EVALUATION REPORT

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

OIG-11-A- 01 October 1, 2010

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

OFFICE OF THE
INSPECTOR GENERAL

October 1, 2010

MEMORANDUM TO: Chairman Jaczko

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

SUBJECT: INSPECTOR GENERAL'S ASSESSMENT OF THE MOST SERIOUS MANAGEMENT AND PERFORMANCE CHALLENGES FACING NRC (OIG-11-A-01)

The *Reports Consolidation Act of 2000* requires the Inspector General of each Federal agency to annually summarize what he or she considers to be the most serious management and performance challenges facing the agency and to assess the agency's progress in addressing those challenges. In accordance with the act, I identified seven management and performance challenges confronting the Nuclear Regulatory Commission that I consider to be the most serious.

We appreciate the cooperation extended to us during this evaluation. The agency provided comments on this report, which have been incorporated as appropriate. If you have any questions, please contact Stephen D. Dingbaum, Assistant Inspector General for Audits, at 415-5915 or me at 415-5930.

Attachment: As stated

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EXECUTIVE SUMMARY

BACKGROUND

The *Reports Consolidation Act of 2000* requires the Inspector General (IG) of each Federal agency to annually summarize what he or she considers to be the most serious management and performance challenges facing the agency and to assess the agency's progress in addressing those challenges.

PURPOSE

In accordance with the act, the IG at the U.S. Nuclear Regulatory Commission (NRC) updated what he considers to be the most serious management and performance challenges facing NRC. The IG evaluated the overall work of the Office of the Inspector General (OIG), the OIG staff's general knowledge of agency operations, and other relevant information to develop and update his list of management and performance challenges. As part of the evaluation, OIG staff sought input from NRC's Chairman, Commissioners, and management to obtain their views on what challenges the agency is facing and what efforts the agency has taken to address previously identified management challenges.

RESULTS IN BRIEF

The IG identified seven challenges that he considers the most serious management and performance challenges facing NRC. The challenges identify critical areas or difficult tasks that warrant high-level management attention.

The 2010 list of challenges reflects one change from the 2009 list. Prior Challenge 6, *Administration of all aspects of financial management,* was reworded to include a reference to procurement. The new wording, *Administration of all aspects of financial management and procurement,* is intended to reflect the overarching responsibility that NRC has to manage and exercise stewardship over its resources.

The following chart provides an overview of the seven most serious management and performance challenges as of October 1, 2010.

Most Serious Management and Performance Challenges Facing the Nuclear Regulatory Commission * as of October 1, 2010 *(as identified by the Inspector General)*	
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 and procurement.*
Challenge 7	*Managing human capital.*
The most serious management and performance challenges are not ranked in any order of importance.	

CONCLUSION

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.

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

ABBREVIATIONS AND ACRONYMS

CFR	Code of Federal Regulations
CUI	Controlled Unclassified Information
FY	fiscal year
IG	Inspector General
HSPD-12	Homeland Security Presidential Directive-12
IMPEP	Integrated Materials Performance Evaluation Program
NMMSS	Nuclear Materials Management and Safeguards System
NRC	U.S. Nuclear Regulatory Commission
NSTS	National Source Tracking System
OIG	Office of the Inspector General
3WFN	Three White Flint North

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I. BACKGROUND

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

II. PURPOSE

In accordance with the Reports Act's provisions, the U.S. Nuclear Regulatory Commission (NRC) IG updated what he considers to be the most serious management and performance challenges facing the agency. The IG evaluated the overall work of the Office of the Inspector General (OIG), the OIG staff's general knowledge of agency operations, and other relevant information to develop and update his list of management and performance challenges.

In addition, OIG sought input from NRC's Chairman, Commissioners, and management to obtain their views on what challenges the agency is facing and what efforts the agency has taken or planned to address previously identified management and performance challenges.

III. EVALUATION RESULTS

The NRC's mission is to license and regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment. Like other Federal agencies, NRC faces management and performance challenges in carrying out its mission.

Determination of Management and Performance Challenges

Congress left the determination and threshold of what constitutes a most serious management and performance challenge to the discretion of the Inspectors General. As a result, the IG applied the following definition in identifying challenges:

> Serious management and performance challenges are mission critical areas or programs that have the potential for a perennial weakness or vulnerability that, without substantial management attention, would seriously impact agency operations or strategic goals.

Based on this definition, in 2010, the IG assessed the most serious management and performance challenges facing NRC and identified seven challenges that he considered most serious. The challenges identify critical areas or difficult tasks that warrant high-level management attention. The 2010 list of challenges reflects one change from the 2009 list:

- Prior Challenge 6*, Administration of all aspects of financial management,* was reworded to include a reference to procurement. The new wording, *Administration of all aspects of financial management and procurement,* is intended to reflect the overarching responsibility that NRC has to manage and exercise stewardship over its resources.

The following chart provides an overview of the seven challenges identified as most serious. The sections that follow the chart provide more detailed descriptions of the challenges, descriptive examples related to the challenges, and examples of efforts that the agency has taken or are underway or planned to address the challenges.

Most Serious Management and Performance Challenges Facing the Nuclear Regulatory Commission * as of October 1, 2010 *(as identified by the Inspector General)*	
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 and procurement.*
Challenge 7	*Managing human capital.*

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

CHALLENGE 1
Protection of nuclear material used for civilian purposes.

NRC is authorized to grant licenses for the possession and use of radioactive materials and establish regulations to govern the possession and use of those materials.

NRC's regulations require that certain material licensees have extensive material control and accounting programs as a condition of their licenses. All other license applications (including those requesting authorization to possess small quantities of special nuclear materials) must develop and implement plans that demonstrate a commitment to accurately control and account for radioactive materials.

NRC may relinquish to States, upon their request, its authority to regulate certain radioactive materials and limited quantities of special nuclear material. After these States demonstrate that their regulatory programs are adequate to protect public health and safety and compatible with NRC's program, the States enter into an agreement assuming this regulatory authority from NRC and are called Agreement States.

The issues related to this challenge and the agency's actions to address each issue include the following:

Issue: Implement the National Source Tracking System (NSTS), Web Based Licensing, and the Licensing Verification System to ensure the accurate tracking and control of byproduct material, especially those materials with the greatest potential to impact public health and safety.

> **Action:** NSTS became operational in December 2008 and was available to licensees in January 2009 for tracking Code of Conduct[1] materials in categories 1 and 2. Although there are some issues regarding NSTS' credentialing process, the staff has numerous actions underway to address these difficulties and

[1] In January 2004, the International Atomic Energy Agency published the Code of Conduct on the Safety and Security of Radioactive Sources as the standard the international community uses to govern the safety and security of radioactive materials based on the categorization system. While the International Atomic Energy Agency classifies sources into five categories, it notes that sources in categories one through three are designated as varying degrees of dangerous.

ultimately increase the online usage of NSTS. The agency is still working to make operational Web Based Licensing and the Licensing Verification System. The agency recently awarded the *Integrated Source Management Portfolio* contract, which will integrate NSTS, Web Based Licensing, and the Licensing Verification System to license and track source materials under one mechanism.

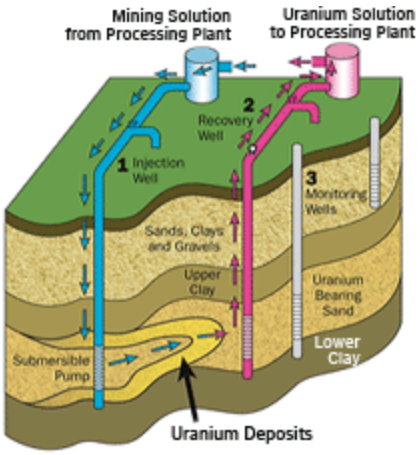
Issue: Ensure that radioactive material is adequately protected to preclude its use for malicious purposes.

Action: Although NRC initiated a rulemaking to expand the materials tracked in NSTS, the decision and potential implementation of that rulemaking was not approved by the Commission. A Commissioner highlighted the following improvements in NRC's overall licensing process as a reason for not approving the rulemaking: background investigations; increased inspections; additional license review; pre-licensing verification and site visits; transfer of sources under existing security orders to verify new users; flagging of significant changes in ordering patterns; licensing of end users; requirements in Title 10, Code of Federal Regulations (CFR), Part 30.41, requiring licensees to verify that a recipient is authorized to receive material; and the presence of existing increased control orders for licensees possessing quantities of material that in the aggregate exceed Category 2 levels.

One radioactive isotope that is of particular concern for malicious use is cesium-chloride. The U.S. National Academy of Sciences issued a report that emphasized replacement technologies be considered for cesium-chloride, a highly dispersible chemical form of the radioactive isotope of Cesium, Cs-137. Cesium-chloride is very soluble in water and easily dispersed in the air and is highly toxic if ingested. Cesium-chloride, used in nuclear medicine, research, and industry, is typically double sealed and contained in a stainless steel capsule for safety reasons. In light of the views on alternative technologies as a replacement, NRC convened public workshops to seek input from various stakeholders. NRC also commissioned a study by its *Advisory Committee on the Medical Uses of Isotopes*. After carefully considering all these inputs, as

well as the NRC's own internal analysis, the agency concluded that near-term replacement of cesium-chloride devices was not practicable, and would be detrimental to the delivery of medical care and research. The current policy allows the continued use of cesium chloride while actively pursuing a better alternative. Additionally, NRC issued a draft policy statement for public comment that emphasizes that developing alternatives to cesium-chloride sources would be prudent.

Issue: Ensure the appropriate oversight of uranium recovery facilities.



Action: NRC maintains a regulatory oversight program with respect to licensing and inspection of uranium recovery facilities to ensure that licensees conduct activities safely and in an environmentally protective manner. NRC regulates four in situ recovery facilities[2] in the Western States, and, for those operating facilities, conducts routine annual inspections to ensure that they are safely operated.

Issue: Ensure adequate inspections to verify licensees' commitments to their material control and accounting programs.

Action: NRC is enhancing its inspection program. Currently, fuel cycle material control and accounting inspections are a shared responsibility between the Office of Nuclear Material Safety and Safeguards and NRC's Region II. The agency continues to ensure that there are two material control and accounting inspectors in each location.

Additionally, NRC is working to document the basis for risk-informing its material control and accounting program with respect to conducting periodic inspections.

[2] In situ recovery is one of the two primary extraction methods that are currently used to obtain uranium from underground. These facilities recover uranium from low-grade ores where other mining and milling methods may be too expensive or environmentally disruptive.

Issue: Ensure reliable accounting of special nuclear materials in the NRC and Department of Energy's jointly managed Nuclear Materials Management and Safeguards System (NMMSS).

Action: NRC has been working since 2003 to resolve issues of material control and accounting in response to OIG-03-A-15, *Audit of NRC's Regulatory Oversight of Special Nuclear Materials*. On February 7, 2008, NRC approved a final rule that amended its regulations to improve the accuracy of material inventory information maintained in the NMMSS. The amendments, effective January 1, 2009, lower the threshold of reportable quantities of special nuclear materials and certain source materials to the NMMSS, modify the types and timing of submittals to the NMMSS, and require licensees to reconcile any material inventory discrepancies that NRC identifies in the NMMSS database. NRC reports that it has started implementing the rule change requiring improved reporting and reconciliation for licensees reporting to NMMSS, and has verified the adequacy of material control and accounting of special nuclear material at NRC licensed facilities. Additionally, the Commission has directed the NRC staff to revise and consolidate current material control and accounting regulations into 10 CFR Part 74. This final rule and associated guidance is scheduled to be completed by April 30, 2012.

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

Action: NRC conducts 8 to 10 reviews per year of Agreement State radioactive materials programs and NRC's regional programs under the agency's *Integrated Materials Performance Evaluation Program* (IMPEP). Furthermore, NRC completed a self-assessment of IMPEP in July 2010. To date, the agency has evaluated the IMPEP Team Member Training and audited the preparations and onsite portion of an IMPEP review. NRC also plans to review IMPEP policies and procedures, interview agency and Agreement State managers and staff, and develop a procedure for future self-assessments.

CHALLENGE 2
Managing information to balance security with openness and accountability.

NRC employees create and work with a significant amount of sensitive information that needs to be protected. Such information includes sensitive unclassified information and classified national security information contained in written documents and various electronic databases.

In addressing continuing terrorist activity worldwide, NRC continually reexamines its information management policies and procedures. NRC faces the challenge of attempting to balance the need to protect sensitive information from inappropriate disclosure with the agency's goal of openness in its regulatory processes. Over the past year, NRC has made various efforts to improve public access to information while protecting sensitive information, including security-related information, from inappropriate disclosure.

The issues related to this challenge and the agency's actions to address each issue include the following:

Issue: Be responsive to requests for information and provide external stakeholders with clear and accurate information about regulatory programs and facilitate public participation in the regulatory process to ensure openness and accountability.

Action: NRC instituted a contract to review documents that were removed from the public domain after September 11, 2001, and restore them to the public domain, in their entirety or redacted, whichever is appropriate. This contract will remain in effect through fiscal year (FY) 2011.

Action: NRC continues to evaluate security related information to determine what can be made publicly available. Information that would not be beneficial to an adversary has been made available to the public through various means including the NRC Web site, a public version of the annual security report to Congress, and public meetings. A recent example is a series of public meetings addressing proposed improvements to the significance determination process.

Action: NRC staff have conducted a number of stakeholder outreach efforts to include public meetings on specific regulatory issues and with elected officials regarding issues at facilities within their jurisdiction.

Action: In response to recommendations in OIG's *Audit of NRC's Process for Closed Meetings* (OIG-A-14), the agency is planning to implement several measures to better notify the public about when NRC holds non-public meetings with external stakeholders and to what topics these meetings pertain.

Issue: Manage information in accordance with new Federal Government policies for designating, marking, safeguarding, and disseminating controlled unclassified information (CUI).

Action: In May 2009, the President issued a memorandum on CUI which established an interagency Task Force to review the CUI framework. Following further presidential direction, the National Archives and Records Administration will issue implementation guidance and NRC will develop its plan to implement the new CUI program. NRC's Safeguards Information program will be incorporated into the CUI program.

Issue: Ensure that sensitive information is handled in accordance with agency policies and procedures for public disclosure.

Action: NRC announced the release of the "NRC's Personally Identifiable Information Responsibilities Awareness and Acknowledgement of Understanding" training presentation through Yellow Announcement No. 116 dated November 16, 2009. NRC developed this presentation to ensure that all personnel are aware of their responsibilities for protecting Personally Identifiable Information, understand the consequences of violating of these responsibilities, and acknowledge these responsibilities on an annual basis.

Action: In addition, NRC is in the process of reviewing the shared network drives to ensure that Personally Identifiable Information is adequately protected or removed if unnecessary.

Issue: Review and strengthen programs to protect licensee, vendor, and Government-owned assets (e.g., facility designs, technology descriptions, dual use material and components, classified information) from compromise by foreign sources and industrial espionage and increase awareness of the relationship of these assets to the Nation's economic and industrial base and energy infrastructure.

Action: NRC has recognized the need to ensure technological data involving licensee, vendor, and Government-owned assets is fully protected against potential loss to adversaries. NRC has promulgated orders that provide additional security measures for the protection of these assets.

NRC employees and contractors are required to have a baseline level of security awareness upon entry on duty and the receipt of a security clearance. Others, depending on their job and involvement in the creation and use of protected information, are provided various "role based" training programs, such as classifier's training, training for administrative personnel, declassification training, Secret Internet Protocol Router Network users training, and Sensitive Compartmented Information Access training. The training is layered, targeted, and recurring for those who have specific responsibilities for various types of protected information.

In addition, NRC has increased its information security awareness through the issuance of a variety of agencywide announcements informing staff of the methods employed by those targeting NRC information systems and the corresponding need for employees to heighten their computer security information protection posture.

Issue: Technologies or materials, which the NRC regulates, have potential intelligence value to foreign states and non-state actors from either an intelligence or a counterproliferation, counterterrorism, or economic espionage perspective and should be protected from potential compromise. Further, there is the potential that NRC employees have knowledge and access to information that may be of interest to foreign powers and non-state actors.

Action: The NRC has begun the process of developing programmatic efforts aimed at identifying potential threats and vulnerabilities that exist in its programs and operations. Such efforts should continue and receive senior leadership support.

CHALLENGE 3
Ability to modify regulatory processes to meet a changing environment, to include the licensing of new nuclear facilities.

NRC faces the challenge of maintaining its core regulatory programs while adapting to changes in its regulatory environment. NRC must address a growing interest in licensing and constructing new nuclear power plants to meet the Nation's increasing demands for energy production. As of June 2010, NRC had received 18 Combined Operating License applications, and the agency expects to receive 2 new applications through FY 2012.

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

The issues related to this challenge and the agency's actions to address each issue include the following:

New Facilities

Issue: Implement the new Construction Inspection Program.

- Risk-inform Construction Inspection Program activities to ensure the safe operation of newly constructed nuclear facilities.

- Ensure that the NRC staff has the necessary knowledge and skill to successfully implement the program.

  Action: The Office of New Reactors has developed the new Construction Inspection Program in accordance with 10 CFR Part 52. New inspections, tests, analyses, and acceptance criteria have been integrated into the Part 52 licensing process "to create a design-specific, pre-approved set of performance standards that the licensee must meet and that the Commission must find have been met, before the licensee can load fuel and operate the plant." Additionally, the agency has issued and revised a number of

Inspection Manual Chapters and procedures to implement the new inspections, tests, analyses, and acceptance criteria process.

The Office of New Reactors continues to make improvements to its construction inspection and quality assurance practices per OIG recommendations. For example, NRC has revised Inspection Manual Chapter 1252, *Construction Inspector Training and Qualification Program,* to ensure that the agency is effectively preparing inspectors to implement the new Construction Inspection Program. The agency will monitor the effectiveness of the training program as inspections of the new construction projects begin.

Issue: As the public's demand for new energy sources continues, NRC must ensure that the process for reviewing applications for new facilities focuses on safety and effectiveness.

Action: NRC's preparations have been focused on issuing reactor design certifications, revising the regulation that governs early site permits, and engaging in ongoing interactions with nuclear plant designers and utilities regarding prospective new reactor applications and licensing activities. In April 2009, the Office of New Reactors developed a set of goals with the purpose of enhancing the agency's ability to plan and implement its reviews more effectively in a dynamic environment resulting from changes in the applicants' business strategies.

NRC is taking a "design-centered review approach" to optimize the Combined Operating License application review process. Part of the license review process includes conducting risk-informed performance-based vendor inspections and quality assurance/quality control audits.

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

Action: The Office of New Reactors has taken steps to allocate resources for the use of translators and/or interpreters to support the office's foreign vendor inspections. NRC also participates in the Multinational Design Evaluation Program, which is a multinational

initiative taken by national safety authorities to develop approaches to leverage the resources and knowledge of the national regulatory authorities who will be tasked with the review of new reactor power plant designs.

Existing Fleet

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

Action: For planning purposes, NRC continues to work with plant licensees to develop a schedule of anticipated license amendment requests for license renewals and power uprates. The agency has also implemented a number of recommendations to improve the license renewal review and power uprate processes to include closer management oversight. For license renewal reviews, the agency has updated report-writing guidance to include management expectations and report-writing standards. For power uprate reviews, the agency has developed a training module for technical reviewers and project managers that is specifically focused on writing or contributing to a safety evaluation.

Issue: Respond to a heightened public focus on license renewals resulting in contested hearings.

Action: NRC has open dialogs with the industry, licensees, and stakeholders, and appropriate comments have been incorporated into new inspection procedures. Additionally, the license renewal process allows stakeholders to request a hearing in order to present their concerns.

Issue: Ensure the ability to identify emerging operating and safety issues at all plants, including issues associated with license renewal and power uprate; consistently apply regulatory and review changes in response to these emerging issues across the existing fleet of reactors.

Action: NRC continues to make changes to its regulatory programs based on emerging operational and safety issues related to license renewal and power uprate. For example, as a result of

identified weaknesses in the power uprate program, Inspection Procedure 71004 was revised to provide additional guidance on inspection planning, implementation, and documentation. Annually, agency staff communicate the status of the license renewal and power uprate programs to the Commission.

In March 2010, NRC formed a Groundwater Contamination Task Force to review the actions taken in response to recent releases of tritium into groundwater by nuclear facilities. In June 2010, the Task Force issued a report with 16 conclusions and 4 specific recommendations for the agency to strengthen NRC's response to groundwater incidents.

Issue: Establish and maintain effective, stable, and predictable regulatory programs or policies for all programs.

Action: NRC continues to interface with stakeholders, develop regulatory policy, update rules and technical guidance, provide technical lead and management for the Reactor Oversight Process, and support the development of programmatic changes when needed. Additionally, the Reactor Oversight Process features an annual assessment process which is used to revise the program as necessary.

CHALLENGE 4
Oversight of radiological waste.

NRC regulates spent nuclear fuel generated from commercial nuclear power reactors, which is referred to as high-level radioactive waste. NRC faces significant issues involving the uncertainty of a potential withdrawal of a Department of Energy license application for the Yucca Mountain repository for storing high-level radioactive waste. Additional challenges in the high-level waste area include the interim storage of spent nuclear fuel, certification of storage and transportation casks, and the oversight of decommissioned reactors and other nuclear sites.

Additionally, the amount of low-level waste continues to grow; however, no new disposal facilities have been built since the 1980s, and unresolved issues will increase as access to disposal facilities becomes more limited given facility closures and restricted accessibility.

The issues related to this challenge and the agency's actions to address each issue include the following:

Issue: Address increasing quantities of radiological waste requiring interim storage or permanent disposal.

> **Action**: NRC developed and implemented a risk-informed decisionmaking framework in connection with a wide range of nuclear waste storage issues. NRC has conducted reviews using the framework for dry cask waste storage systems and concluded that such systems provide a safe means to store spent nuclear fuel with exceedingly low risk. NRC has met with Agreement States and issued guidance on interim storage of low-level nuclear waste. Stakeholder outreach is an integral part of the implementation of NRC's low level waste strategic assessment.

Issue: Address issues regarding the uncertainty of NRC's continued review or the potential withdrawal of the Department of Energy's license application to construct a high-level radioactive waste repository at Yucca Mountain.

> **Action:** NRC is continuing to review the Yucca Mountain license application submitted by the Department of Energy in June 2008.

In 2010, the agency held hearings and evaluated a wide range of technical and scientific issues. On August 2, 2010, the agency issued Volume 1 of a safety evaluation report on the U.S. Department of Energy license application to construct a geologic repository at Yucca Mountain, Nevada. Volume 1 contains the NRC staff's conclusion that the "General Information" section of the Department of Energy license application adequately describes the proposed repository. A final decision on the application will be made after completion of NRC's independent technical review of the application, an adjudicatory hearing, and subsequent Commission review. If the Department of Energy successfully withdraws its license application for a high-level waste repository, NRC staff plan to conduct an orderly shutdown of the technical review program, including knowledge management and responding to continued intervener appeals.

Issue: Oversight of low-level waste storage and disposal, including low-level radioactive waste disposal sites. All current low-level waste disposal sites are regulated by Agreement States.

Action: NRC has focused on stakeholder outreach as an integral part of the Low-Level Waste Strategic Assessment. This outreach communicates to licensees that the NRC's staff position continues to be that low-level waste storage must meet NRC requirements to ensure safe operation, and that when constructing new low-level waste storage facilities, the regulations for evaluating proposed changes to facilities must be met. In March 2010, NRC posted to its Web site guidance on long-term storage of low-level waste.

Issue: Oversight of nuclear waste issues associated with the decommissioning and cleanup of nuclear reactor sites and other facilities.

Action: NRC continues to hold public meetings with stakeholders and licensees to explore safe and secure storage options associated with decommissioning of plants, such as transitioning from spent pool storage to dry cask storage. NRC continues to oversee the 13 power reactors currently undergoing

decommissioning. NRC staff published NUREG-1307, "Report on Waste Burial Charges," which provides updated disposal costs for pressurized water reactors and boiling water reactors based on estimated disposal volumes.

CHALLENGE 5
Implementation of information technology and information security measures.

NRC needs to continue upgrading and modernizing its information technology and security capabilities both for employees and for public access to the regulatory process. Recognizing the need to modernize, the Office of Information Services established goals to improve the productivity, efficiency, and effectiveness of agency programs and operations, and enhance the use of information for all users inside and outside the agency. NRC also needs to ensure that system security controls are in place to protect the agency's information systems against misuse.

The issues related to this challenge and the agency's actions to address each issue include the following:

Issue: Upgrade and manage information technology activities to improve the productivity, efficiency, and effectiveness of agency programs and operations.

Action: An aggressive implementation schedule was developed to upgrade the existing information technology environment and to bring new technologies to NRC. Projects under development include a virtual private network and standard laptop and dockable workstation configuration. The Computer Security Office has also established mandatory laptop security standards, including requirements for full-disk encryption and security wireless capabilities for users outside of the NRC network. These efforts, which were underway in FY 2010 and will continue during FY 2011, are intended to enable NRC staff to securely access and use the systems and information needed to perform job junctions, regardless of where they are located.

Action: To further agency plans for technology modernization, the Office of Information Services began analysis of information technology/information management legacy applications with business owners to identify opportunities for transforming legacy applications starting in FY 2013. The office continues to work with offices to develop a funding strategy for application modernization.

In addition, the office now offers business analysis services with the goal of improving requirements definition.

Action: The Office of Information Services has developed an enterprise contracting strategy for commonly used information technology services to improve productivity and efficiency in information technology contracting.

Action: NRC Implemented Microsoft Office 2007, thereby upgrading the office suite of applications to a current platform. The agency also implemented Internet Explorer 8 to upgrade the current Web browser to a current and more secure application.

Issue: Provide laptop computers with enhanced functionality, security, and support.

Action: The agency has set goals concerning laptops for the Office of Information Services to implement over the next several years. The agency has identified and is addressing its needs to (1) develop policies and standards for the use of laptop computers, (2) implement enterprise encryption and updating of operating systems to support the laptop program, and (3) provide secure wireless capability access.

Issue: Ensure that information systems and assets are protected.

Action: The Computer Security Office has taken action on identified vulnerabilities. Such actions include (1) certifying and accrediting all general support systems and major applications that are reported to the Office of Management and Budget in accordance with the Federal Information Security Management Act; (2) initiating a continuous monitoring process to annually evaluate information technology security controls of agency information technology systems to provide assurance that systems remain secure after having been authorized to operate; (3) publishing information technology security policy and standards to address current agency needs; and (4) implementing a security impact assessment process for evaluating the nature and extent of changes to information technology systems that have been authorized to operate.

Action: The NRC is deploying a variety of capabilities that strengthen its ability to identify, mitigate and ameliorate threats against its information systems infrastructure. These means, coupled with cyber tabletop exercises designed to examine the agency's response to potential network intrusion attacks, provide the NRC with enhanced capabilities to respond to such threats.

Action: The agency has established a secure network that enables authorized users to access safeguards information documents electronically. This system will reduce the need to print documents and will enable the management of safeguards documents in a centralized electronic document management system.

Action: The agency has issued Homeland Security Presidential Directive-12 (HSPD-12) identification cards to NRC staff and contractors and is working to install HSPD-12 card readers at headquarters and regional facilities. Use of this technology is expected to reduce the risk of unauthorized personnel gaining access to NRC facilities, thereby improving security of sensitive information and information technology assets.

Issue: Ensure that plans for a cyber security inspection program are developed and implemented.

Action: The staff plans to develop an inspection procedure for conducting cyber security inspections at nuclear power plants and hold training for NRC cyber security inspectors. The inspections are planned to be conducted between calendar years 2012 and 2016.

CHALLENGE 6

Administration of all aspects of financial management and procurement.

NRC management is also responsible to meet the objectives of several statutes, including the Federal Managers' Financial Integrity Act. This act mandates that NRC establish controls that reasonably ensure that (1) obligations and costs comply with applicable law; (2) assets are safeguarded against waste, loss, unauthorized use, or misappropriation; and (3) revenues and expenditures are properly recorded and accounted for. This act encompasses programmatic and administrative areas, as well as accounting and financial management.

NRC's procurement of goods and services must be made with an aim to achieve the best value for the agency's dollars in a timely manner. Further, agency policy provides that NRC's procurement of goods and services supports the agency's mission; is planned, awarded, and administered efficiently and effectively; and is consistent with sound business practices and contracting principles.

The issues related to this challenge and the agency's actions to address each issue include the following:

Financial Management

Issue: Replace the agency's current financial systems, which are obsolete, overly complex, and inefficient.

> **Action**: The agency is scheduled to deploy the new Financial Accounting and Integrated Management Information System (FAIMIS) on October 1, 2010. The FAIMIS core implementation replaces the functionality of five core financial systems with a single Web-based system based on a commercial-off-the-shelf software system. The agency plans to deploy an acquisitions module for FAIMIS in October 2012.
>
> **Action**: NRC's plans to upgrade the Time and Labor System in July 2010 were delayed because of performance issues identified during production testing. The agency is currently analyzing the performance issues to determine the root causes. Once the root

causes have been identified, the agency plans to develop a path forward, including a project plan to address implementation strategy, resource requirements, and milestones. NRC will continue to use the legacy system until the new system is deployed.

Action: In July 2009, NRC implemented e-Travel, a Government-wide initiative to improve travel operations and management. The agency expanded implementation of the system in FY 2010 to include specialized travel, such as foreign and premium class travel and split pay, an option that allows employees to apply a portion of their travel reimbursement to pay their Government credit card bill and a portion to their bank account.

Issue: Respond to Commission direction and implement recommendations of the Advisory Group on Budget Formulation and Financial Plan Reporting. This issue encompasses both budget formulation and budget execution.

Action: NRC made improvements in the budget formulation and execution processes consistent with Commission direction and the recommendations of the Advisory Group on Budget Formulation and Financial Plan Reporting.

Budget Formulation: For the FY 2011 budget, the budget formulation process was streamlined and took advantage of the upgraded Budget Formulation System accessibility and functionality enhancements. The formulation of the FY 2011 budget included a new budget structure that incorporates products and product lines.

Budget Execution: During FY 2010, NRC implemented improvements to the budget execution process.

- The midyear review and request process was eliminated and replaced with a reprogramming strategy early in the fiscal year. This resulted in funds being made available earlier in the year. Plans are to continue to streamline and accelerate this process for the next execution year.

- Additionally, advance procurement planning was coordinated with the planning for funds utilization, which brought the agency a step closer to ultimately integrating the advanced procurement plan and budget execution.

- Finally, the new budget structure positions the agency to integrate budget formulation, execution, and performance information using the new financial management systems. Budget execution and management information reporting will be improved through enhanced capabilities to compare budgeted amounts with actual funds used.

Procurement

Issue: Implement improvements in the agency's procedures for awarding, negotiating, and managing agreements with Department of Energy laboratories.

Action: In response to an OIG audit,[3] NRC has agreed to revise Management Directive 11.7, *NRC Procedures for Placement and Monitoring of Work with the U.S. Department of Energy*. The revisions include the following: requiring NRC offices to consider the use of commercial sources through market research, clarifying Management Directive 11.7 to emphasize the requirement to document the rationale and basis for using a Department of Energy lab, and requiring independent review of justifications by NRC Division of Contracts personnel to ensure that commercial sources are fully considered. In addition, the NRC plans to initiate efforts with the Department of Energy to update the memorandum of understanding between the two agencies to require that the Department of Energy provide NRC with timely audit reports.

Issue: Manage the agency's expanded grant program to ensure that grants are awarded in a timely manner and NRC personnel who award and administer grants are provided appropriate training.

[3] OIG-10-A-12, *Audit of NRC's Management of Agreements with Department of Energy Laboratories* (April 23, 2010).

Action: NRC established and documented a process for announcing grants, reviewing applications, and administering grants. NRC also implemented the Department of the Treasury's Automated Standard Application for Payments System to ensure accessible and timely distribution of funds to the grantees. This allows funds to be available as early as the beginning of the grant's period of performance for immediate drawdown based on incurred costs.

Action: NRC conducted a Lean Six Sigma[4] review of the agency's process for awarding grants to reduce the overall time for processing grants. Recently, the Division of Contracts issued Interim guidance to offices responsible for implementing the Grants Program to include the Office of Human Resources, Office of Small Business and Civil Rights, and Office of Nuclear Regulatory Research, as recommended by the Lean Six Sigma and by OIG's *Audit of NRC's Grant Management Program*.[5]

Action: On June 24, 2010, the Executive Director for Operations issued a memorandum to the Office of Human Resources, Office of Small Business and Civil Rights, and Office of Nuclear Regulatory Research, establishing a Grants Management Certification and Training Program, effective immediately. The training program will ensure that grants specialists or grants project officers are appropriately trained and certified to carry out their fiduciary responsibilities. The program mandates specific training for staff involved in awarding, administering, and monitoring grants and cooperative agreements. Implementation of this program also responds to recommendations in OIG's *Audit of NRC's Grants Management Program*.

[4] Lean Six Sigma is a structured methodology that NRC uses to accomplish sustained improvements to the types of process, transactions, and services that are performed routinely at the agency.
[5] OIG-09-A-16, *Audit of NRC's Grant Management Program* (September 29, 2009).

CHALLENGE 7

Managing human capital.

Over the last 6 years, NRC's workforce has grown from 3,059 staff to approximately 4,000 staff currently. This represents an increase of approximately 33 percent. Some offices still have a need for additional staff to deal with the increased workload in the Low-Level Waste and Uranium Recovery Programs while other offices may face a decreased need resulting from various states becoming Agreement States. To effectively manage human capital, while continuing to accomplish the agency's mission, NRC must continue to implement initiatives in the following areas:

- Recruitment and training.
- Space planning.

The issues related to this challenge and the agency's actions to address each issue include the following:

Issue: NRC must address recruitment, training, and knowledge management in light of anticipated fluctuations in workload demands and retirements.

Action: NRC is refining the agency's human capital program through the following initiatives: (1) reviewing existing recruitment strategies to determine how the agency can maximize and leverage limited resources to position the agency to be successful with both current and long-term human capital needs; (2) developing a talent acquisition and recruitment plan that will focus on strengthening its academic linkages, diversity, and other areas; and (3) acquiring wellness services to provide for functions involving health, physical fitness, ergonomics, automated external defibrillation, and occupational safety and health services.

Action: For FY 2011, NRC will strategically focus on fine tuning available skill sets to meet future mission needs. The agency anticipates various critical skill needs for the next several years and

will continue to recruit, hire, and develop staff to meet these skill needs. Hiring strategies will also include emphasis on governmentwide programs, specifically hiring of the disabled and employment of veterans.

Issue: NRC needs to facilitate continuation of its space planning efforts. Last October, the General Services Administration signed a lease for the construction and occupation of a building that the developer will construct across Marinelli Road from One White Flint North. NRC will occupy the building, referred to as Three White Flint North (3WFN), under the terms of a 15-year lease between the General Services Administration and the building owners. Ground-breaking ceremonies for the building were held during May with excavation beginning in early July. When completed, 3WFN will provide office space for approximately 1,300 NRC staff members and allow the agency to reconsolidate headquarters staff who are now dispersed among four offsite locations. The space in 3WFN will allow the agency to decompress work areas and restore conference rooms that had been converted to workstations in both One White Flint North and Two White Flint North. The building will also house the Headquarters Operations Center and the Data Center. At the present time, there is no funding in the budget for either above ground or underground pedestrian access between One White Flint North and 3WFN. To access 3WFN, agency employees will have to cross Marinelli Road, which is a multi-lane road. NRC faces two challenges related to 3WFN. The agency must ensure that:

- Building requirements are met and within budget.

- Provisions are put in place to ensure safe pedestrian movement between the buildings.

Action: Although the construction is in the preliminary phase and the target date to begin moving staff into 3WFN is September 2012, NRC is currently working on the design requirements for the interior of the building. The goal is to provide a good working environment for NRC employees within the budget.

Action: In late August, the agency signed a Memorandum of Understanding with Montgomery County to ensure cooperation to maximize pedestrian safety around the White Flint complex. In the

near term, the county Department of Transportation staff are meeting with NRC staff to discuss current and future pedestrian and vehicle flows on both sides of Marinelli Road and how best to manage them between Rockville Pike and the White Flint complex vehicle entrance/exit.

IV. CONCLUSION

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

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

Appendix

SCOPE AND METHODOLOGY

This evaluation focused on the IG's annual assessment of the most serious management and performance challenges facing the NRC. The challenges represent critical areas or difficult tasks that warrant high level management attention. To accomplish this work, the OIG focused on determining (1) current challenges, (2) the agency's efforts to address the challenges during FY 2009, and (3) future agency efforts to address the challenges.

OIG reviewed and analyzed pertinent laws and authoritative guidance, agency documents, and OIG reports, and sought input from NRC officials concerning agency accomplishments relative to the challenge areas and suggestions they had for updating the challenges. Specifically, because challenges affect mission critical areas or programs that have the potential to impact agency operations or strategic goals, NRC Commission members, offices that report to the Commission, the Executive Director for Operations, and the Chief Financial Officer were afforded the opportunity to share any information and insights on this subject.

OIG conducted this evaluation from May through August 2010 at NRC Headquarters. The major contributors to this report were Steven Zane, Deputy Assistant Inspector General for Audits; Sherri Miotla, Team Leader; Beth Serepca, Team Leader; Kathleen Stetson, Team Leader; RK Wild, Team Leader; and Judy Gordon, Quality Assurance Manager.