the specific mission of each office. They perform functions that are specific to their organization as well as functions that were transferred from other offices. The FY 2016 budget has more than 200 staff positions for PMDA/DRMA functions.

The audit objective is to determine if the activities performed by NRC's PMDA/DRMA programs produce the intended results from operational processes in a manner that efficiently and effectively uses resources.

Audit of NRC's Contract Administration Process
(To be completed in FY 2017)

The Federal Acquisition Regulation (FAR), Nuclear Regulatory Commission Acquisition Regulation (NRCAR) and Management Directive (MD) 11.1 discuss the importance of contract administration once a contract is awarded and are the criteria NRC uses for contract administration. According to the FAR, only Contracting Officers (COs), acting within the scope of their authority, are able to enter into and administer contracts. However, COs may, when appropriate, delegate responsibility for specific contract administration or technical supervision tasks to a Contracting Officer's Representative (COR). CORs may not re-delegate any authority delegated to them by the CO.

CORs are responsible for the daily administration and technical direction of a contract during the period of performance. These responsibilities can include: verifying deliverables against contract terms, reviewing and reconciling invoices, monitoring contract funding, overseeing contractor performance, addressing security requirements for onsite contractors, on/off-boarding of contractor staff, and verifying support for Intra-Governmental Payment and Collection. COs and CORs are required to take biennial training to maintain certification as contracting professionals.

The audit objective is to assess the effectiveness NRC's compliance with applicable contract administration requirements.

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COMMENTS AND SUGGESTIONS

If you wish to provide comments on this report, please email OIG using this link.

In addition, if you have suggestions for future OIG audits, please provide them using this link.

Summary of Financial Statement Audit and Management Assurances

U.S. NUCLEAR REGULATORY COMMISSION

Summary of Financial Statement Audit for FY 2016	
Audit Opinion	Unmodified
Restatement	No

Material Weaknesses	Beginning Balance	New	Resolved	Consolidated	Ending Balance
None	0	0	0	0	0
Total Material Weaknesses	0	0	0	0	0

Summary of Management Assurances for FY 2016	
Effectiveness of Internal Control over Financial Reporting (FMFIA § 2)	
Statement of Assurance	Unmodified

Material Weaknesses	Beginning Balance	New	Resolved	Consolidated	Reassessed	Ending Balance
None	0	0	0	0	0	0
Total Material Weaknesses	0	0	0	0	0	0

Effectiveness of Internal Control over Operations (FMFIA § 2)	
Statement of Assurance	Unmodified

Material Weaknesses	Beginning Balance	New	Resolved	Consolidated	Reassessed	Ending Balance
None	0	0	0	0	0	0
Total Material Weaknesses	0	0	0	0	0	0

Conformance with Financial Management System Requirements (FMFIA § 4)	
Statement of Assurance	Federal systems conform to financial management system requirements

Nonconformances	Beginning Balance	New	Resolved	Consolidated	Reassessed	Ending Balance
None	0	0	0	0	0	0
Total Nonconformances	0	0	0	0	0	0

Compliance with Federal Financial Management Improvement Act (FFMIA)		
	Agency	**Auditor**
1. Federal Financial Management Systems Requirements	No Lack of Compliance Noted	No Lack of Compliance Noted
2. Applicable Federal Accounting Standards	No Lack of Compliance Noted	No Lack of Compliance Noted
3. USSGL at the Transaction Level	No Lack of Compliance Noted	No Lack of Compliance Noted

U.S. NUCLEAR REGULATORY COMMISSION

Required Improper Payments Reporting Details

U.S. NUCLEAR REGULATORY COMMISSION

Improper Payments Information Act of 2002 Reporting Details

RISK ASSESSMENT

The NRC is required to complete assessments to determine if any programs were susceptible to making significant improper payments in accordance with the IPIA as amended by the IPERA and the IPERIA. The NRC was not required to complete a risk assessment in FY 2016 because the results of prior assessments allow the agency to conduct risk assessments on a triennial basis. In the NRC's FY 2014 PAR, the NRC reported on the results of the improper payment risk assessment completed that year. The FY 2014 results are also included in the following paragraphs.

The NRC performed a risk assessment as of September 30, 2014, to determine which programs would require improper payment testing using a statistically valid sample. Prior to the passing of IPERIA, which further amended IPIA, agencies were not required to review intra-governmental transactions or payments to employees. IPERIA now requires agencies to review payments to employees as well as Government charge card transactions. Intra-governmental transactions remain the lone exception to IPERIA requirements. Therefore, management identified commercial payments, grants payments, employee payments, payroll, and Government charge cards as potential areas to test pending results of an IPIA risk assessment. In FY 2014, the NRC reviewed FY 2013 disbursements of selected programs to determine the appropriate threshold to conduct a risk assessment and possible testing. For FY 2013, total commercial payments were $230,153,040.29; total grants payments were $22,035,829.01; total employee payments were $24,089,080.17; and total payroll payments were $470,363,997.02. The NRC did not conduct a risk assessment over its purchase card (total disbursements of $3,337,043.45) and travel card (total disbursements of $6,386,480.57) since disbursement totals for each were below $10 million. Conducting a risk assessment over those two programs would not produce an error rate that would meet the minimum threshold set by OMB ($10 million and 1.5% of total program payments).

As part of our qualitative and quantitative risk assessment, the NRC used its best judgement to select samples from each program under review, based on the universe of payments, which were reconciled to the general ledger. This sample was not meant to be statistically valid, as testing was performed to support the risk assessment process versus conducting full IPIA testing for high-risk programs. The testing was further refined through the identification of select attributes for each program to determine if the right recipient received the right payment amount for the right goods or services at the right time.

The results of the FY 2014 risk assessment did not identify any programs that were susceptible to making significant improper payments. While the results of the FY 2014 risk assessment identified programs as low risk, the NRC continued to monitor its payment processes, in addition to conducting periodic reviews of key controls for IPIA programs identified by management. The NRC will continue to conduct risk assessments on a triennial basis, in accordance with the IPIA, as amended by IPERA and IPERIA as well as OMB guidance. The next IPIA risk assessment will take place in FY 2017. However, the NRC will conduct risk assessments, as needed, if there are material changes in the way programs operate or if the agency establishes new programs.

SAMPLING AND ESTIMATION

The results of the FY 2014 risk assessment did not identify any programs that were susceptible to making significant improper payments. Therefore, no sampling or estimation methodologies were required. The next IPIA risk assessment will take place in FY 2017.

IMPROPER PAYMENT REPORTING

NRC has not identified any programs that are susceptible to making significant improper payments. Therefore, there are no improper payments that exceed the statutory thresholds to report or to develop reduction goals.

IMPROPER PAYMENT ROOT CAUSE CATEGORIES

Since the NRC has not identified any improper payments that exceed the statutory thresholds to report, the NRC has not conducted any root cause analysis.

IMPROPER PAYMENT CORRECTIVE ACTIONS

The NRC has not developed improper payment corrective actions because no programs have been identified that are susceptible to making significant improper payments.

INTERNAL CONTROL OVER PAYMENTS

The NRC has sufficient controls in place for payments. No improper payments have been identified that exceed the statutory thresholds to report.

ACCOUNTABILITY

No specific accountability plans have been developed because the NRC has not identified any programs that are susceptible to making significant improper payments.

AGENCY INFORMATION SYSTEMS AND OTHER INFRASTRUCTURE

The NRC has sufficient internal controls, human capital, and information systems in place for payments. The NRC has not identified any programs that are susceptible to making significant improper payments.

BARRIERS

The NRC is not aware of any barriers that limit the agency's ability to properly control payments.

RECAPTURE OF IMPROPER PAYMENTS REPORTING

The NRC conducted a risk assessment in FY 2014 and no improper payments were discovered. Therefore, it was determined that recovery or recapture audits are not cost effective. Risk assessments are conducted every 3 years by the NRC as required by IPERIA. The FY 2014 risk assessment information and conclusions were reported to the OMB in October 2015.

Overpayment Payment Recaptures without Recapture Audit Programs *($ in millions)*

Results for fiscal year 2016	Overpayments Recaptured outside of Payment Recapture Audits	
Program or Activity	Amount Identified	Amount Recaptured
Nuclear Regulatory Commission – 31000001	$0.04 million	$0.04 million
Total	$0.04 million	$0.04 million

AGENCY REDUCTION OF IMPROPER PAYMENTS WITH THE DO NOT PAY INITIATIVE

The NRC uses the Treasury's Do Not Pay (DNP) automated tools to monitor and reduce improper payments. This process has not resulted in capturing any improper payments. The improper payments are being captured through the NRC's internal controls. The NRC uses the Federal Awardees Performance and Integrity Information System and other data systems such as the System for Acquisition Management (SAM) and financial reports to establish whether a contractor has the integrity and business ethics to receive a Federal contract and is otherwise responsible, which is consistent with applicable statutes and regulations.

To date, the NRC grants are awarded only to educational institutions and other entities. The NRC does not award grants to individuals. The NRC uses SAM and other data systems to ensure that only responsible and otherwise eligible applicants receive NRC grants. The same monitoring practices are used for both grantees and commercial vendors. The NRC takes appropriate action internally to debar and suspend grant recipients, as appropriate, as well as reviews for debarments/suspensions as part of the pre-award risk review for eligibility. The NRC continues to follow the lead of the Office of Federal Procurement Policy (OFPP) on who receives awards and continues to implement any changes directed by OFPP policy. The NRC will also continue to use DNP to review and monitor improper payments.

Results of the Do Not Pay Initiative in Preventing Improper Payments

Results for fiscal year 2016	Number (#) of payments reviewed for possible improper payments	Dollars ($) of payments reviewed for possible improper payments	Number (#) of payments stopped	Dollars ($) of payments stopped	Number (#) of potential improper payments reviewed and determined accurate	Dollars($) of potential improper payments reviewed and determined accurate
Reviews with the IPERIA specified databases	52,324	$233 million	0	$0 million	0	$0 million
Reviews with databases not listed in IPERIA	0	$0 million	0	$0 million	0	$0 million

U.S. NUCLEAR REGULATORY COMMISSION

Combined Schedule of Spending

U.S. NUCLEAR REGULATORY COMMISSION

Combined Schedule of Spending

The Combined Schedule of Spending (SOS) is a summary and comparison of how the NRC spent money during FY 2016 and FY 2015. The Combined SOS presents all budgetary resources and obligations incurred for the NRC. The data used to populate the Combined SOS comes from the NRC's core accounting system and is the same data that the NRC uses to populate the SBR.

In the Combined SOS and the SBR, obligations incurred include personnel compensation and benefits, contracts, agreements between Federal agencies, travel, training, grants, and bankcard purchases below the micro-purchase threshold. The "Total Amounts Agreed To Be Spent" line of each section of the Combined SOS agrees with the "Obligations Incurred" line in the SBR.

The NRC also reports obligation information through the Web site *USASpending.gov*. The information reported by the NRC in *USASpending.gov* includes only contract obligations, which is a subset of the NRC's total obligations.

WHAT MONEY IS AVAILABLE TO SPEND?

This section presents total budgetary resources that are reported in the SBR.

Total Resources refers to budgetary resources approved for spending by law.

Amounts Not Agreed To Be Spent represents amounts that the NRC was allowed to spend but did not take action on by the end of the FY.

Amounts Not Available To Be Spent represents amounts that the NRC was not approved to spend during the current FY.

Total Amounts Agreed To Be Spent represents spending actions by the NRC, including payroll and benefits, travel, training, contracts, orders, grants, and other legally binding agreements to pay for goods or services.

HOW WAS THE MONEY SPENT?

This section presents the value of goods and services that the NRC obligated for each of the NRC's two major programs: Nuclear Reactor Safety and Nuclear Materials and Waste Safety.

For the purposes of this section, the breakdown of "How was the Money Spent?" is based upon the OMB budget object class definitions in the OMB Circular A-11.

Payroll represents compensation, including benefits directly related to duties performed for the Government by Federal civilian employees.

Contracts represents purchases of contractual services and supplies.

Grants represents contributions to States, local governments, foreign governments, corporations, associations (domestic and international), and individuals in compliance with programs allowed by law for distributing funds in this manner.

Travel represents the NRC's payment for transportation, sustenance, and miscellaneous expenses for employees/persons on official business.

Rent, Communications, and Utilities represents purchases of contractual services for the NRC's offices.

Structures and Equipment represents purchases of capital equipment and leasehold improvements.

WHO DID THE MONEY GO TO?

This section identifies the recipient of the money, by Federal and non-Federal entities. Amounts in this section reflect "amounts agreed to be spent."

Combined Schedule of Spending *(in thousands)*

For the fiscal years ended September 30,	2016	2015
WHAT MONEY IS AVAILABLE TO SPEND?		
Total Resources	**$ 1,043,944**	$ 1,081,813
Less Amount Available but Not Agreed To Be Spent	**(41,262)**	(26,096)
Less Amount Not Available To Be Spent	**(365)**	(1,904)
Total Amounts Agreed To Be Spent	**$ 1,002,317**	$ 1,053,813
HOW WAS THE MONEY SPENT?		
Spending within NRC Major Programs		
Nuclear Reactor Safety		
Payroll	**$ 472,748**	$ 470,846
Contracts	**231,802**	251,724
Grants	**13,809**	15,333
Travel	**17,670**	21,430
Rent, Communications, and Utilities	**39,843**	43,087
Structures and Equipment	**7,940**	13,338
Total money spent for Nuclear Reactor Safety	**$ 783,812**	$ 815,758
Nuclear Materials and Waste Safety		
Payroll	**$ 131,789**	$ 137,400
Contracts	**64,620**	73,466
Grants	**3,850**	4,475
Travel	**4,926**	6,254
Rent, Communications, and Utilities	**11,107**	12,574
Structures and Equipment	**2,213**	3,886
Total money spent for Nuclear Materials and Waste Safety	**$ 218,505**	$ 238,055
Total Amounts Agreed To Be Spent	**$ 1,002,317**	$ 1,053,813
WHO DID THE MONEY GO TO?		
For Profit	**$ 227,933**	$ 238,366
Individuals	**500,117**	511,032
Federal	**258,915**	280,623
State & Local Government	**15,205**	18,828
Other	**147**	4,964
Total Amounts Agreed To Be Spent	**$ 1,002,317**	$ 1,053,813

In accordance with OMB Circular A-136, Section 11.5.1, the Combined SOS is not a required part of the Financial Statements and, therefore, it is not audited.

Freeze the Footprint

U.S. NUCLEAR REGULATORY COMMISSION

Combined Freeze the Footprint Baseline Comparison

	FY 2012 Baseline	FY 2016	Change (FY 2012 Baseline – 2016)
Square Footage (SF in millions)	1.170	1.134	(0.036)

Reporting of O&M Cost – Owned and Direct Lease Buildings

	FY 2012 Reported Cost	2015	Change (FY 2012 Baseline – 2016)
Operation and Maintenance (O&M) Costs ($ in millions)	N/A*	N/A*	N/A*

**The NRC does not directly lease or own any space, but has occupancy agreements with GSA.*

The NRC's portfolio is currently 97 percent of the agency's FY 2012 Freeze the Footprint baseline of 1,170,242 usable office space (USF). This year's Reduce the Footprint Plan targets a reduction of the portfolio to 1,039,946 USF (89 percent of the Freeze the Footprint baseline) by the end of the FY 2017 – FY 2021 planning period. The plan refines the projections from last year's final plan as follows:

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Office Target (Net USF Reduction)	3,000	33,561	39,561	7,000	11,000

The NRC's office space at its Rockville, MD, headquarters and regional office location space, which is provided by occupancy agreements with GSA, will be backfilled by other Federal agencies. Implementing the reductions at headquarters and the regions will be challenging due to budget limitations and the lengths and non-cancelable terms of the leases GSA has in place. The limited amount of physical swing space available to support the renovation/ reconfiguration activities at headquarters will also be a challenge.

U.S. NUCLEAR REGULATORY COMMISSION

Civil Monetary Penalty Adjustment for Inflation

U.S. NUCLEAR REGULATORY COMMISSION

Civil Monetary Penalty Adjustment for Inflation

On November 2, 2015, the *Federal Civil Penalties Inflation Adjustment Act of 1990* was amended by the *Federal Civil Penalties Inflation Adjustment and Improvements Act of 2015* (Sec. 701, Pub. L. 114-74, 129 Stat.599). The 2015 Improvements Act requires that the head of each agency through an interim final rulemaking make an initial "catch-up" adjustment of the civil monetary penalties assessed under statutes enforced by the agency by July 1, 2016, to be effective no later than August 1, 2016. The NRC issued its adjustment in July 2016.

Penalty (Name of Penalty)	Authority	Date of Previous Adjustment	Date of Current Adjustment*	Current Penalty Level ($ Amount)
Base civil penalties – power reactors, gaseous diffusion plants, and high-level waste repository	*Atomic Energy Act of 1954, as amended*	November 2004	August 2016	$280,000
Base civil penalty – fuel fabricators authorized to possess Category I or II quantities of SNM and uranium conversion facilities	*Atomic Energy Act of 1954, as amended*	November 2004	August 2016	$140,000
Base civil penalty – all other fuel fabricators, including facilities under construction, authorized to process Category III quantities of SNM, industrial processors, independent spent fuel and monitored retrievable storage installations, mills, gas centrifuge and laser uranium enrichment facilities	*Atomic Energy Act of 1954, as amended*	November 2004	August 2016	$70,000
Base civil penalty – test reactors, contractors, waste disposal licensees, industrial radiographers, and other large material users	*Atomic Energy Act of 1954, as amended*	November 2004	August 2016	$28,000
Base civil penalty – research reactors, academic, medical, or other small material users	*Atomic Energy Act of 1954, as amended*	November 2004	August 2016	$14,000
Base civil penalty - loss, abandonment, or improper transfer or disposal of a sealed source or device, regardless of the use or type of licensee: Sources or devices with a total activity greater than 3.7 x 10 4 MBq (1 Curie), excluding hydrogen-3 (tritium)	*Atomic Energy Act of 1954, as amended*	November 2004	November 2008	$54,000
Base civil penalty - loss, abandonment, or improper transfer or disposal of a sealed source or device, regardless of the use or type of licensee: Other sources or devices containing the materials and quantities listed in 10 CFR 31.5(c)(13)(i)	*Atomic Energy Act of 1954, as amended*	November 2004	November 2008	$17,000
Base civil penalty - loss, abandonment, or improper transfer or disposal of a sealed source or device, regardless of the use or type of licensee: Sources and devices not otherwise described above	*Atomic Energy Act of 1954, as amended*	November 2004	November 2008	$7,000
Individuals who release Safeguards Information	*Atomic Energy Act of 1954, as amended*	November 2004	November 2008	$7,000

* *Federal Register, Vol. 81, No. 127, Friday, July 1, 2016, 43019*

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Acronyms and Abbreviations

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ACRONYM	
10 CFR	Title 10 of the Code of Federal Regulations
ABWR	advanced boiling-water reactor
ADAMS	Agencywide Documents Access and Management System
AMP	Aging Management Programs
AO	Abnormal Occurrence
ASP	Accident Sequence Precursor
BFS	Budget Formulation System
BWR	Boiling-Water Reactor
CFO	Chief Financial Officer
CCDP	conditional core damage probability
CFR	Code of Federal Regulations
CLE	Collaborative Learning Environment
COL	combined license
COOP	continuity of operations
COSO	Committee of Sponsoring Organization of the Treadway Commission
cROP	Construction Reactor Oversight Process
CRT	Contingency Response Tool
CSRS	Civil Service Retirement System
DC	design certification
DHS	U.S. Department of Homeland Security
DNFSB	Defense Nuclear Facilities Safety Board
DOE	U.S. Department of Energy
DOL	U.S. Department of Labor
DOT	U.S. Department of Transportation
DSRS	design specific review standards
ECCS	Emergency Care Cooling Systems
ECERM	Executive Committee on Enterprise Risk Management
EDO	Executive Director for Operations
ERM	Enterprise Risk Management
ESP	early site permit
ETS2	E-Gov Travel Service 2
FAIMIS	Financial Accounting and Integrated Management Information System
FAST	Fixing America's Surface Transportation
FDA	U.S. Food and Drug Administration
FECA	*Federal Employees Compensation Act of 1993*

ACRONYM	
FERS	Federal Employees Retirement System
FEVS	Federal Employee Viewpoint Survey
FFMIA	*Federal Financial Management Improvement Act of 1996*
FMFIA	*Federal Managers' Financial Integrity Act of 1982*
FITARA	*Federal Information Technology Acquisition Reform Act*
FOIA	*Freedom of Information Act of 1966*
FSER	final safety evaluation report
FTE	full-time equivalent
FY	fiscal year
GAAP	Generally Accepted Accounting Principles
GAO	Government Accountability Office
GSA	U.S. General Services Administration
GTAS	Government-wide Treasury Accounting Symbol
HRA	human reliability analysis
HRMS	Human Resource Management System
IAEA	International Atomic Energy Agency
IG	Inspector General
IMC	Inspection Manual Chapter
IMPEP	Integrated Materials Performance Evaluation Program
IPP	Internet Payment Platform
Integrity Act	*Federal Managers' Financial Integrity Act of 1982*
IPERA	*Improper Payments Elimination and Reporting Act of 2012*
IPERIA	*Improper Payment Elimination and Recovery Improvement Act of 2012*
IPIA	*Improper Payments Information Act of 2002*
IRC	Incident Response Center
IRP	Integrated Response Program
ISFSI	independent spent fuel storage installation
IT	information technology
ITAAC	inspections, tests, analyses, and acceptance criteria
IT/IM	Information Technology and Information Management
KM	knowledge management
LANL	Los Alamos National Laboratory

ACRONYM	
LLRW	low-level radioactive waste
LLW	low-level waste
LLWR	large light-water reactors
LWA	limited work authorization
LWR	light-water reactor
MBDBE	Mitigation Beyond Design Basis Events
MDM	Master Data Management
NEA	Nuclear Energy Agency
NIST	National Institute of Standards and Technology
NRC	U.S. Nuclear Regulatory Commission
NSTS	National Source Tracking System
NTAS	National Terrorism Advisory System
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
OCHCO	Office of the Chief Human Capital Officer
OIG	Office of the Inspector General
OMB	Office of Management and Budget
OPM	U.S. Office of Personnel Management
PAR	Performance and Accountability Report
PSAT	Programmatic Senior Assessment Team

ACRONYM	
REIRS	Radiation Exposure Information and Reporting System
REM	roentgen equivalent man
RIC	Regulatory Information Conference
ROP	Reactor Oversight Process
SAT	Senior Assessment Team
SBR	Statement of Budgetary Resources
SCNP	Statement of Changes in Net Position
SES	Senior Executive Service
SFFAS	Statement of Federal Financial Accounting Standards
SGI	Safeguards Information
SMR	small modular reactor
SNM	special nuclear material
SOS	Schedule of Spending
SRP	Standard Review Plan
TLM	Time and Labor Modernization
TVA	Tennessee Valley Authority
UF6	uranium hexafluoride
UO2	uranium dioxide
UR	uranium recovery
USAID	U.S. Agency for International Development
USF	Usable Office Space
VIP	Vendor Inspection Program
WCS	Waste Control Specialist
WIR	Waste Incidental to Reprocessing

Bibliographic Data Sheet

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NRC FORM 335
(12-2010)
NRCMD 3.7

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BIBLIOGRAPHIC DATA SHEET

(See instructions on the reverse)

1. REPORT NUMBER
(Assigned by NRC, Add Vol., Supp., Rev., and Addendum Numbers, if any.)

NUREG-1542, Vol. 22

2. TITLE AND SUBTITLE

U.S. Nuclear Regulatory Commission
Fiscal Year 2016
Performance and Accountability Report

3. DATE REPORT PUBLISHED

MONTH	YEAR
November	2016

4. FIN OR GRANT NUMBER

N/A

5. AUTHOR(S)

David Holley, James Coyle, et.al

6. TYPE OF REPORT

Annual

7. PERIOD COVERED (Inclusive Dates)

Fiscal Year 2016

8. PERFORMING ORGANIZATION - NAME AND ADDRESS (If NRC, provide Division, Office or Region, U. S. Nuclear Regulatory Commission, and mailing address; if contractor, provide name and mailing address.)

Division of Planning and Budget
Office of the Chief Financial Officer
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

9. SPONSORING ORGANIZATION - NAME AND ADDRESS (If NRC, type "Same as above", if contractor, provide NRC Division, Office or Region, U. S. Nuclear Regulatory Commission, and mailing address.)

Same as above

10. SUPPLEMENTARY NOTES

11. ABSTRACT (200 words or less)

The Fiscal Year 2016 Performance and Accountability Report (PAR) presents the agency's program performance and financial management information in compliance with the *Government Performance and Results Modernization Act of 2010*. 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.

12. KEY WORDS/DESCRIPTORS (List words or phrases that will assist researchers in locating the report.)

Performance and Accountability Report (PAR)
Fiscal Year (FY)
2016

13. AVAILABILITY STATEMENT

unlimited

14. SECURITY CLASSIFICATION

(This Page)
unclassified

(This Report)
unclassified

15. NUMBER OF PAGES

16. PRICE

NRC FORM 335 (12-2010)

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NUREG-1542, Vol. 22
November 2016

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