



# Semiannual Report to Congress

*April 1, 2010 - September 30, 2010*



## OIG VISION

"We are agents of positive change striving for continuous improvement in our agency's management and program operations."

## NRC-OIG MISSION

NRC-OIG's mission is to (1) independently and objectively conduct and supervise audits and investigations relating to NRC's programs and operations; (2) prevent and detect fraud, waste, and abuse; and (3) promote economy, efficiency, and effectiveness in NRC's programs and operations.

Center Photo: Foundation excavation for Vogtle Unit 4 showing Vogtle Units 1 and 2 in background with water vapor rising from cooling towers. (March, 2010)  
Photo courtesy of Southern Company.

Right Photo: Construction for the module assembly building at the plant site for Vogtle Units 3 and 4. (April, 2010)  
Photo courtesy of Southern Company.

Left Photo: Construction plant site for Vogtle Units 3 and 4. (October, 2009)  
Photo courtesy of Southern Company.

---

# A Message From The Inspector General

I am pleased to present this Semiannual Report to Congress on the activities and accomplishments of the Nuclear Regulatory Commission (NRC) Office of the Inspector General (OIG) from April 1, 2010, to September 30, 2010.



Our work reflects the legislative mandate of the Inspector General Act, which is to identify and prevent fraud, waste, and abuse through the conduct of audits and investigations relating to NRC programs and operations. The audits and investigations highlighted in this report demonstrate our commitment to ensuring integrity and efficiency in NRC's programs and operations.

NRC's core mission is to ensure the protection of public health and safety and the environment. In addition to ongoing agency activities to maintain the safety and security of the existing fleet of reactors, NRC's workload has increased with the receipt of applications for new reactor designs and new nuclear power plants to address the Nation's future electric power generation needs. Our cover for this Semiannual Report presents photographs of the existing Vogtle nuclear power plant Units 1 and 2 and the construction site for the new Vogtle Units 3 and 4. These photographs reflect the agency's dual responsibility for the oversight of existing nuclear power plants, and the construction of new plants.

During this reporting period, the NRC OIG continued its focus on critical agency operations such as NRC's vendor inspection program, oversight of irradiator security, the deployment of the National Source Tracking System, and the management of agreements with Department of Energy laboratories. Working with NRC to identify risks and vulnerabilities to alert them to problems affords the agency the opportunity to take any necessary corrective action.

During this semiannual period, we issued eight program audit reports, two evaluation reports, and analyzed one contract audit report. As a result of this work, OIG made a number of recommendations to improve the effective and efficient operation of NRC's safety, security, and corporate management programs. OIG also opened 23 investigations, and completed 38 cases. Two of the open cases were referred to the Department of Justice, and 22 allegations were referred to NRC management for action.

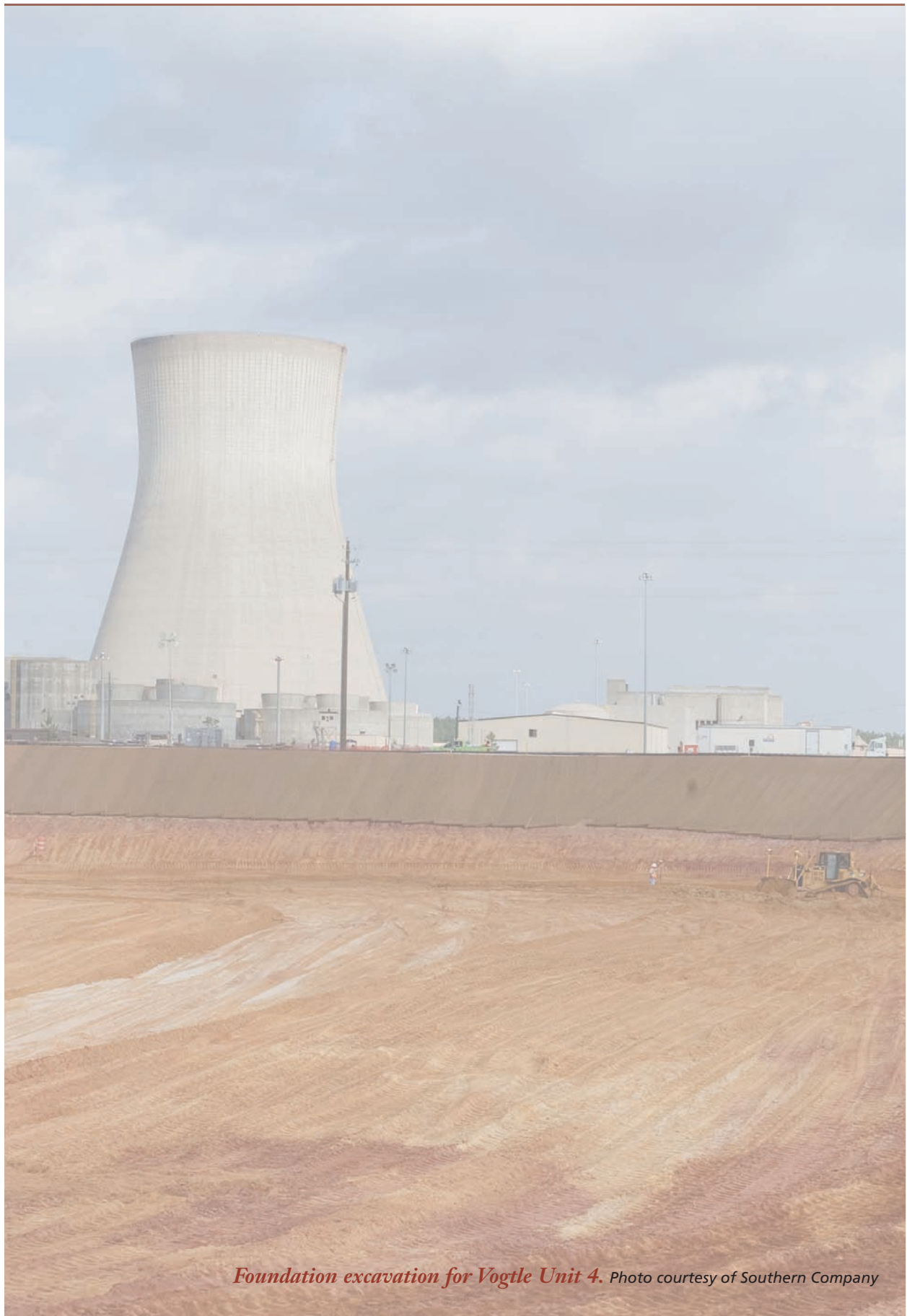
OIG remains committed to the integrity, efficiency, and effectiveness of NRC programs and operations, and our audits, investigations, and other activities highlighted in this report demonstrate this ongoing commitment. My office is dedicated to maintaining the highest possible standards of professionalism and quality in its audits and investigations. I would like to acknowledge our auditors, investigators, and support staff for their superior work and commitment to the mission of our office.

Finally, OIG's success would not be possible without the collaborative efforts between my staff and agency managers to address OIG findings and to implement the corrective actions recommended by my office. I wish to thank them for their dedication and support, and I look forward to their continued cooperation as we work together to ensure the integrity of agency operations.

A handwritten signature in black ink that reads "Hubert T. Bell". The signature is written in a cursive, flowing style.

Hubert T. Bell  
Inspector General





*Foundation excavation for Vogtle Unit 4. Photo courtesy of Southern Company*

---

# Contents

<i>Highlights</i> . . . . .	v
<i>Overview of the NRC and the OIG</i> . . . . .	1
NRC's Mission . . . . .	1
OIG History, Mission, and Goals . . . . .	2
Inspector General History . . . . .	2
OIG Mission and Goals . . . . .	3
<i>OIG Programs and Activities</i> . . . . .	4
Audit Program . . . . .	4
Investigative Program . . . . .	5
General Counsel Activities . . . . .	6
Regulatory Review . . . . .	6
Other Activities . . . . .	7
Support of the Inspector General Community in Training . . . . .	7
NRC OIG Receives Best-In-Class Award . . . . .	8
Management and Performance Challenges . . . . .	9
<i>Audits</i> . . . . .	10
Audit Summaries . . . . .	10
Audits in Progress . . . . .	26
<i>Investigations</i> . . . . .	33
Investigative Case Summaries . . . . .	33
<i>Summary of OIG Accomplishments</i> . . . . .	39
Investigative Statistics . . . . .	39
Audit Listings . . . . .	41
Audit Resolution Activities . . . . .	43
<i>Abbreviations and Acronyms</i> . . . . .	46
<i>Reporting Requirements</i> . . . . .	47
<i>Appendix</i> . . . . .	48



*Foundation excavation for Vogtle Unit 4.* Photo courtesy of Southern Company

---

# Highlights

*The following two sections highlight selected audits and investigations completed during this reporting period. More detailed summaries appear in subsequent sections of this report.*

## AUDITS

- The Energy Reorganization Act of 1974 authorized the NRC to use the Department of Energy's (DOE) research facilities and services to assist NRC in conducting its mission. In 1978, NRC and DOE executed a Memorandum of Understanding that established the policy governing the relationship between NRC and DOE for NRC-funded research at DOE laboratories. There are currently 17 DOE laboratories nationwide and all are managed and operated by non-Government entities under contract with DOE. As of July 13, 2009, NRC had 186 active agreements with DOE laboratories totaling approximately \$365 million. The audit objective was to determine whether NRC has established and implemented an effective system of internal control over the placement and monitoring of work with DOE laboratories.
- In recent years, the Federal Government has taken steps to increase opportunities for employees to telework. Telework is defined as work arrangements in which an employee regularly performs officially assigned duties at home or other worksites geographically convenient to the employee's residence. Telework is also a tool that can be used to ensure continuity of essential Government functions in the event of national or local emergencies. The audit objectives were to determine NRC's readiness to have staff telework under emergency situations, the adequacy of internal controls associated with the telework program, and if NRC's telework program complies with relevant law and Office of Personnel Management guidance.
- In 1977, Congress enacted the Government in the Sunshine Act (the Sunshine Act) with the goal of enhancing openness in the decisionmaking process of Federal Government agencies. The Sunshine Act states that when Federal agency heads deliberate on behalf of their respective organizations, these meetings must be open to the public. However, the Sunshine Act provides exemptions allowing for certain meetings to be closed to the public. Each Federal agency is required to document the reasons why a meeting was closed; give notice of the closed meeting; keep transcripts, electronic recordings, or minutes of the closed meeting; and report to Congress annually on compliance with these requirements. The audit objective was to determine if NRC's process for conducting meetings that are closed to the public hinders the transparent transaction of nuclear regulation.



- 
- The National Source Tracking System (NSTS) is a centralized database developed and managed by NRC to help NRC and Agreement State regulatory agencies account for select categories of high-risk radiological sources held by approximately 1,300 licensees. Specifically, NSTS is used to monitor transactions and inventories of nationally tracked sources as defined in Title 10 of the Code of Federal Regulations, Part 20, Section 1003 (10 CFR 20.1003). These nationally tracked sources include Category 1 and 2 radiological sealed sources that have industrial, medical, and research uses. The International Atomic Energy Agency (IAEA) characterizes Category 1 and 2 sources as radiological materials that pose the greatest health risks if not safely managed or securely protected. The audit's objective was to determine if the National Source Tracking System meets its required operational capabilities.
  - Irradiators are devices that expose products, such as food and medical supplies, to radiation for sterilization and other purposes. Radiation is achieved by the exposure to high-risk radioactive materials, such as Cobalt-60 and Cesium-137. Commercial firms, as well as State-run organizations such as hospitals and universities, operate irradiators and are licensed to possess the radioactive materials used in these devices. NRC and NRC Agreement States regulate the safe and secure use of these irradiators and other radioactive materials. Nationwide, there are approximately 50 licensees that operate about 50 large irradiators that contain more than 10,000 curies of Cobalt-60. Additionally, there are approximately 590 licensees that operate about 1,100 smaller type irradiators that use lesser quantities of radioactive materials. The purpose of this audit was to determine the adequacy of NRC's oversight of industrial irradiator security.
  - Wireless devices, services, and technologies are commonplace in all aspects of our lives and offer potential cost-savings and convenience over wired solutions. Wireless devices include any electronic device that can communicate with other devices without being physically attached to those devices. Most wireless devices communicate through radio frequencies. A wireless service provides access to services such as telephone, e-mail, calendaring, and messaging using wireless devices. Wireless technologies include mobile equipment, such as cellular telephones, BlackBerries, and wireless networking. The objective of this assessment was to determine if NRC's wireless devices met required operational capabilities and security requirements.



- 
- NRC endeavors to protect the public health and safety and the environment by overseeing vendor compliance with NRC's regulations for assuring the integrity of domestic and global parts and services supplied to nuclear power reactors. NRC directly oversees compliance by conducting reactive and routine inspections of vendors, and indirectly through licensee audits of vendors and through American Society of Mechanical Engineers (ASME) standards. Vendors manufacture a range of components such as fasteners, pumps, valves, and reactor vessels, as well as provide design, engineering, and construction services. While most vendors do not hold NRC licenses, they are nonetheless bound through contracts with licensees, applicants, or other vendors to comply with NRC's quality assurance regulations contained in NRC regulations. The audit objective was to assess NRC's regulatory approach for ensuring the integrity of domestic and foreign safety-related parts and services supplied to current or prospective nuclear power reactors.
  - NRC has promulgated regulations requiring that its licensees implement an access authorization program to provide high assurance that individuals who are granted unescorted access to nuclear power plants and those individuals who maintain access to these sites are trustworthy and reliable and do not constitute an unreasonable risk to public health and safety, including the potential to commit radiological sabotage. NRC inspects licensee access authorization programs to verify that licensees are implementing programs in accordance with NRC regulations and the facilities' security plans. Sharif Mobley was arrested and charged in Yemen as a suspected member of al Qaeda in March 2010. Prior to his arrest, Mobley worked as a general laborer at six nuclear power plants in the United States between 2002 and 2008. Mobley's arrest prompted congressional interest and in early 2010, following Mobley's arrest, OIG received a congressional request to conduct a review of NRC's process requirements for licensees granting unescorted access at nuclear power plants. The purpose of this audit was to determine the effectiveness of NRC's oversight of nuclear power plant access authorization programs.

---

## INVESTIGATIONS

- OIG conducted an investigation into a leak that occurred in the essential service water system (ESW), a significant safety system, at the Byron Nuclear Station (Byron) on October 19, 2007. This leak necessitated a 12-day shutdown of both reactors located at that site. This was a significant event, and NRC initiated a Special Inspection Team soon after the shutdown to evaluate licensee actions surrounding the ESW failure.
- OIG conducted an investigation based on a letter sent to the Department of Homeland Security (DHS) OIG from four members of Congress regarding implementation of a new emergency notification system (ENS) at Indian Point Nuclear Power Plant, an NRC licensee. The letter expressed concern about the oversight exercised by the Federal Emergency Management Agency (FEMA) and the relationship between FEMA and NRC during the implementation of modifications of backup power to the ENS, which was required by the Energy Policy Act of 2005.
- OIG conducted an investigation based on a request from a former NRC Chairman concerning the development of an NRC SECY paper regarding options for disposal of depleted uranium. Specifically, OIG was requested to review whether individual NRC staff members involved in the development of the SECY felt they could pursue the agency's differing professional view and differing professional opinion program if they disagreed with the SECY paper presented to the NRC Commission.
- OIG conducted an investigation into an allegation concerning the legality of an NRC contract with Information Systems Laboratories, Inc. (ISL), to review applications submitted to the NRC by utility companies requesting to build new nuclear power plants. The allegation questioned the legality of NRC contracting out activities which were "inherently governmental" in nature.
- OIG completed an investigation into an allegation that Constellation Energy Nuclear Group (CENG) withheld material financial information from NRC regarding its corporate restructuring with Electricite de France when it submitted an application for an indirect license transfer. Specifically, OIG examined whether NRC staff were pressured or acted inappropriately in connection with the agency's decision to award the transfer license to CENG, or had knowledge that the license application was incomplete.

---

# Overview of the NRC and the OIG

## NRC'S MISSION

NRC was formed in 1975, in accordance with the Energy Reorganization Act of 1974, to regulate the various commercial and institutional uses of nuclear materials. The agency succeeded the Atomic Energy Commission, which previously had responsibility for both developing and regulating nuclear activities.

NRC's mission is to regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment. NRC's regulatory mission covers three main areas:

- **Reactors** - Commercial reactors that generate electric power and research and test reactors used for research, testing, and training.
- **Materials** - Uses of nuclear materials in medical, industrial, and academic settings and facilities that produce nuclear fuel.
- **Waste** - Transportation, storage, and disposal of nuclear materials and waste, and decommissioning of nuclear facilities from service.



Under its responsibility to protect public health and safety, NRC has three principal regulatory functions: (1) establish standards and regulations, (2) issue licenses for nuclear facilities and users of nuclear materials, and (3) inspect facilities and users of nuclear materials to ensure compliance with the requirements. These regulatory functions relate both to nuclear power plants and other uses of nuclear materials – like nuclear medicine programs at hospitals, academic activities at educational institutions, research, and such industrial applications as gauges and testing equipment.

The NRC maintains a current Web site and a public document room at NRC headquarters in Rockville, Maryland, and holds public hearings, public meetings in local areas and at NRC offices, and discussions with individuals and organizations.

---

## OIG HISTORY, MISSION, AND GOALS

### *Inspector General History*

In the 1970s, Government scandals, oil shortages, and stories of corruption covered by newspapers, television, and radio stations took a toll on the American public's faith in its Government. The U.S. Congress knew it had to take action to restore the public's trust. It had to increase oversight of Federal programs and operations. It had to create a mechanism to evaluate the effectiveness of Government programs. And, it had to provide an independent voice for economy, efficiency, and effectiveness within the Federal Government that would earn and maintain the trust of the American people.

In response, Congress passed the landmark legislation known as the Inspector General Act (IG Act), which President Jimmy Carter signed into law in 1978. The IG Act created independent Inspectors General (IG), who would protect the integrity of Government; improve program efficiency and effectiveness; prevent and detect fraud, waste, and abuse in Federal agencies; and keep agency heads, Congress, and the American people fully and currently informed of the findings of IG work.

Today, the IG concept is a proven success. The IGs continue to deliver significant benefits to our Nation. Thanks to IG audits and investigations, billions of dollars have been returned to the Federal Government or have been better spent based on recommendations identified through those audits and investigations. IG investigations have also contributed to the prosecution of thousands of wrongdoers. In addition, the IG concepts of good governance, accountability, and monetary recovery encourages foreign governments to seek advice from IGs, with the goal of replicating the basic IG principles in their own governments.



---

## *OIG Mission and Goals*

NRC's OIG was established as a statutory entity on April 15, 1989, in accordance with the 1988 amendment to the IG Act. NRC OIG's mission is to (1) independently and objectively conduct and supervise audits and investigations relating to NRC programs and operations; (2) prevent and detect fraud, waste, and abuse; and (3) promote economy, efficiency, and effectiveness in NRC programs and operations.

OIG is committed to ensuring the integrity of NRC programs and operations. Developing an effective planning strategy is a critical aspect of accomplishing this commitment. Such planning ensures that audit and investigative resources are used effectively. To that end, OIG developed a *Strategic Plan*<sup>1</sup> that includes the major challenges and critical risk areas facing NRC.

The plan identifies OIG's priorities and establishes a shared set of expectations regarding the goals OIG expects to achieve and the strategies that will be employed to do so. OIG's *Strategic Plan* features three goals, which generally align with NRC's mission and goals:

- 1. Strengthen NRC's efforts to protect public health and safety and the environment.**
- 2. Enhance NRC's efforts to increase security in response to an evolving threat environment.**
- 3. Increase the economy, efficiency, and effectiveness with which NRC manages and exercises stewardship over its resources.**

---

<sup>1</sup> OIG's current *Strategic Plan* covers the period FY 2008 through FY 2013.

---

# OIG Programs and Activities

## AUDIT PROGRAM

The OIG Audit Program focuses on management and financial operations; economy or efficiency with which an organization, program, or function is managed; and whether the programs achieve intended results. OIG auditors assess the degree to which an organization complies with laws, regulations, and internal policies in carrying out programs, and they test program effectiveness as well as the accuracy and reliability of financial statements. The overall objective of an audit is to identify ways to enhance agency operations and promote greater economy and efficiency. Audits comprise four phases:

- **Survey phase** - An initial phase of the audit process is used to gather information, without detailed verification, on the agency's organization, programs, activities, and functions. An assessment of vulnerable areas determines whether further review is needed.
- **Verification phase** - Detailed information is obtained to verify findings and support conclusions and recommendations.
- **Reporting phase** - The auditors present the information, findings, conclusions, and recommendations that are supported by the evidence gathered during the survey and verification phases. Exit conferences are held with management officials to obtain their views on issues in the draft audit report. Comments from the exit conferences are presented in the published audit report, as appropriate. Formal written comments are included in their entirety as an appendix in the published audit report.
- **Resolution phase** - Positive change results from the resolution process in which management takes action to improve operations based on the recommendations in the published audit report. Management actions are monitored until final action is taken on all recommendations. When management and OIG cannot agree on the actions needed to correct a problem identified in an audit report, the issue can be taken to the NRC Chairman for resolution.

Each September, OIG issues an *Annual Plan* that summarizes the audits planned for the coming Fiscal Year. Unanticipated high priority issues may arise that generate audits not listed in the *Annual Plan*. OIG audit staff continually monitor specific issues areas to strengthen OIG's internal coordination and overall planning process. Under the OIG Issue Area Monitor (IAM) program, staff designated as IAMs are assigned responsibility for keeping abreast of major agency programs and activities. The broad IAM areas address nuclear reactors, nuclear materials, nuclear waste, international programs, security, information management, and financial management and administrative programs.

---

## INVESTIGATIVE PROGRAM

OIG's responsibility for detecting and preventing fraud, waste, and abuse within NRC includes investigating possible violations of criminal statutes relating to NRC programs and activities, investigating misconduct by NRC employees, interfacing with the Department of Justice on OIG-related criminal matters, and coordinating investigations and other OIG initiatives with Federal, State, and local investigative agencies and other OIGs. Investigations may be initiated as a result of allegations or referrals from private citizens; licensee employees; NRC employees; Congress; other Federal, State, and local law enforcement agencies; OIG audits; the OIG Hotline; and IG initiatives directed at areas bearing a high potential for fraud, waste, and abuse.

Because NRC's mission is to protect the health and safety of the public, OIG's Investigative Program directs much of its resources and attention on investigations of alleged conduct by NRC staff that could adversely impact matters related to health and safety. These investigations may address allegations of:

- Misconduct by high-ranking NRC officials and other NRC officials, such as managers and inspectors, whose positions directly impact public health and safety.
- Failure by NRC management to ensure that health and safety matters are appropriately addressed.
- Failure by NRC to appropriately transact nuclear regulation publicly and candidly and to openly seek and consider the public's input during the regulatory process.
- Conflicts of interest involving NRC employees and NRC contractors and licensees, including such matters as promises of future employment for favorable or inappropriate treatment and the acceptance of gratuities.
- Fraud in the NRC procurement program involving contractors violating Government contracting laws and rules.

OIG has also implemented a series of proactive initiatives designed to identify specific high-risk areas that are most vulnerable to fraud, waste, and abuse. A primary focus is electronic-related fraud in the business environment. OIG is committed to improving the security of this constantly changing electronic business environment by investigating unauthorized intrusions and computer-related fraud, and by conducting computer forensic examinations. Other proactive initiatives focus on determining instances of procurement fraud, theft of property, Government credit card abuse, and fraud in Federal programs.

---

## GENERAL COUNSEL ACTIVITIES

### *Regulatory Review*

Pursuant to the Inspector General Act, Title 5 U.S. Code, Appendix 3, Section 4(a)(2), OIG reviews existing and proposed legislation, regulations, policy, and implementing Management Directives (MD), and makes recommendations to the agency concerning their impact on the economy and efficiency of agency programs and operations.

Regulatory review is intended to provide assistance and guidance to the agency prior to the concurrence process so as to avoid formal implementation of potentially flawed documents. The OIG does not concur with, or object to, the agency actions reflected in the regulatory documents, but rather offers comments and requests responsive action within specified timeframes.

Comments provided in regulatory review reflect an objective analysis of the language of proposed agency statutes, directives, regulations, and policies resulting from OIG insights from audits, investigations, and historical data and experience with agency programs. OIG's review is structured so as to identify vulnerabilities and offer additional or alternative choices.

From April 1, 2010, through September 30, 2010, OIG reviewed more than 250 agency documents, including approximately 185 Commission papers (SECYs) and Staff Requirements Memoranda, and 65 Federal Register Notices, regulatory actions, and statutes.

To effectively track the agency's response to OIG regulatory review, comments include a request for written replies within 90 days, with either a substantive reply or status of issues raised by OIG.

During this reporting period, the OIG reviewed 18 MDs on technical issues, agency communications, program organization, and personnel guidance. In addition, the agency provided responsive comments to 12 OIG comments issued earlier. Significant comments are summarized below:

### **Management Directives**

Transparency and the release of documents under the Freedom of Information Act have a renewed emphasis in the current environment. The revised draft of MD 3.1, *Freedom of Information Act*, reflects recent policy changes and adds new requirements. OIG comments requested clarification on the authority of the agency to permit release of documents related to OIG's mission. In addition, OIG noted that the additional conditions for withholding of documents under law enforcement exemption 7(F) did not appear to be included in either regulatory or Department of Justice guidance.



---

Revised MD 6.1, *Resolution and Follow-up of Audit Recommendations*, establishes agency systems to ensure prompt and proper resolution and implementation of audit recommendations made to the agency and provides guidance on addressing audits by OIG and non-agency audit organizations. The review of this draft directive afforded OIG the opportunity to revisit the structure of the audit resolution process.

OIG comments sought to clarify the roles of the various audit organizations assessing NRC programs and operations; better define the different types of audits; clarify the audit followup requirements for the different types of audits; define the impasse resolution process; and bring consistency between current practices and the draft MD.

Draft MD 10.161, *Civil Rights Program and Affirmative Employment and Diversity Management Program*, reflected a rebranding of the program formerly known as the “NRC Equal Employment Opportunity Program” as well as additional agency action items, including *No Fear Act* implementation. OIG provided comments on minor issues in the draft, including the need to clarify certain reporting requirements.

The draft revision of MD 11.6, *Financial Assistance Programs*, was well constructed. OIG comments focused on wrongdoing reporting requirements and suggested direction regarding timeframes for reporting.

OIG found revised MD 13.1, *Property Management*, to be generally comprehensive; however, the matter of electronic devices (e.g., cell phones, BlackBerries) requires more detail, clarity, and consistency with regard to responsibility for oversight and accounting. In addition, the handling of reporting requirements for contractor held property needs to be more fully addressed.

## OTHER ACTIVITIES

### *Support of the Inspector General Community in Training*

The OIG General Counsel, Maryann Lawrence Grodin, supported the IG community in training and presentations. The Department of Justice Attorney General guidelines for statutory law enforcement authority for OIG 1811 special agents include the requirement for periodic refresher training on specified legal issues. The *Inspector General Criminal Investigator Academy* was tasked with formulating the syllabus for the training and identification of appropriate teaching staff. The NRC OIG General Counsel was part of a group of attorneys from several IG offices who constructed a model 3-hour course and participated in training a cadre of attorney-trainers. Additionally, Ms Grodin presented the *Civil and Administrative Remedies* class as part of the *Inspector General Periodic*

---

*Refresher Training Program* in Denver, Colorado, and Chicago, Illinois, to more than 50 agents from more than a dozen Federal agencies.

The *Council of Counsels to Inspectors General*, a group of attorneys who serve as legal advisors in the Federal IG community, sponsors a training program for law students working as summer interns in IG offices in the Washington, D.C., area. As part of the introductory session for this year's program, the NRC OIG General Counsel provided a presentation on the *History and Concept of the Inspector General in the Federal Government*. In addition to the chronological history, she related the political and philosophical context of IG authority and functions, adding factual illustrations and anecdotes from practice in the community.

Ms. Grodin was also invited to serve as a guest speaker for the annual *Space and Warfare Command Inspector General Conference*. During that conference, she provided a presentation to more than 35 IG investigators, auditors, and attorneys from a variety of field offices and with varying experience levels. Her presentation covered procurement issues related to fraud in service contracting, focusing on the pitfalls in improper personal services contracts and performance of inherently governmental functions. During the presentation, she related both the statutory and regulatory authority and standards applicable to each of the topics, and illustrated each discussion area with examples from practice and evolving case law.



*OIG receives Best-In-Class Award. Pictured left to right are Robert K. Wild, Team Leader; Sherri Miotla, Team Leader; Hubert T. Bell, Inspector General; Beth H. Serepca, Team Leader; Steven E. Zane, Deputy Assistant Inspector General for Audits; Judy G. Gordon, Quality Assurance Manager; David C. Lee, Deputy Inspector General; Kathleen M. Stetson, Team Leader; and Stephen D. Dingbaum, Assistant Inspector General for Audits.*

### *NRC OIG Receives Best-In-Class Award*

On May 26, 2010, the Association of Government Accountants presented the NRC OIG with the Certificate of Excellence in Accountability Reporting *Best-In-Class Award*, "In recognition for Providing the Best Inspector General's Summary of Management and Performance Challenges in your FY 09 Performance and Accountability Report." Steven E. Zane, Deputy Assistant Inspector General for Audits, and Kathleen Stetson, Team Leader, received the award on behalf of the many OIG employees who authored the various sections of the report. The OIG recognizes with appreciation the valuable input provided by agency officials in connection with the Management and Performance Challenges report.



---

# Management and Performance Challenges

<b>Most Serious Management and Performance Challenges Facing the Nuclear Regulatory Commission * as of September 30, 2009 (as identified by the Inspector General)</b>	
Challenge 1	Protection of nuclear material used for civilian purposes.
Challenge 2	Managing information to balance security with openness and accountability.
Challenge 3	Ability to modify regulatory processes to meet a changing environment, to include the licensing of new nuclear facilities.
Challenge 4	Oversight of radiological waste.
Challenge 5	Implementation of information technology and information security measures.
Challenge 6	Administration of all aspects of financial management.
Challenge 7	Managing human capital.

*\*The most serious management and performance challenges are not ranked in any order of importance.*

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

---

# Audits

*To help the agency improve its effectiveness and efficiency during this period, OIG completed ten financial and performance audits or evaluations, eight of which are summarized here that resulted in numerous recommendations to NRC management. OIG also analyzed one contract audit report.*

## AUDIT SUMMARIES

### *Audit of NRC's Management of Agreements with Department of Energy Laboratories*

#### **OIG Strategic Goal: Corporate Management**

The Energy Reorganization Act of 1974 authorized the NRC to use DOE research facilities and services to assist NRC in conducting its mission. In 1978, NRC and DOE executed a Memorandum of Understanding (MOU) that established the policy governing the relationship between NRC and DOE for NRC-funded research at DOE laboratories. The MOU, last updated in 1998, states that NRC may order and pay for services from DOE laboratories and includes an amended organizational conflict of interest (OCOI) provision.

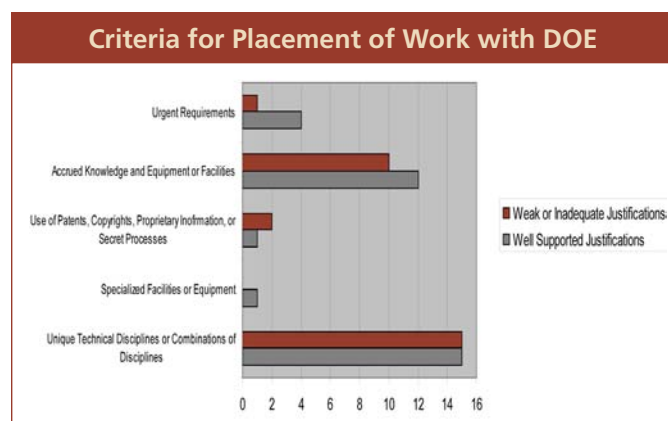
There are currently 17 DOE laboratories nationwide and all are managed and operated by non-Government entities under contract with DOE. As of July 13, 2009, NRC had 186 active agreements with DOE laboratories totaling approximately \$365 million.

NRC MD 11.7, *NRC Procedures for Placement and Monitoring of Work with the U.S. Department of Energy*, specifies the interagency responsibilities, authorities, and procedures for placing and monitoring work at DOE laboratories.

NRC's Division of Contracts is responsible for oversight of NRC work placed with DOE labs, though responsibility for awarding, administering, and managing DOE lab agreements is decentralized at NRC. The various program offices handle and track their own lab agreements with little involvement by other NRC offices.

Project managers manage the DOE lab agreements for their respective offices; this includes preparing the office's justification for placing work with DOE laboratories. The Office of the General Counsel reviews, provides advice and counsel, and makes recommendations regarding OCOI concerns.

The audit objective was to determine whether NRC has established and implemented an effective system of internal control over the placement and monitoring of work with DOE laboratories.





---

### ***Audit Results:***

NRC complies with its OCOI requirements prescribed by Section 170A of the Atomic Energy Act of 1954, as amended, and is consistent in assessing and resolving potential OCOI issues prior to and after awarding work to a DOE lab.

However, OIG identified opportunities for program improvements in the following areas:

- Source selection justifications.
- Audit coverage.
- Delegation of authority.

### **Source Selection Justification**

MD 11.7 requires that project managers develop convincing justifications for using a DOE lab rather than a commercial source. However, 20 of 38 lab agreement justifications reviewed by auditors did not effectively demonstrate why a DOE lab was more qualified to perform the work than a commercial firm. Some justifications stated that DOE labs had unique capabilities when it appeared that there was a strong likelihood that organizations other than DOE labs also had the capabilities to perform the work. Furthermore, 32 of the justifications lacked indication that commercial firm capabilities were assessed or considered as part of the decisionmaking process.

Justifications were inadequate because (1) MD 11.7 guidance is unclear with regard to consideration of commercial sources, (2) offices typically do not include supporting background information and rationale in their DOE lab agreement files, and (3) NRC does not require independent review of all justifications by someone outside the originating office. Without adequately considering whether commercial firms can perform the work awarded to DOE labs, the agency cannot be certain that it is obtaining best value on these acquisitions.

### **Audit Coverage**

To ensure the propriety of payments to DOE laboratories, NRC should receive the results of audits performed on the laboratories. To date, NRC has not received results of audits of DOE labs because the 1998 MOU between DOE and NRC does not provide for this to occur. Consequently, NRC lacks assurance regarding the propriety of amounts paid for work performed by DOE labs.

### **Delegation of Authority**

NRC is authorized to use DOE research facilities and services to assist NRC in conducting its mission. The Office of International Programs (OIP) is one of the NRC offices that avails itself of this overall authority. Office of Management and Budget Circular A-123 states that management must clearly define and appropriately

delegate areas of authority and responsibility. Currently, OIP is operating without a signed delegation of authority to award and administer DOE lab agreements because MD 11.7 does not include OIP as having the authority. Consequently, the agency is not fully adhering to the delegation of authority requirements contained in MD 11.7, which creates the potential for ineffective management of certain agreements. *(Addresses Management and Performance Challenge #6)*

### *Audit of NRC's Telework Program*

#### **OIG Strategic Goal: Corporate Management**

In recent years, the Federal Government has taken steps to increase opportunities for employees to telework. Telework is defined as work arrangements in which an employee regularly performs officially assigned duties at home or other worksites geographically convenient to the employee's residence. Telework is also a tool that can be used to ensure continuity of essential Government functions in the event of national or local emergencies.

NRC's Office of Human Resources (HR) Employee/Labor Relations and Work Life Branch, has responsibility for implementing the NRC's telework program in accordance with telework guidelines stated in the Collective Bargaining Agreement (CBA) between NRC and the National Treasury Employees Union (NTEU), which covers approximately 68 percent of NRC permanent employees.

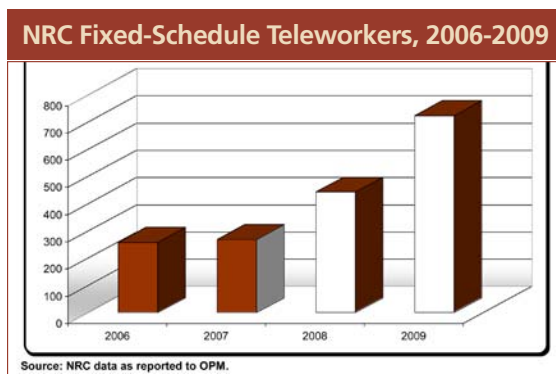
This audit addressed three categories of telework arrangements that are practiced at NRC: project-based, fixed-schedule, and full-time. Project-based telework is used to complete portable short-term tasks such as writing performance appraisals. The time spent is normally measured in terms of days or hours. Fixed-schedule telework is a regular arrangement to perform portable duties for a specified period of time. For the period 2006-2009, the number of NRC's fixed-schedule teleworkers increased from approximately 200 to 700. Full-time telework is a type of fixed-schedule telework that occurs when an employee primarily works at an alternate workplace. As of January 2010, 27 employees had either obtained or requested full-time telework.

The audit objectives were to determine NRC's readiness to have staff tele-

work under emergency situations, the adequacy of internal controls associated with the telework program, and NRC's compliance with relevant law and Office of Personnel Management guidance.

#### ***Audit Results:***

NRC has established a telework program that supports the agency's mission and work/life programs. However, OIG identified opportunities for program improvements in the following areas:



- 
- Readiness to telework during emergency situations.
  - Telework program internal controls.
  - Compliance with law.

### **Readiness To Telework During Emergency Situations**

NRC emergency plans require that employees potentially needed to telework during pandemic emergencies be identified and have the equipment needed to telework. However, NRC has not identified all of the individuals needed for teleworking during pandemic emergencies or the methods for accessing information technology systems that are not remotely accessible via Citrix or in the event of a power failure, but are potentially needed for telework to occur. At the time of the audit, 21 of 26 offices had not identified personnel who are required to perform essential functions and high priority tasks during a pandemic. Furthermore, while NRC identified 35 applications/systems used to carry out NRC's essential functions, 28 of that total were not available to personnel who telework and compensating manual or other systems were not in place.

NRC has not identified all individuals and systems infrastructure potentially needed for telework during pandemic emergencies because it has not made completing the telework aspects of pandemic planning a priority. Without identifying the individuals needed to telework during emergencies and how systems would be accessed for telework during emergencies, the agency's ability to perform mission-related functions in a pandemic emergency is diminished.

### **Telework Program Internal Controls**

Management has the fundamental responsibility to develop and maintain effective internal control over the telework program, such as ensuring that required telework documentation is properly approved, maintained, and readily available for examination. In addition, management is responsible for developing and implementing detailed telework policies and procedures that should appear in a Management Directive or operating manual. However, NRC is not maintaining complete telework documentation and has not developed or implemented a telework program policy that applies to all agency employees. The agency's policy, which is found in the CBA between NRC and the NTEU, does not cover approximately 32 percent (1,255) of NRC's permanent employees who are not part of the bargaining unit. Although in practice, NRC follows the CBA for full-time non-bargaining unit employees, the agency's telework policy should clearly apply to both bargaining unit and non-bargaining unit personnel.

These internal control weaknesses exist because agency policy and procedures regarding telework are not consolidated into a Management Directive and handbook. By strengthening internal controls, NRC staff can improve the telework program so that employees will have a common understanding of the program and an increased awareness of opportunities to telework.

---

## Compliance with Law

NRC is required to establish telework policies that provide eligible employees the ability to telework to the maximum extent possible without diminished employee performance. CBA telework eligibility guidance requires that management consider covered employee performance for initial and continued participation. Despite these requirements, managers inconsistently assessed and reported the results of employee arrangements to HR and in some cases did not report the information. Performance was inconsistently assessed and reported because NRC has not established procedures to accomplish a consistent approach. As a result, the agency has no assurance that all employees who telework full-time from alternate worksites are maintaining their expected performance levels. (*Addresses Management and Performance Challenge #7*)

### *Audit of NRC's Process for Closed Meetings*

#### **OIG Strategic Goal: Security**

In 1977, Congress enacted the *Government in the Sunshine Act* (the Sunshine Act) with the goal of enhancing openness in the decisionmaking process of Federal Government agencies. The Sunshine Act states that when Federal agency heads deliberate on behalf of their respective organizations, these meetings must be open to the public. However, the Sunshine Act provides exemptions allowing for certain meetings to be closed to the public. Each Federal agency is required to document the reasons why a meeting was closed; give notice of the closed meeting; keep transcripts, electronic recordings, or minutes of the closed meeting; and report to Congress annually on compliance with these requirements. The Sunshine Act provisions apply to meetings in which NRC Commission members participate; currently, the agency is meeting the reporting requirements of the act.

In addition to meetings between Commission members and stakeholders, NRC staff meet regularly with various external stakeholders (e.g., NRC licensees, license applicants) to discuss agency regulatory activities. These exchanges take place in various forums, including in-person, teleconference, videoconference, phone conversations, and Web-based meetings. These meetings are not governed by the Sunshine Act.

NRC strives to be open and transparent in the transaction of nuclear regulation, and NRC's Commission members promote this goal. In a recent speech, the current NRC Chairman stated that NRC must conduct itself openly and transparently in fulfilling the agency's core mission and preparing for new issues and challenges. A former NRC Chairman also affirmed that transparency and public involvement must be key elements of NRC's licensing and oversight, and a prior NRC Commissioner stated that for NRC to fulfill its mission, it must do so in an open and transparent regulatory environment.

The audit objective was to determine if NRC's process for conducting meetings that are closed to the public hinders the transparent transaction of nuclear regulation.

---

### ***Audit Results:***

Although NRC strives for a transparent closed meeting process, the public availability of closed staff meeting notices and summaries is inconsistent. Specifically:

- There is uncertainty as to what constitutes a “meeting.”
- Closed staff meeting information is not always accessible by the public.
- The timeframe in which closed staff meeting notices and summaries are issued varies.

According to Federal guidance, the agency’s regulatory process should be open and transparent. However, ambiguity in NRC’s guidance for closed staff meetings may impede agency staff from effectively and consistently complying with the agency’s openness goal. Moreover, NRC risks the public perception of not regulating in an open and transparent manner.

### **Uncertainty About What Constitutes a “Meeting”**

There is uncertainty as to what constitutes a “meeting,” leading to inconsistencies in the recording of closed staff meeting information. For example, stakeholders expressed concerns about certain phone conversations between NRC and licensees/applicants that could have been construed as closed staff meetings and, therefore, should have been announced and summarized. One agency official questioned whether visits from NRC employees to licensee/applicant sites can be interpreted as “meetings,” and added that NRC needs better guidance in this area. Without a clear definition of what constitutes a “meeting,” it is hard for agency staff and external stakeholders to know how many closed staff meetings actually occur.

### **Closed Staff Meeting Information Is Not Always Accessible By the Public**

Agency guidance states that staff are encouraged to post closed staff meeting information in the Agencywide Documents Access and Management System (ADAMS);<sup>2</sup> thus, this information is not always accessible by the public because staff can profile the document as public or non-public. Although the public cannot attend closed staff meetings, notices of when the meetings take place can be made available to the public. While sensitive issues are discussed in closed staff meetings and the details are not appropriate to be made public, NRC can issue generic summaries that can be made public.

### **Timeframe in Which Notices and Summaries Are Issued Varies**

The timeframe in which closed staff meeting notices and summaries are issued to the public varies. Based on the 375 closed staff meeting notices available in ADAMS, about 40 percent of the meeting notices publicly available in ADAMS were issued less than 10 days prior to the date of the meeting.<sup>3</sup> Summaries of closed staff meetings, when prepared, were publicly available in ADAMS between 1 and 60 days after the meeting took place.

---

<sup>2</sup> ADAMS is a document management system used by NRC to organize, process, manage, search, and retrieve agency records.

<sup>3</sup> An NRC official noted that some closed staff meetings are scheduled on a very short notice and, therefore, the agency is unable to provide advance notification of these meetings.



---

## Ambiguous Guidance Leads to Risk of Not Operating Openly and Transparently

NRC guidance for documenting closed staff meetings is ambiguous, leading to inconsistencies in the reporting and public availability of closed staff meeting information. Moreover, the agency risks the public perception that NRC does not regulate in an open and transparent manner, and that the agency gives preferential treatment to certain external stakeholders. Recent Federal Government initiatives require agencies to improve the openness and transparency of their activities with the public. Therefore, it is especially important for NRC to clarify its guidance to improve its communication regarding closed staff meeting information and thereby better meet its goal for an open and transparent nuclear regulatory process. (*Addresses Management and Performance Challenge #2*)

## *Audit of NRC's Deployment of the National Source Tracking System*

### **OIG Strategic Goal: Corporate Management**

NSTS is a centralized database developed and managed by NRC to help NRC and Agreement State regulatory agencies<sup>4</sup> account for select categories of high-risk radiological sources held by approximately 1,300 licensees.<sup>5</sup> Specifically, NSTS is used to monitor transactions and inventories of nationally tracked sources as defined in Title 10 of the Code of Federal Regulations, Part 20, Section 1003 (10 CFR 20.1003).<sup>6</sup> These nationally tracked sources include Category 1 and 2 radiological sealed sources that have industrial, medical, and research uses.<sup>7</sup> IAEA characterizes Category 1 and 2 sources as radiological materials that pose the greatest health risks if not safely managed or securely protected.<sup>8</sup>

---

<sup>4</sup> The Atomic Energy Act of 1954 allows NRC to delegate to State governments some authority to license and regulate radiological materials. States that have signed formal regulatory agreements with NRC are known as "Agreement States."

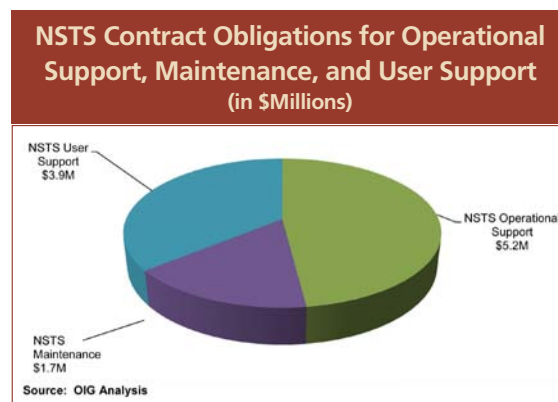
<sup>5</sup> Licensees are businesses and other organizations licensed by NRC and Agreement States to possess radiological sources.

<sup>6</sup> 10 CFR 20.1003 defines a nationally tracked source as, "a sealed source containing a quantity equal to or greater than Category 1 or Category 2 levels of any radioactive material listed in Appendix E of this part. In this context a sealed source is defined as radioactive material that is sealed in a capsule or closely bonded, in a solid form and which is not exempt from regulatory control. It does not mean material encapsulated solely for disposal, or nuclear material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet. Category 1 nationally tracked sources are those containing radioactive material at a quantity equal to or greater than the Category 1 threshold. Category 2 nationally tracked sources are those containing radioactive material at a quantity equal to or greater than the Category 2 threshold but less than the Category 1 threshold."

<sup>7</sup> These sources do not include materials encapsulated solely for disposal, or nuclear materials contained in fuel assemblies, subassemblies, fuel rods, or fuel pellets.

<sup>8</sup> The IAEA's five-category scale provides a relative ranking of radiological sources in terms of each source's potential to cause immediate harmful health effects if not safely managed or securely protected. Category 1 sources are the most hazardous, and can cause permanent injury or death if mishandled; Category 5 sources are the least hazardous, and could not cause permanent injury.

NRC developed NSTS in response to the U.S. Government's endorsement of the *IAEA Code of Conduct on the Safety and Security of Radioactive Sources*, which is the current standard used by the international community to govern safety and security of radioactive material based on the IAEA categorization system.<sup>9</sup> In addition, the Energy Policy Act of 2005 required NRC to issue regulations establishing a mandatory tracking system for radiation sources in the United States. NRC deployed NSTS in December 2008, thereby enabling licensees to begin reporting radiological source inventories and transactions by January 31, 2009, as required by 10 CFR 20.2207.



NSTS enables licensees to report via the Internet transactions of nationally tracked sources, including the manufacture, import, export, transfer, and receipt of these sources.<sup>10</sup> Licensees can also report transaction data by other means such as facsimile, e-mail, or standard mail. Approximately 200 source transactions are processed daily in NSTS.

The Office of Federal and State Materials and Environmental Management Programs (FSME) is responsible for NSTS operations. A contractor operates and maintains NSTS for FSME, and also processes data submitted by licensees for entry into NSTS. The FSME contractor also runs the NSTS Help Desk, whose personnel provide technical assistance to NSTS users. As of March 2010, total obligated funding for the NSTS contract was approximately \$20 million, which included approximately \$10.8 million for operations, maintenance, and user support.<sup>11</sup>

The audit's objective was to determine if NSTS meets its required operational capabilities.

#### ***Audit Results:***

NSTS satisfies basic operational requirements, including functional capabilities for capturing data and security features for protecting data. However, OIG auditors developed findings regarding NSTS smart card utilization, data quality, and access controls.

<sup>9</sup> A joint DOE/NRC Interagency Working Group on Radiological Dispersal Devices also recommended a national source tracking system following its work during 2002-2003.

<sup>10</sup> The Energy Policy Act of 2005 established requirements for identifying individual radiological sources (e.g., by serial number), and for reporting any change of possession or loss of control of these materials. In addition, this legislation required a capability for reporting through a secure Internet connection.

<sup>11</sup> The remaining \$9.2 million in contract obligations reflect NSTS development tasks.

---

### **Licensees Have Not Fully Adopted NSTS Technology**

NSTS was designed primarily to be an Internet-based system enabling direct data entry by licensees. However, a majority of the licensee user population has not fully adopted technology required for direct access to NSTS. This trend is caused by challenges inherent in the NSTS credentialing process, as well as technical problems encountered by licensees in using the smart card devices. Further, Help Desk contractor personnel are not always capable of resolving application and set-up problems encountered by NSTS users. As a result, NRC has incurred administrative costs from updating NSTS on behalf of licensees who opt not to enter their source transaction and inventory data into NSTS.

### **NSTS Has Data Quality Problems with Timeliness and Accuracy**

Internal control standards for Federal Government agencies recommend that data be processed in a timely manner to maintain its relevance and operational value to management. NSTS is designed with automated security controls to ensure the integrity of data entered into the system; however, OIG auditors found problems with the timeliness and accuracy of NSTS data regarding source transfers. These problems result primarily from the process by which data is reported and manually uploaded into NSTS. Although NSTS is designed to enable direct data entry by credentialed licensee personnel, most transactions are processed by NRC's contractor on behalf of licensees. For example, a December 2009 report showed that the FSME contractor processed approximately 70 percent of transactions that month.

Although NSTS cannot provide "real time" tracking of licensees' source transactions and inventories, NRC and Agreement State personnel must have reliable information to perform their oversight duties.

### **Least Privilege Principle Not Consistently Applied to NSTS Access Controls**

Federal Government internal controls standards for information systems recommend security controls to protect systems and networks from inappropriate access and unauthorized use. Although NSTS access rights for licensee personnel are scaled to individual users' job needs, some NRC staff have broader access rights that do not reflect individuals' job needs or organizational roles. This occurs because NRC lacks a procedure for scaling staff access rights to their respective job needs. Although OIG auditors did not find evidence of internal NSTS data breaches, the lack of a procedure to ensure consistent application of the least privilege principle increases the risk that NSTS data could be intentionally or accidentally compromised. (*Addresses Management and Performance Challenge #5*)

---

## *Audit of NRC's Oversight of Irradiator Security*

### **OIG Strategic Goal: Security**

Irradiators are devices that expose products, such as food and medical supplies, to radiation for sterilization and other purposes. Radiation is achieved by the exposure to high-risk radioactive materials, such as Cobalt-60 and Cesium-137. Commercial firms, as well as State-run organizations such as hospitals and universities, operate irradiators and are licensed to possess the radioactive materials used in these devices.



*Blood Irradiator.*  
Photo courtesy IAEA

NRC and NRC Agreement States<sup>12</sup> regulate the safe and secure use of these irradiators and other radioactive materials. NRC's Office of Federal and State Materials and Environmental Management Programs (FSME) develops and implements rules and guidance for the safe and secure use of source, byproduct, and special nuclear material in industrial, medical, academic, and commercial activities, including irradiators. Inspections to ensure compliance with these regulations are conducted by approximately 46 NRC materials inspectors and numerous inspectors within the 37 Agreement States. Nationwide, there are approximately 50 licensees that operate about 50 large irradiators that contain more than 10,000 curies of Cobalt-60. Additionally, there are approximately 590 licensees that operate about 1,100 smaller type irradiators that use lesser quantities of radioactive materials.

NRC materials inspectors based in NRC's regional offices<sup>13</sup> are responsible for ensuring licensee compliance with regulatory safety and security requirements. NRC Inspection Manual Chapter 2800, "Materials Inspection Program," outlines NRC's materials inspection program policy. This manual chapter establishes frequencies for routine inspections of all licensees, details when poor performance requires increased inspection oversight, and addresses other areas of materials oversight. NRC Inspection Manual Chapter 1246, "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area," defines training and qualification requirements for personnel working within the nuclear materials inspection program.

In the changed threat environment since the terrorist attacks of September 11, 2001, NRC determined that certain licensed material should be subject to enhanced security requirements and issued several orders to address the security of radioactive materials.

The purpose of this audit was to determine the adequacy of NRC's oversight of industrial irradiator security. Due to the scope of the security orders and NRC's

---

<sup>12</sup> An Agreement State is a State that has assumed regulatory responsibility over certain byproduct, source, and small quantities of special nuclear material through an agreement with NRC. As of June 2010, 37 States had signed formal agreements with NRC.

<sup>13</sup> These NRC inspectors are located at NRC Regions I, III, and IV. Region II facilities are inspected by Region I personnel.

---

efforts to combine these security orders into one section of the CFR, the audit findings and recommendations expand beyond irradiators to address the radioactive materials security program as a whole.

***Audit Results:***

While NRC has worked to increase security of irradiators and other radiological materials of concern, enhancements in the materials security program are needed to better ensure the security of these materials.

Specifically, NRC needs to (1) establish security inspection frequencies based on a risk-informed approach, (2) enhance access authorization controls of individuals with unescorted access to materials of concern, and (3) fully develop the security training program for materials inspectors.

**Security Inspection Frequency**

The frequency of materials security inspections should be based on a risk-informed process that takes into account the security risk associated with the material. Currently, security inspections are based on a licensee's safety inspection schedule rather than the risk that the material will be stolen or exploited for malevolent purposes. The frequency of the security inspections is not risk-informed because the frequencies established in Inspection Manual Chapter 2800 do not consider current security risks. Without a risk-informed approach to the security inspection program, radioactive materials could be at an increased vulnerability to theft or sabotage.

**Access Authorization Controls**

All details associated with the audit report finding "Process To Regularly Check Individuals With Unescorted Access to Materials of Concern Is Needed," have been redacted from the public version of the report and the Semiannual Report due to the sensitive, security-related nature of the information.

**Security Training Program**

NRC materials inspectors should be provided the tools and training necessary to make risk-informed decisions to address security, health and safety, and environmental aspects of licensee compliance. While these inspectors receive initial training on the security requirements for material licensees, they do not receive any refresher training to address the security aspects of their jobs. Although NRC has acknowledged the need to incorporate security training into the inspector qualification program, the development of a security refresher course has not been a priority. Without formalized refresher training, NRC might not be able to ensure licensees are adequately protecting materials of concern. (*Addresses Management and Performance Challenge #1*)



---

## *Assessment of NRC's Wireless Devices*

### **OIG Strategic Goal: Security**

Wireless devices, services, and technologies are commonplace in all aspects of our lives and offer potential cost-savings and convenience over wired solutions. Wireless devices include any electronic device that can communicate with other devices without being physically attached to those devices. Most wireless devices communicate through radio frequencies. A wireless service provides access to services such as telephone, e-mail, calendaring, and messaging using wireless devices. Wireless technologies include mobile equipment, such as cellular telephones, BlackBerries, and wireless networking.

The objective of this assessment conducted by Southwest Research Institute (SWRI) on behalf of OIG was to determine if NRC's wireless devices met required operational capabilities and security requirements. SWRI's assessment focused on two wireless systems. In addition, a top-level overview of Bluetooth communication was conducted.

### ***Assessment Results:***

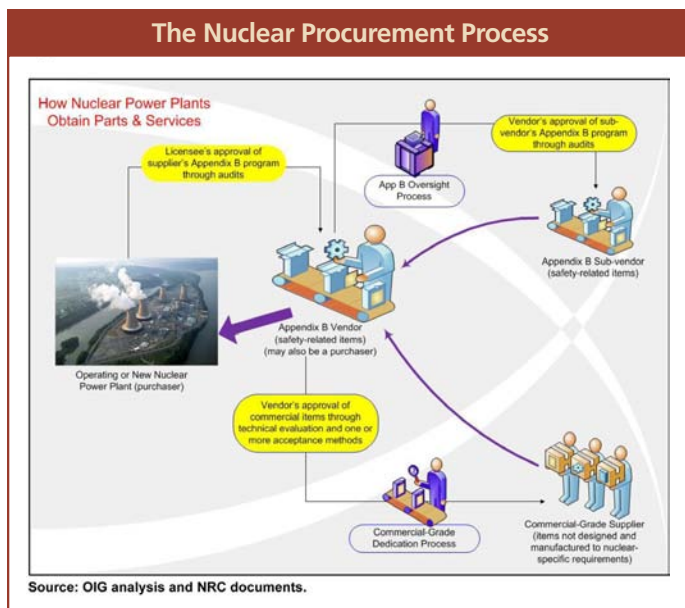
The assessment found that the overall policy framework that supports both wireless devices should be reviewed and revised. The existing policy framework is complex and confusing, and both gaps and overlaps exist. The use of wireless devices at NRC is a recent occurrence, but the Management Directives and other policies and procedures need to be updated to reflect the current use of wireless devices.

In addition, the assessment identified other technical and procedural changes needed for both wireless systems. Because these changes could provide adversaries with an attack plan, specifics were not presented in the public version of the report and are not provided in this Semiannual Report, which is also a public document. (*Addresses Management and Performance Challenge #5*)

## *Audit of NRC's Vendor Inspection Program*

### **OIG Strategic Goal: Safety**

NRC endeavors to protect the public health and safety and the environment by overseeing vendor compliance with NRC's regulations for assuring the integrity of domestic and global parts and services supplied to nuclear power reactors. NRC directly oversees compliance by conducting reactive and routine inspections of vendors, and indirectly through licensee audits of vendors and through ASME standards. Vendors manufacture a range of components such as fasteners, pumps, valves, and reactor vessels, as well as provide design, engineering, and construction services. While most vendors do not hold NRC licenses, they are nonetheless bound through contracts with licensees, applicants, or other vendors to comply



with NRC's quality assurance regulations contained in Appendix B to Title 10, CFR Part 50 (Appendix B). Vendors are also required to comply with 10 CFR Part 21 (Part 21).

Appendix B requires that a quality assurance program be applied to all activities affecting structures, systems, and components of reactors that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. Vendors have a unique relationship with NRC through licensees given that, while the regulation requires licensees to establish and implement an Appendix B quality assurance program, it does not specifically

require this of vendors. Vendors are nonetheless required to comply because this requirement is passed down from licensees to vendors through contracts.

Part 21 establishes (1) procedures for reporting defects in safety-related components, and (2) a process for providing reasonable assurance that commercial off-the-shelf parts used in nuclear power plant safety-related applications will perform their intended safety function. Vendors are required to notify NRC of a defect in a basic component— also referred to as a “safety-related” component.

Vendors and their customers often acquire parts from commercial suppliers that do not produce parts specifically designed or manufactured for a nuclear safety-related application. These parts are called commercial-grade items. If a customer decides to purchase commercial-grade items, Part 21 requires the customer receiving the items to use a commercial-grade dedication process to provide reasonable assurance that these items destined for use in nuclear power plants will perform their intended safety function.

NRC conducts reactive and routine inspections of vendors' implementation of Appendix B and Part 21 requirements. Typically, reactive inspections are performed by NRC's Office of Nuclear Reactor Regulation (NRR), and routine inspections are performed by NRC's Office of New Reactors (NRO). During the period January 2009 through March 2010, NRR performed five of these reactive inspections, which resulted in findings that the vendor was not in compliance with one or more aspects of Part 21 or Appendix B. During the period January 2009 through March 2010, NRO performed 16 of these routine inspections, which resulted in findings that the vendor was not in compliance with one or more aspects of Part 21 or Appendix B.

Vendors providing safety-related parts and services for the nuclear industry have become increasingly global over the last few decades. For example, NRC

---

regulations require parts of the reactor coolant pressure boundary<sup>14</sup> to be manufactured according to the ASME Boiler and Pressure Vessel Code. The code requires those vendors manufacturing reactor coolant pressure boundary parts to have an ASME nuclear, or “N-type,” certificate. According to OIG analysis of industry documents, the number of U.S. vendors maintaining an ASME N-type certificate decreased to roughly 125 in 2009 from about 500 in 1980. The number of international ASME N-type certificates has fluctuated between about 80 and 100 certificates. As of 2009, there were about 100 international firms with ASME N-type certificates.

The audit objective was to assess NRC’s regulatory approach for ensuring the integrity of domestic and foreign safety-related parts and services supplied to current or prospective nuclear power reactors.

### ***Audit Results:***

Beginning in 2007, the agency proactively enhanced its overall approach to vendor inspections and increased vendor outreach efforts. After the creation of NRO, two new branches were established to perform additional vendor inspections, including routine inspections. OIG has identified five areas that need management attention while NRO continues its ongoing vendor inspection activities.

### **Enhanced Planning Would Improve Vendor Identification and Selection**

NRO’s planning process for identifying and selecting vendors for routine inspections, and its strategy for guiding the process, is largely an informal one. Simply identifying the number of vendors is challenging, and NRO does not know how many vendors there are or how to identify changes in the vendor universe. Furthermore, NRO’s planning for selecting vendors for inspection is based on an approach that relies primarily on professional judgment. Moreover, NRO’s overall strategic approach to vendor identification and selection planning is informal as indicated by NRO staff, who have varying views of the purposes of the Vendor Inspection Program and routine vendor inspections.

### **Opportunity To More Effectively Communicate Requirements**

NRC relies on nuclear vendors’ understanding and implementation of its regulations to assure that safety-related components will perform adequately in service, and that defects are reported. In order for vendors supplying nuclear components and services to be knowledgeable of their obligations under the regulations, NRC must effectively communicate the regulations. NRC has undertaken a number of efforts to communicate regulations to vendors, but some vendors are not aware of all obligations or NRC expectations which might result in vendors not reporting defects or otherwise fully assuring that safety-related components will perform adequately in service.

---

<sup>14</sup> The reactor coolant pressure boundary is a primary barrier that protects the public from exposure to radiation.

---

### **Commercial-Grade Dedication and Part 21 Regulations and Guidance Could Be Clarified**

Even when vendors are aware of the applicable NRC regulations and other regulatory information, NRC could clarify its expectations and requirements for Part 21 and for the process of obtaining parts from commercial suppliers known as commercial-grade dedication. NRC presumes that adherence to its regulatory requirements on the part of licensees and vendors assures safety. However, nuclear vendors are confused about how to adequately implement Part 21 and commercial-grade dedication due to unclear, insufficient, or conflicting guidance. This could lead to vendors (1) supplying parts and services to nuclear power plants that do not meet NRC regulatory requirements or quality assurance expectations, and (2) inadequately reporting defects.

### **Calibration Laboratory Approval Guidance Could Be Clarified**

NRC's guidance for approving accredited commercial-grade calibration laboratories—which calibrate measuring and test equipment used by vendors to evaluate the properties of materials and parts—could be clarified. In response to a request from one of its licensees, NRC allowed a process permitting the licensee to approve calibration laboratories based on the reviews performed by accrediting bodies in lieu of an Appendix B audit or a commercial-grade survey. However, since NRC's guidance documents describing this process are disparate, vendors are confused about, and have difficulty implementing, the process. Consequently, vendors' approval of laboratories may not be in accordance with NRC's expectations, vendors may find themselves unknowingly in violation of Appendix B or NRC commercial-grade dedication requirements, and vendors could find they have used out-of-calibration equipment during the manufacturing process.

### **NRC's Approach to Counterfeit, Fraudulent, and Substandard Items (CFSI) Could Be Strengthened**

NRC could strengthen its current approach to CFSI. Both the Federal Government and private sector have recognized the increasing prevalence of CFSI in nuclear and other industries. However, NRC's approach has been primarily reactive because NRC lacks a formal strategy and plan to monitor and evaluate potential CFSI, and consider program changes to address the issue. Consequently, the lack of any formal strategy or framework could result in reactor construction problems with major implications for public health and safety. (*Addresses Management and Performance Challenge #3*)

---

## *Audit of NRC's Oversight of the Access Authorization Program for Nuclear Power Plants*

### **OIG Strategic Goal: Security**

NRC has promulgated regulations requiring that its licensees implement an access authorization program to provide high assurance that individuals who are granted unescorted access to nuclear power plants and those individuals who maintain unescorted access to these sites are trustworthy and reliable and do not constitute an unreasonable risk to public health and safety, including the potential to commit radiological sabotage.

NRC inspects licensee access authorization programs to verify that licensees are implementing programs in accordance with NRC regulations and the facilities' security plans. Regional security inspectors conduct these inspections on a triennial cycle. Specifically, these inspectors look to provide assurance that a licensee's access authorization program and its implementation process and procedures ensure individuals granted unescorted access are trustworthy and reliable.



Source: Nuclear Energy Institute

Sharif Mobley was arrested and charged in Yemen as a suspected member of al Qaeda in March 2010. Prior to his arrest, Mobley worked as a general laborer at six nuclear power plants in the United States between 2002 and 2008. Mobley's arrest prompted congressional interest and in early 2010, following Mobley's arrest, Senator Charles Schumer and Congressman William Owens sent letters to NRC's Inspector General requesting a thorough and comprehensive review of NRC's process requirements for licensees granting unescorted access at nuclear power plants.

In light of the Sharif Mobley incident, NRC is evaluating the access authorization process and NSIR's interface with the Federal Bureau of Investigations Terrorist Screening Center. NRC has made some initial enhancements to certain aspects of the access authorization program.

The purpose of this audit was to determine the effectiveness of NRC's oversight of nuclear power plant access authorization programs.

### ***Audit Results:***

Due to the sensitive security related nature of the audit, additional details cannot be provided in this Semiannual Report, which is public. The following information appeared in a redacted, publicly released version of the audit report.



---

This audit found that program performance could be enhanced by implementing OIG recommendations regarding:

- Behavioral Observation Program training requirements.
- Personnel Access Data System database access.
- NRC's procedures for screening individuals granted unescorted access.

*(Addresses Management and Performance Challenge #2)*

## AUDITS IN PROGRESS

### *Audit of NRC's FY 2010 Financial Statements*

#### **OIG Strategic Goal: Corporate Management**

Under the Chief Financial Officers Act and the Government Management and Reform Act, the OIG is required to audit the financial statements of the NRC. The report on the audit of the agency's financial statements is due on November 15, 2010. In addition, OIG will issue reports on:

- Special Purpose Financial Statements.
- Implementation of the Federal Managers' Financial Integrity Act.
- Condensed Financial Statements.

The audit objectives are to:

- Express opinions on the agency's financial statements and internal controls.
- Review compliance with applicable laws and regulations.
- Review the controls in the NRC's computer systems that are significant to the financial statements.
- Assess the agency's compliance with Office of Management and Budget Circular A-123, *Revised, Management's Responsibility for Internal Control*.

*(Addresses Management and Performance Challenge #6)*

---

## *Audit of NRC's Purchase Card Program*

### **OIG Strategic Goal: Corporate Management**

NRC employees use purchase cards for purchases of supplies and services that do not exceed \$3,000. During FY 2009, there were approximately 10,000 purchase card transactions conducted by 124 NRC employees that totaled more than \$6,000,000.

NRC's purchase card program guidance states the procedures that need to be followed for the usage of purchase cards by NRC employees and the responsibilities of the staff managing the program.

Recent audits conducted by other Federal agencies on their respective purchase card programs have found significant internal control deficiencies that have led to the improper usage of Government issued purchase cards.

The audit objective is to determine whether NRC has established and implemented an effective system of internal control over the use of Federal purchase cards. (*Addresses Management and Performance Challenge #6*)

## *Audit of NRC's iLearn Learning Management System*

### **OIG Strategic Goal: Corporate Management**

iLearn is NRC's learning management system that was developed to serve as the central point for all training activities across the agency and to provide detailed training information for all NRC employees. The system was developed by a contractor under an interagency agreement with the Office of Personnel Management. Its purpose is to provide access to online courses from courseware libraries as well as custom courses developed by NRC, allow staff to register for courses and submit training requests online, complete training evaluations, and generate training reports.

Since its April 2008 deployment, the system has experienced problems. For example, an attempt was made to move all agency online training from NRC's server onto iLearn. This would permit employees to launch all online training from one application and have course completion information automatically added to their learning history. However, many of the online training courses are not working correctly due to technical problems that cause them to launch incorrectly or not launch at all. Consequently, many of the online courses were removed from iLearn and placed back on the NRC server.

The audit objective is to determine the effectiveness of the iLearn Learning Management System to meet the agency's current and future training needs. (*Addresses Management and Performance Challenge #7*)

---

## *Audit of NRC's Oversight of Defect Reporting for Installed Equipment*

### **OIG Strategic Goal: Safety**

While conducting the Audit of the NRC's *Vendor Inspection Program* during FY 2010, OIG auditors learned of instances of differing interpretations of defect reporting requirements for defects found in basic components. Section 206 of the Energy Reorganization Act of 1974, as amended, requires that NRC be notified of defects in basic components that could cause a substantial safety hazard.

Currently, however, event reporting guidance appears not to require licensees to report some defects in installed equipment that could result in substantial safety hazards. Specifically, regulatory guidance that is provided to licensees does not require these licensees to report defects if an event was caused by the defect and is evaluated against the reporting criteria in 10 CFR 50.72 or 50.73. Moreover, licensees do not appear to be consistently reporting some defects that could result in substantial safety hazards.

The audit objective is to determine if NRC's implementation of Federal regulations requiring reactor licensees to report defects contained in installed equipment is meeting the intent of the Energy Reorganization Act of 1974, as amended, Section 206, Noncompliance. (*Addresses Management and Performance Challenge #3*)

## *Audit of NRC's Oversight of Master Materials Licensees*

### **OIG Strategic Goal: Safety**

The Office of Federal and State Materials and Environmental Management Programs has, among other activities, the responsibility to provide program oversight for the master materials license program. Master materials licenses are issued by NRC to provide designated organizations with regulatory authority for the receipt, possession, distribution, use, transportation, transfer, and disposal of radioactive material. As of August 2010, there were three master materials licensees: the Departments of Air Force, Navy, and Veterans Affairs (VA).

The public and Government officials have recently questioned the effectiveness of NRC oversight in the aftermath of the reported misadministration of treatments to 97 patients at a VA hospital in Pennsylvania. Congressional and public interest remains high where nuclear materials are involved and there remains public concern with respect to the use of radioactive material at other VA hospitals and other organizations to which NRC has delegated master materials licenses.

The audit objective is to determine the extent to which NRC is providing effective oversight of master materials licensees. (*Addresses Management and Performance Challenge #1*)

---

## *Audit of NRC's Oversight of Independent Spent Fuel Storage Installations Safety*

### **OIG Strategic Goal: Safety**

The need for alternative storage began to grow in the late 1970s/early 1980s as spent fuel pools at many nuclear reactors began to fill up with stored fuel. NRC authorizes licensees to store spent nuclear fuel at independent spent fuel storage installations (ISFSIs), generally consisting of casks on a concrete pad located onsite. A site-specific ISFSI is licensed for 20 years from the date of approval. Thus, until a high-level waste repository is made available, spent nuclear fuel at ISFSIs across the Nation will continue to accumulate.

The audit objective is to determine if NRC has the requisite processes in place for reviewing and approving ISFSIs. (*Addresses Management and Performance Challenge #4*)

## *Audit of NRC's Oversight of Independent Spent Fuel Storage Installations Security*

### **OIG Strategic Goal: Security**

An ISFSI is a storage facility for spent nuclear fuel. Under the Atomic Energy Act of 1954, as amended, NRC has the responsibility to establish rules, regulations, orders, and policies to assure that source material, byproduct material, and special nuclear material are stored in a manner to adequately protect public health and safety, the common defense and security, and the environment.

Following the terrorist events of September 11, 2001, NRC issued security orders (in October 2002) to all ISFSI licensees to ensure that a consistent overall protective strategy was in place for all ISFSIs. On December 18, 2007, the Commission directed Office of Nuclear Security and Incident Response (NSIR) staff to develop risk-informed and performance-based regulations to enhance security requirements. The Commission also directed NSIR staff to undertake a rulemaking to update the security requirements. NRC staff have received public comment on the proposed security rules. Public stakeholders have raised concerns that the proposed rules do not sufficiently emphasize anti-terrorism capabilities.

The audit objective is to determine the adequacy of NRC's oversight of ISFSI security. (*Addresses Management and Performance Challenge #4*)

---

## *FY 2010 Evaluation of FISMA*

### **OIG Strategic Goal: Security**

The Federal Information Security Management Act (FISMA) was enacted on December 17, 2002. FISMA permanently reauthorized the framework laid out in the Government Information Security Reform Act, which expired in November 2002. FISMA outlines information security management requirements for agencies, including the requirement for an annual review and annual independent assessment by agency IGs. In addition, FISMA includes new provisions such as the development of minimum standards for agency systems, aimed at further strengthening the security of Federal Government information and information systems. The annual assessments provide agencies with the information needed to determine the effectiveness of overall security programs and to develop strategies and best practices for improving information security.

The evaluation objectives are to assess (1) the adequacy of NRC's information security programs and practices for NRC major applications and general support systems of record for FY 2010, (2) the effectiveness of agency information security control techniques, and (3) the implementation of the NRC's corrective action plan created as a result of the FY 2009 headquarters and regional FISMA program reviews. (*Addresses Management and Performance Challenge #5*)

## *Audit of NRC's Implementation of Homeland Security Presidential Directive-12*

### **OIG Strategic Goal: Security**

The Executive Branch of Government requires agencies to apply Homeland Security Presidential Directive-12 (HSPD-12) to Federal employees, contractors, and affiliates requiring long-term access to Federal facilities and information systems. This initiative employs electronically validated identity credentials to achieve secure access and interoperability among Federal agencies. In 2009, the Government's Chief Information Officer Council issued *Federal Identity, Credential, and Access Management (FICAM) Roadmap and Implementation Guidance* to Federal agencies to maximize and aggressively pursue the use of credentials and to plan and implement Identity, Credential, and Access Management (ICAM) programs in FY 2010.

A standard such as FICAM is too broad to represent the unique risk requirements of individual agencies, which must be derived from individual risk assessments representing the desired security profiles of each. In 2008, NRC conducted an independent survey and developed an Identity and Access Management Strategy Framework document to identify key focus areas for their HSPD-12 strategy; provide actionable recommendations; and identify priorities,



---

solutions, and a high-level timeline. Currently, NRC is deploying some of the ICAM-related efforts identified in the ICAM Strategy Framework document.

The audit objective is to assess whether NRC has effectively established and implemented the required ICAM program. (*Addresses Management and Performance Challenge #5*)

### *Audit of NRC's Non-Concurrence Process*

#### **OIG Strategic Goal: Safety**

NRC promotes discussion and consideration of differing views in the preparation and review of agency documents. NRC managers and staff have various mechanisms for expressing their views about agency decisions. The Non-Concurrence Process applies to all documents undergoing concurrence and applies equally to administrative issues, policy issues, and technical concerns.

The objectives of the Non-Concurrence Process are to (1) promote discussion and consideration of differing views on documents in the concurrence process, (2) provide a non-concurrence option for individuals with concerns about documents in the concurrence process that they had a role in creating or reviewing, and (3) provide a uniform approach to processing non-concurrences.

According to a former Executive Director for Operations, "Non-concurrence should be viewed as a routine option in the NRC's document concurrence process. All employees have a responsibility to raise concerns as early as possible in the document preparation and review process, engage in discussions and seek solutions before non-concurrences are initiated. The Non-Concurrence Process is another tool the agency can use to foster an environment in which the views of all employees are welcome, even when they differ from those of management."

The audit objective will be to assess the effectiveness of how NRC dispositions issues objected to through the Non-Concurrence Process. (*Addresses Management and Performance Challenge #2*)



---

# Investigations

*During this reporting period, OIG received 110 allegations, initiated 23 investigations, and closed 38 cases. In addition, the OIG made 22 referrals to NRC management and two to the Department of Justice.*

## INVESTIGATIVE CASE SUMMARIES

### *Essential Service Water Leak at Byron Nuclear Power Plant*

#### **OIG Strategic Goal: Safety**

OIG conducted an investigation into a leak that occurred in the essential service water system (ESW), a significant safety system, at the Byron Nuclear Station (Byron) on October 19, 2007. This leak necessitated a 12-day shutdown of both reactors located at that site. This was a significant event, and NRC initiated a Special Inspection Team (SIT) soon after the shutdown to evaluate licensee actions surrounding the ESW failure. The SIT found that the licensee had not taken timely corrective action to correct degradation in ESW piping, and that a licensee analysis of the degradation's impact was faulty.



*Byron nuclear power plant. Photo courtesy Exelon Nuclear*

Byron has a safety related heat removal system that is used to remove decay heat and cool critical components during accident conditions. At Byron, the ESW fulfills these safety functions. The ESW cooling tower consists of eight separated cells. Each cooling tower cell contains a fan and spray nozzles. The pipes that convey the heated ESW water into each cooling tower cell are 24 inches in diameter, made of carbon steel, and have a nominal pipe wall thickness of 0.375 inches. The pipes (pipe risers) emerge from the ground through a concrete floor, which is located inside a concrete valve vault.

OIG found that between March 2007 and October 2007, Byron staff conducted a series of inspections of the pipe riser, identified progressive thinning of the pipe wall had resulted in wall thickness that was less than the established standard, and four times reduced the minimum value for allowed riser pipe wall thickness: first from 0.375 to 0.153 inches, then from 0.153 to 0.121 inches, again from 0.121 to 0.06 inches, and finally from 0.06 inches to 0.03 inches.

OIG learned that the degradation of the pipe risers as well as the licensee's actions to evaluate and correct the degradation was documented in Byron's Corrective Action Program (CAP). The two NRC resident inspectors who worked at Byron during the months leading up to the leak both stated that they reviewed every CAP issue report that Byron generated. The senior resident inspector recalled thinking in September 2007 that there were an unusually high

---

number of issue reports on the ESW piping degradation, perhaps as many as a dozen. However, he told OIG he did not follow up on this information prior to the leak because he believed the degradation was minor surface corrosion and that the licensee was addressing the issue appropriately.

OIG learned that the NRC senior resident inspector learned about the extent of the degradation on October 17, 2007, 2 days before the leak.

This investigation determined the following:

- The NRC oversight of licensee operability decisionmaking was not successful in learning of the steady reduction in margin of wall thickness of the ESW piping over a 7-month period until just 2 days before pipe failure.
- Although the Byron resident inspectors carried out routine oversight responsibilities in accordance with agency requirements, the licensee's failure to analyze a problem correctly resulted in the resident inspectors' lack of awareness of a significant problem with the ESW.
- Although NRC inspection guidance conveys an expectation that resident inspectors should be aware of the status of safety systems, it was not specific enough to result in effective oversight of the degraded ESW by the resident inspectors. (*Addresses Management and Performance Challenges #1 and #2*)

### *NRC Role Regarding Backup Power Emergency Notification System Mandated by the Energy Policy Act of 2005*

#### **OIG Strategic Goal: Safety and Security**

OIG conducted an investigation based on a letter sent to the Department of Homeland Security (DHS) OIG from four members of Congress regarding implementation of a new ENS at Indian Point Nuclear Power Plant (Indian Point). The letter expressed concern about the oversight exercised by FEMA and the relationship between FEMA and NRC during the implementation of modifications of backup power to the ENS, which was required by the Energy Policy Act of 2005 (EPA).

On August 8, 2005, the EPA was enacted, which, in part, required that Indian Point implement a backup power to its ENS. Although the EPA required that Indian Point's license operator, Entergy, modify the existing ENS to provide for backup supply, Entergy decided to install a completely new state of the art system that had not been installed at any other nuclear power plant, which increased the size and scope of the effort.

The NRC Office of the General Counsel reviewed the EPA and advised NRC Commissioners that the agency had 18 months to issue a requirement to Indian Point requiring the plant to obtain the necessary backup power. Consequently,

---

on January 31, 2006, the Commission issued Confirmatory Order EA-05-190 to Entergy, requiring that backup power for the ENS be installed and operational by January 30, 2007. Entergy subsequently requested two extensions of the confirmatory order. NRC granted the first extension, but denied the second extension request.

The NRC issued a Severity Level III violation to Entergy with an escalated civil penalty of \$130,000, twice the normal amount for a non-safety issue, for failing to comply with the confirmatory order requirements. This civil penalty was based on circumstances that were considered to be under Entergy's control (i.e., project management). NRC issued an additional civil penalty against Entergy in the amount of \$650,000 in January 2008, prior to the completion of corrective action by Entergy.

OIG determined that NRC met the EPA's mandate to NRC to require that backup power be available for Indian Point's ENS by (1) issuing Confirmatory Order EA-05-190, dated January 31, 2006, requiring Indian Point to install backup power for the system within a year of the order, and (2) initiating the enforcement process when Indian Point did not comply. (*Addresses Management and Performance Challenges #1 and #2*)

## *Documents Related to Development of SECY 08-0147*

### **OIG Strategic Goal: Corporate Management**

OIG conducted an investigation based on a request from a former NRC Chairman regarding the development of NRC SECY 08-0147, "Response to Commission Order CLI-05-20 Regarding Depleted Uranium." Specifically, OIG was requested to review whether individual NRC staff members involved in the development of the SECY felt they could pursue the agency's differing professional view and differing professional opinion program if they disagreed with the SECY paper presented to the NRC Commission.

The NRC encourages employees to make known their best professional judgments even though they may differ from a prevailing staff view, disagree with a management decision or policy position, or take issue with proposed or established agency practices. To foster this policy, and create an atmosphere for an exchange of views of a technical nature, the agency has in place the Differing Professional View (DPV) and Differing Professional Opinion (DPO) program, which is delineated in internal guidance, Management Directive 10.159, *Differing Professional Views and Opinions*.

This investigation determined that SECY 08-0147, submitted to the Commission in October 2008, responded to a 2005 commission order to the NRC staff to consider options for disposal of depleted uranium (DU). In response to the SECY paper, the Commission accepted the staff's recommended courses of action which was to (1) proceed with rulemaking in 10 CFR Part 61, to specify a require-

---

ment for a site-specific analysis for the disposal of large quantities of DU, and (2) develop a guidance document for public comment that outlines the parameters and assumptions to be utilized in the conduct of such a site analysis.

OIG found that NRC's process for developing SECY 08-147 did not prevent or discourage NRC staff members from expressing varying views held by staff involved in the process. While several participants involved in the development of the SECY paper disagreed with the paper's conclusion, they chose not to pursue the DPV or DPO program. Furthermore, the other participants within the process confirmed that differing views were considered. (*Addresses Management and Performance Challenges #1 and #7*)

### *Potential Conflict of Interest between the NRC and Contractors/ Subcontractors Utilized by the Information Systems Laboratories, Inc.*

#### **OIG Strategic Goal: Safety**

OIG completed an investigation into an allegation concerning the legality of an NRC contract with Information Systems Laboratories, Inc. (ISL), a company that was contracted to review license applications submitted to NRC by utility companies requesting to build new nuclear power plants. This investigation addressed (1) whether NRC's contract with ISL involves activities that are inherently governmental and therefore should be performed by NRC employees, and (2) whether ISL was free of organizational conflicts of interest as it conducts reviews of highly technical issues that license applicants have also contracted out to evaluate as part of their applications to the NRC.

The Federal Acquisitions Regulations subpart 7.5 prescribes policies and procedures to ensure that inherently governmental functions are not performed by contractors. "Inherently governmental function" means, as a matter of policy, a function that is so intimately related to the public interest as to mandate performance by Government employees. The Standard for Evaluation of Potential Conflict of Interest are prescribed in 48 CFR 2009.570-3(b)(1) and are used to determine whether there are conflicting roles that might bias an offeror's or contractor's judgment in relation to their work with the government, and ensure that the offeror or contractor are not given an unfair competitive advantage based on the performance of the contract.

In 2007, NRC entered into a 5-year, \$33,852,575 contract with ISL to provide technical expertise and assistance in support of design certification, early site permit, combined license, environmental, and pre-application activities related to new reactor license applications for the Westinghouse AP 1000 design. According to the NRC statement of work, the agency did not have the ability to complete the technical reviews of all the license applications in a productive and efficient manner. Thus, ISL would be required to support all the technical facets of new reactor licensing reviews.



---

This investigation determined that the contract work NRC requested from ISL was not an inherently governmental function because (1) ISL contractors and subcontractors serve as technical assistants, (2) NRC staff reviews all tasks completed by the contractor employees, and (3) NRC staff make the decisions relative to the license applications.

The investigation also determined that there was no conflict of interest posed by NRC utilizing ISL contractor and subcontractor employees as subject matter experts who had also previously assisted licensees with their new reactor applications. OIG compared the names and employment dates of four new reactor license applicants who had submitted applications to NRC as of April 17, 2009, with the names of all ISL contractor and subcontractor employees involved in the review of the new reactor license applications on behalf of NRC. OIG found that although contractor and subcontractor employees were working for ISL to review new reactor applications on behalf of the NRC, they were not reviewing the same applications that they helped to prepare. (*Addresses Management and Performance Challenge #3*)

### *Incomplete Information Provided by Constellation Energy Nuclear Group*

#### **OIG Strategic Goal: Corporate Management**

OIG completed an investigation into an allegation that Constellation Energy Nuclear Group (CENG) withheld material financial information from NRC regarding its corporate restructuring with Electricite de France (EDF) when it submitted an application for an indirect license transfer. Specifically, OIG examined whether NRC staff were pressured or acted inappropriately in connection with the agency's decision to award the transfer license to CENG, or had knowledge that the license application was incomplete.

OIG learned that on January 22, 2009, CENG submitted an application for an indirect license transfer of CENG's ownership and operating interest in several nuclear power plants as a result of a proposed corporate restructuring and planned investment by EDF Development. Under this arrangement, EDF would acquire a 49.99 percent ownership interest in CENG. CENG also requested NRC approval to change to the corporate name of one of the nuclear power plants.

NRC staff reviewed the application, conducted a safety evaluation, and issued orders that approved the transfer on October 9, 2009. However, CENG wanted to proceed with the corporate name change, prior to completing the rest of the transfer. Because the transfer now appeared to be taking place in at least two parts, the NRC staff requested that CENG provide more information to the NRC.

---

OIG learned that NRC staff was concerned that the final corporate structure might be different than what was conveyed in the license transfer application which had been reviewed and approved by the staff, and that CENG's intended actions were different than previously stated. Subsequently, CENG provided more information to NRC regarding the timing and process related to the planned merger and corporate restructuring.

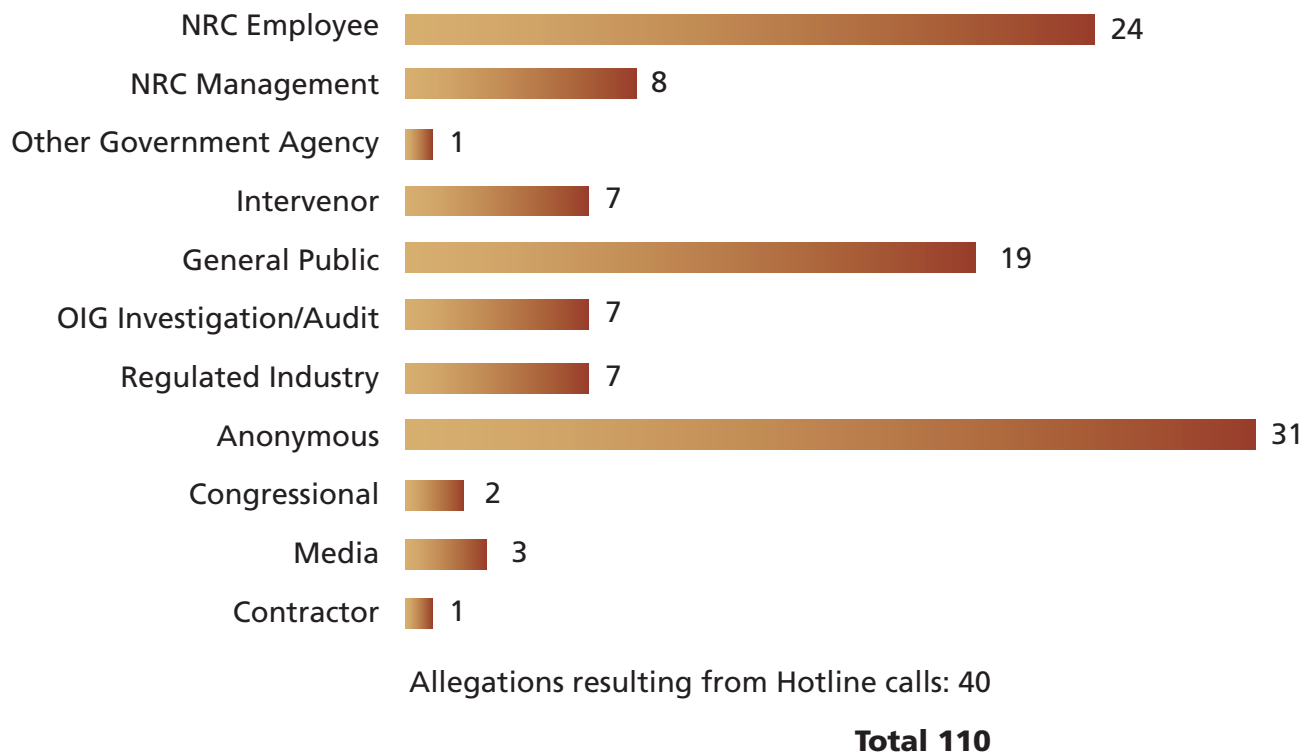
This investigation determined that the staff was not pressured and did not act inappropriately to approve CENG's license application. Rather, OIG found that once NRC staff learned of problems with the completeness of CENG's license application, they suspended their initial orders approving the transfer until complete and accurate information regarding the company's financial and operational structure was provided to NRC. *(Addresses Management and Performance Challenges #2 and #7)*

---

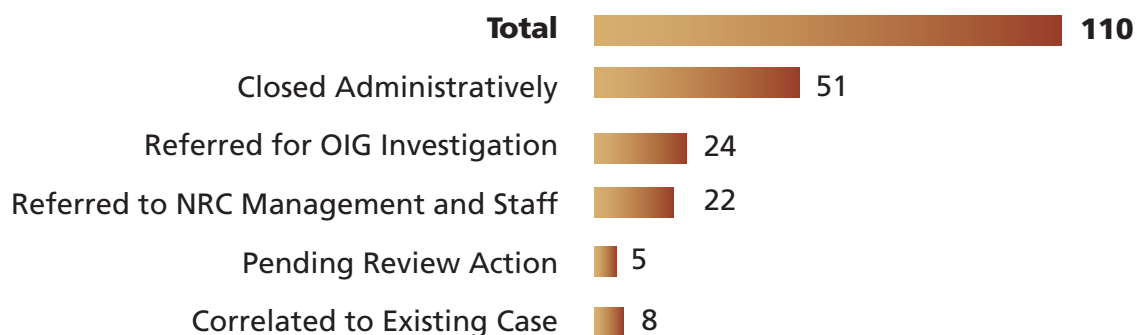
# Summary of OIG Accomplishments

## INVESTIGATIVE STATISTICS

*Source of Allegations — April 1, 2010, through September 30, 2010*



*Disposition of Allegations — April 1, 2010, through September 30, 2010*



### *Status of Investigations*

DOJ Acceptance . . . . .	0
DOJ Referrals . . . . .	2
DOJ Pending . . . . .	1
DOJ Declinations . . . . .	2
Sentencing . . . . .	1
NRC Administrative Actions:	
Terminations and Resignations . . . . .	1
Suspensions and Demotions . . . . .	3
Counseling . . . . .	3
Recoveries . . . . .	\$2620.91
State Referrals . . . . .	0
State Accepted . . . . .	0
PFCRA Referral . . . . .	1
PFCRA Acceptance . . . . .	1
PFCRA Recovery . . . . .	\$10,000

### *Summary of Investigations*

<b>Classification of Investigations</b>	<b>Carryover</b>	<b>Opened Cases</b>	<b>Closed Cases</b>	<b>Cases In Progress</b>
Bribery	0	1	1	0
Conflict of Interest	1	1	1	1
External Fraud	5	3	3	5
False Statements	1	1	0	2
Misuse of Government Property	1	0	1	0
Employee Misconduct	17	11	17	11
Management Misconduct	5	1	5	1
Mishandling of Technical Allegations	4	0	4	0
Whistleblower Reprisal	2	0	2	0
Miscellaneous	0	2	1	1
Technical Allegations	1	1	1	1
Management Implication Report	1	0	1	0
Event Inquiries	2	2	1	3
<b>Total Investigations</b>	<b>40</b>	<b>23</b>	<b>38</b>	<b>25</b>
<b>Other</b>				
Projects and Proactive Initiatives	10	4	4	10

---

## AUDIT LISTINGS

### *Internal Program Audit and Evaluation Reports*

<b>Date</b>	<b>Title</b>	<b>Audit Number</b>
04/23/2010	Audit of NRC's Management of Agreements with Department of Energy Laboratories	OIG-10-A-12
06/09/2010	Audit of NRC's Telework Program	OIG-10-A-13
06/09/2010	Audit of NRC's Process for Closed Meetings	OIG-10-A-14
07/30/2010	Audit of NRC Employee Use of Federal Calling Card	OIG-10-A-15
08/30/2010	Audit of NRC's Deployment of the National Source Tracking System	OIG-10-A-16
09/02/2010	Audit of NRC's Oversight of Irradiator Security – <b>Redacted Version For Public Release</b>	OIG-10-A-17
09/17/2010	Assessment of NRC's Wireless Devices <b>Redacted Version For Public Release</b>	OIG-10-A-18
09/17/2010	Evaluation of NRC's FOIA Process	OIG-10-A-19
09/28/2010	Audit of NRC's Vendor Inspection Program	OIG-10-A-20
09/30/2010	Audit of NRC's Oversight of the Access Authorization Program for Nuclear Power Plants <b>Redacted Version For Public Release</b>	OIG-10-A-21

---

*Contract Audit Reports*

<b>OIG Issue Date</b>	<b>Contractor/ Contract Number</b>	<b>Questioned Costs</b>	<b>Unsupported Costs</b>
09/27/10	Energy Research, Inc. NRC-04-07-402 NRC-04-07-483	0	0



---

## AUDIT RESOLUTION ACTIVITIES

TABLE I

*OIG Reports Containing Questioned Costs<sup>15</sup>  
April 1, 2010, through September 30, 2010*

<i>Reports</i>	<i>Number of Reports</i>	<i>Questioned Costs (Dollars)</i>	<i>Unsupported Costs (Dollars)</i>
A. For which no management decision had been made by the commencement of the reporting period	0	0	0
B. Which were issued during the reporting period	0	0	0
<i>Subtotal (A + B)</i>	0	0	0
C. For which a management decision was made during the reporting period:			
(i) dollar value of disallowed costs	0	0	0
(ii) dollar value of costs not disallowed	0	0	0
D. For which no management decision had been made by the end of the reporting period	0	0	0
E. For which no management decision was made within 6 months of issuance	0	0	0

---

<sup>15</sup> Questioned costs are costs that are questioned by the OIG because of an alleged violation of a provision of a law, regulation, contract, grant, cooperative agreement, or other agreement or document governing the expenditure of funds; a finding that, at the time of the audit, such costs are not supported by adequate documentation; or a finding that the expenditure of funds for the intended purpose is unnecessary or unreasonable.

---

TABLE II

*OIG Reports Issued with Recommendations  
That Funds Be Put to Better Use<sup>16</sup>*

<i>Reports</i>	<i>Number of Reports</i>	<i>Dollar Value of Funds</i>
A. For which no management decision had been made by the commencement of the reporting period	0	0
B. Which were issued during the reporting period	0	0
C. For which a management decision was made during the reporting period:		
(i) dollar value of recommendations that were agreed to by management	0	0
(ii) dollar value of recommendations that were not agreed to by management	0	0
D. For which no management decision had been made by the end of the reporting period	0	0
E. For which no management decision was made within 6 months of issuance	0	0

---

<sup>16</sup> A “recommendation that funds be put to better use” is a recommendation by the OIG that funds could be used more efficiently if NRC management took actions to implement and complete the recommendation, including: reductions in outlays; deobligation of funds from programs or operations; withdrawal of interest subsidy costs on loans or loan guarantees, insurance, or bonds; costs not incurred by implementing recommended improvements related to the operations of NRC, a contractor, or a grantee; avoidance of unnecessary expenditures noted in pre-award reviews of contract or grant agreements; or any other savings which are specifically identified.

---

TABLE III

*Significant Recommendations Described in Previous  
Semiannual Reports on Which Corrective Action Has  
Not Been Completed*

<b>Date</b>	<b>Report Title</b>	<b>Number</b>
05/26/03	<p>Audit of NRC's Regulatory Oversight of Special Nuclear Materials</p> <p>Recommendation 1: Conduct periodic inspections to verify that material licensees comply with material control and accountability (MC&amp;A) requirements, including, but not limited to, visual inspections of licensees' special nuclear material (SNM) inventories and validation of reported information.</p>	OIG-03-A-15

---

# Abbreviations and Acronyms

ADAMS	Agencywide Documents Access and Management System
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CBA	Collective Bargaining Agreement
CENG	Constellation Energy Nuclear Group
CFR	Code of Federal Regulations
CFSI	Counterfeit, Fraudulent, and Substandard Items
DHS	U.S. Department of Homeland Security
DOE	U.S. Department of Energy
DPO	Differing Professional Opinion
DPV	Differing Professional View
DU	depleted uranium
EDF	Electricite de France
ENS	emergency notification system
EPA	Energy Policy Act of 2005
ESW	essential service water system
FEMA	U.S. Federal Emergency Management Agency
FICAM	Federal Identity, Credential, and Access Management
FISMA	Federal Information Security Management Act
FSME	Office of Federal and State Materials and Environmental Management Programs (NRC)
FY	Fiscal Year
HR	Office of Human Resources (NRC)
HSPD-12	Homeland Security Presidential Directive-12
IAEA	International Atomic Energy Agency
IAM	Issue Area Monitor
ICAM	Identity, Credential, and Access Management
IG	Inspector General
ISFSI	independent spent fuel storage installations
ISL	Information Systems Laboratories, Inc.
MD	Management Directive
MOU	Memorandum of Understanding
NRC	U.S. Nuclear Regulatory Commission
NRO	Office of New Reactors (NRC)
NRR	Office of Nuclear Reactor Regulation (NRC)
NSIR	Office of Nuclear Security and Incident Response (NRC)
NSTS	National Source Tracking System
OCOI	organizational conflict of interest
OIG	Office of the Inspector General (NRC)
OIP	Office of International Programs (NRC)
SIT	Special Inspection Team
SWRI	Southwest Research Institute
VA	U.S. Department of Veterans Affairs

---

# Reporting Requirements

The Inspector General Act of 1978, as amended (1988), specifies reporting requirements for semiannual reports. This index cross-references those requirements to the applicable pages where they are fulfilled in this report.

Citation	Reporting Requirements	Page
Section 4(a)(2)	Review of Legislation and Regulations . . . . .	6-7
Section 5(a)(1)	Significant Problems, Abuses, and Deficiencies . . . . .	10-26, 33-38
Section 5(a)(2)	Recommendations for Corrective Action . . . . .	10-26
Section 5(a)(3)	Prior Significant Recommendations Not Yet Completed . . . . .	45
Section 5(a)(4)	Matters Referred to Prosecutive Authorities . . . . .	40
Section 5(a)(5)	Information or Assistance Refused . . . . .	None
Section 5(a)(6)	Listing of Audit Reports . . . . .	41-42
Section 5(a)(7)	Summary of Significant Reports . . . . .	10-26, 33-38
Section 5(a)(8)	Audit Reports — Questioned Costs . . . . .	43
Section 5(a)(9)	Audit Reports — Funds Put to Better Use . . . . .	44
Section 5(a)(10)	Audit Reports Issued Before Commencement of the Reporting Period for Which No Management Decision Has Been Made . . . . .	None
Section 5(a)(11)	Significant Revised Management Decisions . . . . .	None
Section 5(a)(12)	Significant Management Decisions With Which the OIG Disagreed . . . . .	None

Public Law 111-203, the Dodd-Frank Wall Street Reform and Consumer Protection Act, requires IGs to include their peer review results as an appendix to each *Semiannual Report to Congress*.

Section 989C	Peer Review Information . . . . .	48
--------------	-----------------------------------	----

---

# Appendix

## PEER REVIEW INFORMATION

The OIG Audit and Investigative programs are peer reviewed every 3 years.

## AUDITS

The NRC OIG Audit program was peer reviewed most recently by the U.S. Small Business Administration Office of Inspector General. The peer review final report, dated August 24, 2009, reflected that NRC OIG received a peer review rating of pass. This is the highest rating possible based on the available options of pass, pass with deficiencies, or fail.

## INVESTIGATIONS

The NRC OIG Investigative program was peer reviewed most recently by the U.S. Department of State Office of Inspector General. The peer review final report, dated July 6, 2010, reflected that the NRC OIG is in compliance with the quality standards established by the President's Council on Integrity and Efficiency/Executive Council on Integrity and Efficiency and the Attorney General guidelines.



## **NRC OIG'S STRATEGIC GOALS**

1. Strengthen NRC's efforts to protect public health and safety and the environment.
2. Enhance NRC's efforts to increase security in response to an evolving threat environment.
3. Increase the economy, efficiency, and effectiveness with which NRC manages and exercises stewardship over its resources.



## The NRC OIG Hotline

The Hotline Program provides NRC employees, other Government employees, licensee/utility employees, contractors and the public with a confidential means of reporting suspicious activity concerning fraud, waste, abuse, and employee or management misconduct. Mismanagement of agency programs or danger to public health and safety may also be reported. We do not attempt to identify persons contacting the Hotline.

### What should be reported:

- Contract and Procurement Irregularities
- Conflicts of Interest
- Theft and Misuse of Property
- Travel Fraud
- Misconduct
- Abuse of Authority
- Misuse of Government Credit Card
- Time and Attendance Abuse
- Misuse of Information Technology Resources
- Program Mismanagement

## Ways to Contact the OIG



**Call:**  
**OIG Hotline**  
**1-800-233-3497**  
**TDD: 1-800-270-2787**  
7:00 a.m. – 4:00 p.m. (EST)  
After hours, please leave a message



**Submit:**  
On-Line Form  
[www.nrc.gov](http://www.nrc.gov)  
Click on Inspector General  
Click on OIG Hotline



**Write:**  
U.S. Nuclear Regulatory Commission  
Office of the Inspector General  
Hotline Program, MS 05 E13  
11555 Rockville Pike  
Rockville, MD 20852-2738