



OFFICE OF THE
INSPECTOR GENERAL

UNITED STATES
NUCLEAR REGULATORY COMMISSION
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October 1, 2015

MEMORANDUM TO: Chairman Burns

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

SUBJECT: INSPECTOR GENERAL'S ASSESSMENT OF THE MOST
SERIOUS MANAGEMENT AND PERFORMANCE
CHALLENGES FACING THE NUCLEAR REGULATORY
COMMISSION (OIG-16-A-01)

In accordance with the Reports Consolidation Act of 2000, I am providing what I consider to be the most serious management and performance challenges facing the U.S. Nuclear Regulatory Commission (NRC) in FY 2016.

INTRODUCTION

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

NRC performs critical functions to ensure the safe and secure use of radioactive materials in the United States and to protect both the public and radiation workers from radiation hazards that could result from the use of radioactive materials. NRC provides licensing and oversight activities for 99 commercial nuclear power reactors.

NRC's principal regulatory functions are to establish regulatory requirements and conduct confirmatory research to support requirements; issue licenses to facility operators and owners, possessors, and users of nuclear materials; oversee these licensees to ensure they are in compliance with NRC requirements and operate safely

and securely; and respond to emergencies involving regulated activities. NRC also participates in international work that is integral to the agency's mandate to protect public health and safety and promote the common defense and security. To carry out its mission, NRC's proposed FY 2016 budget is \$1,032.2 million, including 3,754 full-time equivalent positions.

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

MANAGEMENT CHALLENGES

The FY 2016 management and performance challenges are directly related to NRC's mission areas (commercial nuclear reactors and nuclear materials), security, information technology and information management, financial programs and administrative functions. Our work in these areas indicates that while program improvements are needed, NRC is continually making progress to address OIG recommendations and improve the efficiency and effectiveness of its programs. The FY 2016 management and performance challenges are as follows:

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

These challenges represent what OIG considers to be inherent and continuing program challenges relative to maintaining effective and efficient oversight and internal controls. As a result, it is likely they will continue to be challenges from year to year. Challenges do not necessarily equate to problems.

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

1. Regulation of nuclear reactor safety programs.

NRC is responsible for maintaining an established regulatory framework for the safe and secure use of civilian nuclear reactors, including commercial nuclear power plants as well as research, test, and training reactors. There are currently 99 nuclear power plants licensed to operate in the United States, which generate about 20 percent of the Nation's electrical use, as well as 5 plants under construction (Vogtle 3 and 4, Summer 2 and 3, Watts Bar 2). There are also 31 licensed research and test reactors. NRC's regulatory oversight responsibilities in the reactor arena include developing policy and rulemaking; licensing and inspecting reactors; licensing reactor operators; and enforcing regulations. The agency implements the nuclear reactor safety program with approximately 77 percent (\$810 million) of its total budget authority and 76 percent (2,900 full-time equivalent employees) of its total staff. Thus, it is of paramount importance that the agency implement these programs as effectively and efficiently as possible.

Key reactor safety oversight challenges for NRC include the following:

- Ensuring an adequate and efficient reactor and operator licensing process, accounting for safety impacts of major changes to plant configuration, and sufficiently evaluating older plants for license extensions.
- Providing an adequate number of trained inspectors for sufficient oversight, and ensuring inspection procedures are adequate and are being followed.
- Ensuring adequate construction oversight of new power reactors, adequately reviewing and approving design changes that are occurring concurrent with the construction, and verifying whether plants are built in accordance with the intended design.
- Ensuring appropriate and reasonable application of the agency's Reactor Oversight Process, Construction Reactor Oversight Process, Significance Determination Process for determining regulatory violation severity, safety culture policy, and Alternative Dispute Resolution.
- Incorporating operational experience from the domestic and international nuclear industries into NRC's regulatory program, including lessons learned from Fukushima and other events.

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

Audit of NRC's Task Interface Agreement Process

OIG-15-A-05, November 25, 2014

NRC's Office of Nuclear Reactor Regulation (NRR) is responsible for a broad range of regulatory activities in the licensing and oversight of commercial nuclear power reactors to protect public health and safety and the environment. NRR works with the NRC regions and other offices to accomplish its mission, including providing technical assistance to the regions and other offices. A Task Interface Agreement (TIA) is one such form of technical assistance that NRR provides the regions and other offices. A TIA is a request for NRR technical assistance from other NRC organizations and contains questions on subjects involving regulatory or policy interpretations, specific plant events, or inspection findings. Ensuring that adequate, appropriate, and timely feedback is provided to the requesting organization is central to the agency's mission to protect public health and safety and the environment.

Our review found that NRC regional and office staff requesting technical assistance from NRR are generally satisfied with the technical content provided through the TIA process. However, there are concerns regarding the efficiency of the process and, conceivably, long overdue TIAs could be regarded as eroding overall effectiveness of the TIA process. Roughly one-third of TIA requests are not resolved and communicated in a timely manner because NRC lacks controls to ensure TIA timeliness performance measures are met. Failure to meet timeliness performance measures degrades the agency's safety oversight mission as well as overall program effectiveness and accountability. The agency agreed with the report's findings and recommendations and is in the process of developing new performance measures that will serve as internal controls to ensure TIA timeliness.

The full report is available at: <http://pbadupws.nrc.gov/docs/ML1432/ML14329A081.pdf>

Audit of NRC's Construction Reactor Oversight Process**OIG-15-A-14, June 16, 2015**

NRC licenses and oversees new nuclear power reactor construction. Four reactors are being built under combined licenses issued in accordance with Title 10, Code of Federal Regulations, Part 52, Licenses, Certifications, and Approvals for Nuclear Power Plants. Two of the new reactors are in Georgia (Vogtle) and two in South Carolina (Summer). A fifth reactor, Watts Bar 2 is being built under the regulations for 10 CFR Part 50. NRC uses the Construction Reactor Oversight Process (cROP), a matrix-based tool for evaluating the quality of construction, to oversee construction of new nuclear power reactors licensed under Part 52. The audit objective was to assess the efficiency and effectiveness of NRC's Construction Reactor Oversight Process.

Our review found that NRC needs to improve efficiency when adjusting to construction inspection schedules and revising inspection guidance. In Fiscal Year 2014, regional construction inspection staff spent approximately 60 percent of time on administrative program support activities such as adjusting to licensee construction schedules and revising SmartPlans rather than conducting inspections. NRC relies on Construction inspection staff for monitoring and adjusting to construction schedule changes because schedules provided by licensees do not contain real-time information as originally envisaged. Further, the process for approving SmartPlan revisions is dominated by multiple levels of review by individuals who do not necessarily need to participate in the review. Agency efforts to identify process inefficiencies are not comprehensive and has left the agency unable to identify process and functional redundancies, overlap, and gaps. As the pace of new reactor construction increases, unaddressed administrative inefficiencies could affect future cROP effectiveness. The agency agreed with the report's findings and recommendations and plans to assess its inspection planning and scheduling processes and monitor these programs for further inefficiencies.

The full report is available at: <http://pbadupws.nrc.gov/docs/ML1516/ML15167A491.pdf>

**Audit of NRC's Operator Licensing Program for the AP1000 Power Reactor
(Ongoing Audit)**

Pursuant to the Atomic Energy Act of 1954, as amended, Title 10, Code of Federal Regulations, Part 55 establishes procedures and criteria for the issuance of operator licenses to persons who operate commercially owned nuclear power reactors in the United States. The AP1000 power reactor is a newly designed system that will be incorporated in four nuclear power reactor units currently under construction. Specifically, units 3 and 4 at the Vogtle plant in Georgia and units 2 and 3 at the V.C. Summer plant in South Carolina, are scheduled to be operational around the 2019–2020 timeframe.

The new AP1000 power reactor design will require operators to be trained, licensed, and qualified to take the controls in accordance with 10 CFR Part 55 when the reactors become operational. Each new reactor should have an onsite functional control room simulator for training and testing operators that must duplicate the plant as designed and built; however, some aspects of the AP1000 designs are incomplete. Consequently, the control room simulators may be insufficient for operator licensing when the new nuclear power reactor units are expected to be operational.

OIG's audit objective is to determine if NRC's program for licensing AP-1000 reactor operators is efficiently and effectively implemented.

2. Regulation of nuclear materials and radioactive waste programs.

NRC is responsible for maintaining an established regulatory framework for the safe and secure use of nuclear materials; medical, industrial, and academic applications; uranium recovery, conversion and enrichment activities; fuel fabrication and development; and, high-level and low-level radioactive waste. NRC is authorized to grant licenses for the possession and use of radioactive materials and establish regulations to govern the possession and use of those materials. Upon a State's request, NRC may enter into an agreement to relinquish its authority to the State to regulate certain radioactive materials and limited quantities of special nuclear material. The State must demonstrate that its regulatory program is adequate to protect public health and safety and the environment, and compatible with NRC's program. The States that enter into an agreement assuming this regulatory authority from NRC are called Agreement States. Currently, there are 37 Agreement States.

NRC regulates high-level radioactive waste generated from commercial nuclear power reactors. High-level radioactive waste is either spent (used) reactor fuel when it is accepted for disposal or waste material remaining after spent fuel is reprocessed. Since radioactive waste becomes harmless only through decay (which may take hundreds of thousands of years for high-level waste), the material must be stored and ultimately disposed of in a manner that provides adequate protection of the public for a very long time.

Low-level radioactive waste (LLRW) is typically produced at nuclear power reactors, hospitals, research facilities, and clinics from the use of nuclear materials for industrial and medical purposes. NRC regulates the management, storage, and disposal of radioactive waste produced as a result of NRC-licensed activities. LLRW includes contaminated protective clothing, equipment and tools, medical supplies, and laboratory animal tissues.

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

- Ensuring that licensing activities are conducted consistent with NRC requirements.

- Providing an adequate number of trained inspectors for sufficient oversight, providing adequate inspector training and assessing whether inspection procedures are adequate and are being followed.
- Providing effective oversight of licensees' radioactive materials programs to preclude loss or theft.
- Ensuring that Agreement State programs are adequate to protect public health and safety and the environment, and are compatible with NRC's program.
- Providing effective oversight for the safe and secure interim storage of increasing quantities of high-level radioactive waste until a permanent repository for high-level radioactive waste is operational.
- Providing effective oversight of licensee programs for the safe storage and disposal of low-level radioactive waste produced as a result of NRC-licensed activities.

The following audit report synopses are examples of work that OIG has completed or is ongoing pertaining to nuclear materials and radioactive waste programs.

Audit of NRC's Oversight of Spent Fuel Pools
OIG-15-A-06, February 10, 2015

There are a total of 93 spent fuel pools for both operating and permanently shutdown nuclear power plants in the United States that currently store spent fuel. Recent NRC staff studies demonstrating the safety of spent fuel pools and the safety of continued storage of spent fuel at reactor sites highlight the need to ensure the safety of pool operations for longer periods than originally envisioned. The audit objective was to determine whether NRC's oversight of spent fuel pools and the nuclear fuel they contain provides adequate protection for public health and safety, and the environment.

Our review revealed that regulatory uncertainty exists in NRC's evaluation of spent fuel pool criticality safety analyses. In addition, there are gaps in NRC's spent fuel pool inspection program as inspections of spent fuel pools greatly vary between licensee sites and are limited in scope. To fulfill its responsibility to protect public health and safety, NRC must inspect and assess licensee operations and facilities to ensure compliance with its regulatory requirements. NRC should also regulate in a manner that clearly communicates requirements and ensures that regulations are consistently applied and are practical. An absence of effective spent fuel pool criticality analyses guidance for both licensees and NRC staff may lead to a reduction in program efficiency and effectiveness. The agency agreed with the report's findings and recommendations.

The full report is available at: <http://pbadupws.nrc.gov/docs/ML1504/ML15041A567.pdf>

**Audit of NRC's Oversight of Medical Uses of Nuclear Material
(Ongoing Audit)**

Nuclear medicine is the use of radioactive material to provide information about the functioning of a person's specific internal organs (diagnostic) or to treat a disease (therapeutic). NRC is responsible for overseeing the medical uses of nuclear material through its licensing, inspection, and enforcement programs. NRC issues medical use licenses to medical facilities, develops guidance and regulations for use by licensees, and maintains a committee of medical experts and health care professionals to obtain advice about the use of byproduct materials in medicine.

NRC regulations aim to assure radioactive material is used properly in medical diagnosis, treatment, and research. The regulations are also meant to assure the safety of patients, medical workers, and the public, as well as to protect the environment. These regulations require licensees to report any event which fits the definition of a "medical event." Medical events refer to a potential problem with how a medical facility uses radioactive material. These events may involve doses to a patient of the wrong amount, the wrong radioactive drug, incorrect administration of a drug, or dose to the wrong patient or wrong part of the body. On average, there are approximately 40 reported medical events per year out of hundreds of thousands of medical procedures involving radioactive material.

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

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

Key security oversight challenges for NRC include the following:

- Ensuring that cyber security protective measures keep pace with the growing threat. Recently, the data breach at OPM that affected NRC employees, targeted spear phishing attempts, credential harvesting and attacks of NRC's public Web site have highlighted the importance of protecting these systems as well as the difficulty and diligence required to guard against such intrusions.
- Establishing the insider threat prevention and detection program for detecting, deterring, and mitigating insider threats to address safeguarding of classified information from exploitation, compromise or unauthorized disclosure.
- Continuing to pursue the need for new regulations focused on unique requirements of decommissioned nuclear power plants, which present different safety and security considerations than operating plants.
- Ensuring effective oversight of physical and personnel security at nuclear power plants.
- Executing the Federal Information Security Management Act (FISMA) Modernization Act of 2014, to strengthen the security of computer networks.

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

Independent Evaluation of NRC's Implementation of the Federal Information Security Management Act for Fiscal Year 2014
OIG-15-A-02 November 13, 2014

NRC has continued to make improvements in its information technology security program and progress in implementing the recommendations resulting from previous FISMA evaluations. However, we found that continuous monitoring is not performed as required. Specifically, we found that annual risk management activities in support of continuous monitoring were either delayed or not performed at all. In addition, system security plans, including the NRC Information Security Program Plan (ISPP), were not updated to reflect changes to National Institute of Standards and Technology (NIST) Special Publication (SP) 800-53, *Security and Privacy Controls for Federal Information Systems and Organizations*, with the issuance of Revision 4 in April 2013. As a result, NRC cannot ensure the effectiveness of information security controls for NRC systems and cannot identify and control risk.

To improve the agency's implementation of FISMA, we made a recommendation to develop a plan and schedule for updating system security plans, as well as the ISPP, to reflect NIST SP 800-53. We also identified two repeat findings from previous FISMA evaluations. These included that configuration management procedures are still not consistently implemented and plans of action and management still needs improvement. The agency agreed with our findings and recommendations and is working towards implementing the recommendations to strengthen FISMA compliance.

The full report is available at <http://pbadupws.nrc.gov/docs/ML1432/ML14323A321.pdf>

Audit of NRC's Communications Security (COMSEC) Program
OIG-14-A-21 September 29, 2014

COMSEC equipment at NRC is used to communicate sensitive and classified information and is a vital link for secure communication. NRC headquarters, region offices, and resident inspectors use a mix of classified and unclassified COMSEC equipment. As of August 2014, NRC had 696 COMSEC items in its inventory. In Fiscal Year 2013 (the most current year for which data were available during this audit), NRC spent \$3,622,500 on classified information systems, which included COMSEC equipment.

The Office of the Inspector General evaluated NRC staff's management of the COMSEC program in accordance with Federal and agency policies. Based on this work, auditors did not identify instances where staff mismanaged the COMSEC program, or classified and sensitive information was disclosed to unauthorized personnel. However, opportunities exist to improve the COMSEC emergency plans and management of equipment maintenance contracting.

COMSEC Emergency Plans: Federal Government COMSEC policy states that emergency plans must be documented and maintained, and that staff must be aware of plans for the accounting and protection of COMSEC materials during emergencies. NRC has not fully complied with Federal Government COMSEC emergency planning requirements. This occurs because of inconsistent management emphasis on updating plans and informing personnel of their responsibilities. As a result, NRC staff who manage and use COMSEC equipment may not be prepared to uphold their COMSEC responsibilities during emergency situations such as natural disasters or hostile actions against their facilities.

Inadequate Maintenance: Federal and NRC guidance provides criteria for procurement and resource management that emphasizes efficient and effective resource use. Although NRC has a contract in place for secure fax maintenance, auditors observed a 60-percent malfunction rate across the agency's inventory of secure fax machines. The high malfunction rates of NRC's secure fax machines are attributable to a lack of performance-based contract terms that reflect the agency's equipment readiness requirements.

While no NRC staff faced immediate harm because of malfunctioning secure fax machines, the quarterly testing and compensating maintenance work performed by staff on these machines is an inefficient use of agency resources. The agency agreed with the report's findings and recommendations and is working to fix the identified vulnerabilities.

The full report is available at: <http://pbadupws.nrc.gov/docs/ML1427/ML14272A359.pdf>

4. Management of information technology and information management.

Technology advances rapidly. New technologies such as cloud, virtualization, and mobility are tools that can be implemented. The challenge is deciding which of these new technologies will work to the best interest of NRC now.

The mission of NRC's information technology/information management (IT/IM) program is to manage information and employ information technology to enhance information access and strengthen agency performance. The most important goal of NRC's IT/IM program is effective information access—enabling both NRC staff and the public to quickly and easily obtain the information they need. This goal reflects NRC's commitment to openness and is essential for effective agency operations.

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

- Ensuring that information is protected and meets user requirements.
- Implementing and optimizing technology across NRC such as mobile computing, Web-based applications, and IT security.
- Implementing The Federal Information Technology Acquisition Reform Act of 2014, which enhances the Chief Information Officers authorities.

The following audit report synopses are examples of work that OIG has completed or is ongoing pertaining to the IT/IM programs.

Audit of Web Based Licensing System**OIG-15-A-17 June 29, 2015**

The Web Based Licensing (WBL) system is a materials licensing system that supports the U.S. Nuclear Regulatory Commission (NRC) in managing the licensing information of regulated entities that use radioactive materials. It was deployed in August 2012. Designed to maintain information on materials licensees, WBL supports the entry of licensing information and license images that enables managing the licensing life cycle from initial application through license issuance, amendment, reporting, and termination.

Use of WBL can be improved to better support effective and efficient operations. Specifically, OIG found that varied use of WBL among the NRC regions, outdated business processes, and lack of standardization hinder efficiency and effectiveness. OIG concluded that full implementation of WBL's capabilities can unify NRC's oversight of materials licensees and support national efforts to monitor and secure radioactive materials. Management stated their general agreement with the findings and recommendations in this report.

The full report is available at: <http://pbadupws.nrc.gov/docs/ML1518/ML15180A203.pdf>

Audit of NRC's IT Procurement Process**OIG15-A-09 February 10, 2015**

Cost-effective information technology (IT) procurement is critical as the Nuclear Regulatory Commission (NRC) aims to provide staff with technology that helps them perform their mission and manage information security risk, while also maintaining fiscal discipline in the face of declining resources. The need to "innovate with less" is reinforced by trends in NRC's annual IT spending, which decreased from approximately \$165 million in fiscal year (FY) 2011 to approximately \$152 million in FY 2015. This spending supports mission and management data systems, such as NRC's incident response, official agency recordkeeping, and core financial accounting systems. Infrastructure services and support—which includes maintenance of NRC computer and telecommunication networks across agency headquarters, regional, and resident inspector offices—accounts for the largest single line item at \$71 million, or 46 percent of NRC's total FY 2015 IT budget.

NRC IT governance groups do not consistently apply investment criteria in reviewing and approving staff requests for new technology. Specifically, OIG found cases dating from 2010 to the present in which NRC purchased items to meet specific customer needs without establishing standardized selection criteria or applying such criteria to business case justifications for the procurements. Additionally, staff interviews and internal agency analysis corroborate a need for better coordination of IT procurement planning, budgeting, and prioritization. Management stated their general agreement with the finding and recommendations in this report.

The full report is available at <http://pbadupws.nrc.gov/docs/ML1504/ML15042A355.pdf>

Audit of NRC's Network Security Operations Center (Ongoing Audit)

The Network Security Operations Center (SOC) is responsible for monitoring, detecting, and isolating incidents and the management of the organization's security products, network devices, end-user devices, and systems. This function is performed seven days a week, 24 hours per day. Basically the SOC, is a centralized facility responsible for every aspect of security in an organization.

In July 2015, OIG initiated an audit of NRC's network Security Operations Center (SOC). The audit objective is to determine whether the SOC meets its operational requirements, and to assess the effectiveness of SOC coordination with organizations that have a role in securing NRC's network.

5. Management of financial programs.

NRC is required by the Omnibus Budget Reconciliation Act of 1990 to collect fees totaling approximately 90 percent of its annual budget authority. The agency's budget authority for FYs 2013 and 2014 was \$985.6 million and \$1,055.9 million, respectively. NRC estimated that \$859.6 million for FY 2013 and \$916.7 million for FY 2014 should be recovered from invoiced fees. NRC is required to establish a schedule of charges that fairly and equitably assess the fees to license holders and license applicants. In recent years, multiple external stakeholders have questioned NRC's budget and fees structure. To maintain transparency, NRC must continue to implement solid internal controls over financial management and reporting.

Key financial management and reporting challenges include the following:

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

The following audit report synopses are examples of work that OIG has completed or is ongoing pertaining to financial programs.

**Audit of NRC's Internal Controls Over Fee Revenue
OIG-15-A-12 March 19, 2015**

The agency needs to establish more effective internal controls over the recordation of fee revenue. The procedures to identify and capture fee billable staff time and reimbursable contractor costs are ineffective and inefficient. Also, the process for validating the accuracy of the charges is labor intensive, difficult, and challenging. Controls for setting up timekeeping codes and their definitions are inconsistent and not standardized making it difficult for staff to identify the correct code for charging time. In addition, controls to prevent errors in selecting timekeeping codes for charging staff time can be improved.

Similarly, the overhead cost allocation process also needs improvement. The allocation calculation uses data that is unreliable and could produce inaccurate invoices to NRC licensees and applicants.

In addition, NRC validation reports and invoices sent to licensees and license applicants do not have adequate contractor details regarding services provided and related reimbursable costs. Lack of contractor detail in NRC validation reports and invoices sent to licensees and applicants increases the risk of billing errors. The agency agreed with the report's findings and recommendations.

The full report is available at: <http://pbadupws.nrc.gov/docs/ML1507/ML15078A321.pdf>

Audit of NRC's Decommissioning Funds Program (Ongoing Audit)

Under 10 CFR Part 50.75, NRC must receive reasonable assurances from nuclear reactor licensees that funds will be available for the decommissioning process. As of the prior biennial reporting and review period (as of December 31, 2012), the Decommissioning Trust Funds dedicated to NRC requirements for decommissioning and radiological decontamination totaled \$45.7 billion. The agency began reviewing biennial decommissioning reports submitted by licensees that include information as of December 31, 2014, in the spring of calendar year 2015.

It is important to understand NRC actions to ensure that the licensees have reasonable plans in place to make up any shortfalls that exist between the current funded amount and the amount estimated as needed by NRC's two-tiered formula. (The formula can be found in 10 CFR 50.75(c).) The first tier computes the minimum amount, in 1986 dollars, needed at the time of permanent cessation of operations based on reactor type and power level of the reactors. The second tier adjusts the amount computed in the first tier, from 1986 dollars to current year dollars, based on escalation factors of labor, energy, and burial. OIG and the Government Accountability Office previously reported that NRC's decommissioning formula was developed in 1986 and may not reliably estimate adequate decommissioning costs (see Audit Report OIG-06-A-07, dated February 6, 2006, <http://pbadupws.nrc.gov/docs/ML0603/ML060370376.pdf> and GAO-12-258, dated April 2012). The audit objectives are to identify opportunities for program improvement and determine the adequacy of NRC's processes for coordinating with licensees to address possible shortfalls.

6. Management of administrative functions.

NRC should continue exploring ways to reduce administrative inefficiencies while maintaining the appropriate corporate support to carry out agency operations. During FY 2015, NRC workforce totaled approximately 3,700 staff positions. To support the agency's technical staff, NRC provides corporate support services such as contract support and multiple human resource programs. Although NRC has implemented multiple programs to support agency staff, NRC continues to operate in a Federal Government environment of stagnant or reduced agency budgets, and increasing pressure to reduce corporate support costs. Because of this, the agency needs to have an adequate balance between administrative functions and technical needs. In addition, NRC must be able to effectively recruit, train and transfer knowledge to new hires. This includes maintaining up-to-date guidance to effectively transfer knowledge and train current staff.

Key NRC corporate support function challenges include the following:

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

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

Audit of NRC's Regulatory Analysis Process
OIG-15-A-15 June 24, 2015

The Atomic Energy Act of 1954, as amended (42 U.S.C. 2011), and Energy Reorganization Act of 1974, authorize the Nuclear Regulatory Commission (NRC) to develop regulations that licensees must follow to protect public health and safety and the environment, and to promote the common defense and security. NRC is authorized to establish by rule, regulation, or order, such standards and instructions to govern the possession and use of special nuclear, source, and byproduct material. NRC uses regulatory analyses to evaluate proposed rulemaking actions to protect public health and safety.

OIG found that the NRC's knowledge management techniques for regulatory analysis need improvement and the agency does not consistently document stakeholder input prior to the proposed rule stage. The agency agreed with the report's findings and recommendations.

The full report is available at: <http://pbadupws.nrc.gov/docs/ML1517/ML15175A344.pdf>

Audit of NRC's Process for Revising Management Directives
OIG-14-A-19 September 15, 2014

Federal regulations provide that Federal agencies should strive to (1) convey written instructions and document agency policies and procedures through effective directives management and (2) provide agency personnel with information needed in the right place, at the right time, and in a useful format. At NRC, management directives are issued to (1) promulgate internal policies and procedures of agencywide interest or application that concern a high profile, mission-critical agency function or program and (2) impose substantive requirements on more than one NRC office. Management directives do not propose new policy; instead, directives reflect policy decisions already made and provide the process and guidance for implementing that policy. NRC Management Directive (MD) 1.1, *NRC Management Directives System*, issued March 18, 2011, describes the process for issuing and revising directives. These directives are to be reviewed and reissued or certified as relevant at least every 5 years (the 5-Year Plan).

Although the agency strives for compliance with MD 1.1, NRC generally is not in compliance with keeping MDs accurate and up-to-date. Therefore, opportunities exist to improve program efficiency and increase compliance with MD 1.1 by (A) issuing MDs timely and (B) centralizing authoritative guidance. The agency agreed with the report's findings and recommendations.

The full report is available at: <http://pbadupws.nrc.gov/docs/ML1425/ML14258A612.pdf>

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