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Vol. 6

Draft Strategic Plan: Fiscal Years 2014–2018

Office of the Executive Director for Operations
Office of the Chief Financial Officer



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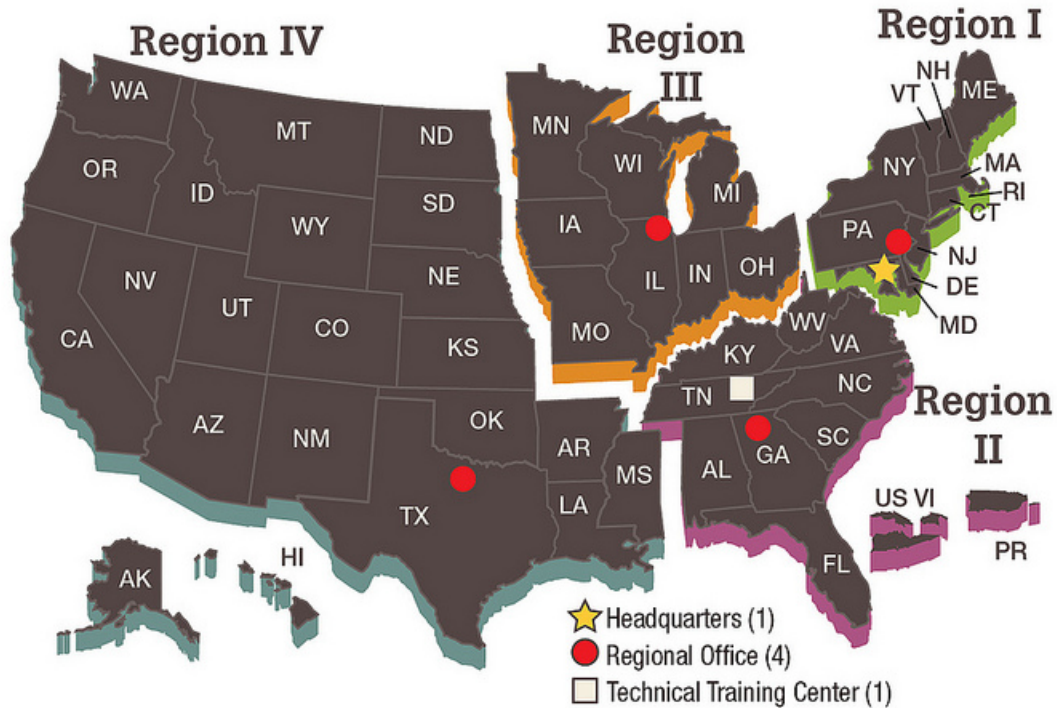
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ABSTRACT

The U.S. Nuclear Regulatory Commission (NRC or agency) is an independent agency established by the Energy Reorganization Act of 1974 that began operations in 1975 as a successor to the Atomic Energy Commission. The agency's mission is to license and regulate the Nation's civilian use of radioactive materials to protect public health and safety, promote the common defense and security, and protect the environment. The NRC currently regulates 100 commercial nuclear power plants, 31 research and test reactors, 14 fuel processing facilities, and approximately 2,900 research, medical, industrial, government, and academic materials licensees. In addition, the NRC has agreements with 37 States, under which the states assume regulatory responsibility for the use of certain radioactive materials. These Agreement States oversee approximately 18,900 licensees. This strategic plan, covering the period 2014–2018, describes how the NRC plans to achieve its two strategic goals: (1) to ensure the safe use of radioactive materials and (2) to ensure the secure use of radioactive materials. The plan provides an overview of the NRC's responsibilities, describes how stakeholders participated in plan development, summarizes the key challenges faced by the agency during the planning period, and lays out the objectives, strategies, and key activities that will be used to achieve the agency's goals.

NRC Regions



Nuclear Power Plants

- Each regional office oversees the plants in its region except the Callaway plant in Missouri, which Region IV oversees.
- Region II handles construction inspectors' activities for new nuclear power plants in all regions.

Materials Licensees

- Region I oversees licensees and Federal facilities located geographically in Region I and Region II.
- Region III oversees licensees and Federal facilities located geographically in Region III.
- Region IV oversees licensees and Federal facilities located geographically in Region IV.

Nuclear Fuel Facilities

- Region II oversees the commercial fuel processing facilities in all regions.
- Region II also handles construction inspectors' activities for new fuel cycle facilities in all regions.

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INTRODUCTION

About the NRC

The U.S. Nuclear Regulatory Commission (NRC or agency) is an independent agency established by the Energy Reorganization Act of 1974 and began operations in 1975 as a successor to the Atomic Energy Commission. The agency's mission is to license and regulate the Nation's civilian use of radioactive materials to protect public health and safety, promote the common defense and security, and protect the environment. Specifically, the NRC regulates commercial nuclear power plants; research, test, and training reactors; nuclear fuel cycle facilities; and the use of radioactive materials in medical, academic, and industrial settings. The agency also regulates the transport, storage, and disposal of radioactive materials and waste. The NRC also licenses the import and export of radioactive materials. The NRC works with agencies around the world to enhance global nuclear safety and security. The NRC is headed by five Commissioners appointed by the President of the United States, and confirmed by the U.S. Senate, to serve staggered 5-year terms. The President designates one of the Commissioners to serve as Chairman. The Commission as a whole formulates policies and regulations governing safety and security of nuclear reactors and materials, issues orders to licensees, and adjudicates legal matters brought before it.

To fulfill its responsibility to protect public health and safety, the NRC performs the following five principal regulatory functions:

- (1) Develops regulations and guidance for applicants, certificate holders, and licensees.
- (2) Licenses or certifies applicants to use nuclear materials and operate or decommission nuclear facilities.
- (3) Inspects and assesses certificate holders, licensee operations and facilities to ensure compliance with NRC requirements, investigates allegations of wrong-doing, responds to events and accidents involving licensed facilities and materials, and takes appropriate enforcement actions when necessary.
- (4) Evaluates domestic and international operational experience associated with licensed facilities and activities.
- (5) Conducts research, holds hearings, and obtains independent reviews to support regulatory decisions.

See Figure 1 for a graphical depiction of these functions and their interrelationships.

How We Regulate

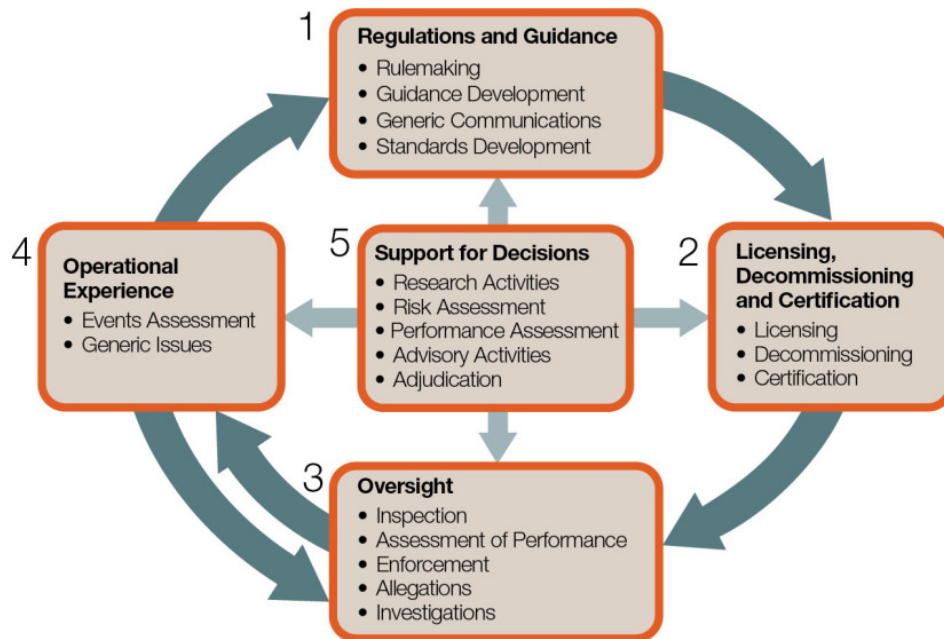


Figure 1 How the NRC regulates

The NRC's regulations are designed to protect the public and occupational workers from radiation hazards resulting from regulated activities. Its licensees and certificate holders are responsible for the safety and security of radioactive materials, subject to the NRC's oversight programs, which are designed to ensure that they comply with the agency's requirements.

Figure 2 shows the NRC's organizational structure. The Executive Director for Operations (EDO) carries out the policies and decisions of the Commission and directs the activities of the program offices. The offices reporting to the EDO regulate the commercial use of nuclear materials in the United States to protect public health and safety and the environment. As part of the regulatory process, NRC staff from headquarters and the four regional offices conduct the agency's regulatory development, licensing, operating experience, inspection, enforcement, and emergency-response programs.

As of December 2013, currently operating nuclear facilities and licensees include 100 commercial nuclear power reactors; 31 research and test reactors; approximately 4,600 licensed reactor operators; 4 early site permits; 4 reactor design certifications; 18 uranium recovery sites; 10 licensed or certified fuel processing facilities and a mixed oxide (MOX) fuel fabrication facility operating license under review; approximately 2,900 research, medical, industrial, government, and academic materials licensees; and 65 independent spent fuel storage installations. The NRC also provides consultation to the U.S. Department of Energy (DOE) about disposal options for waste incidental to reprocessing and monitors the Department's disposal actions for incidental waste.

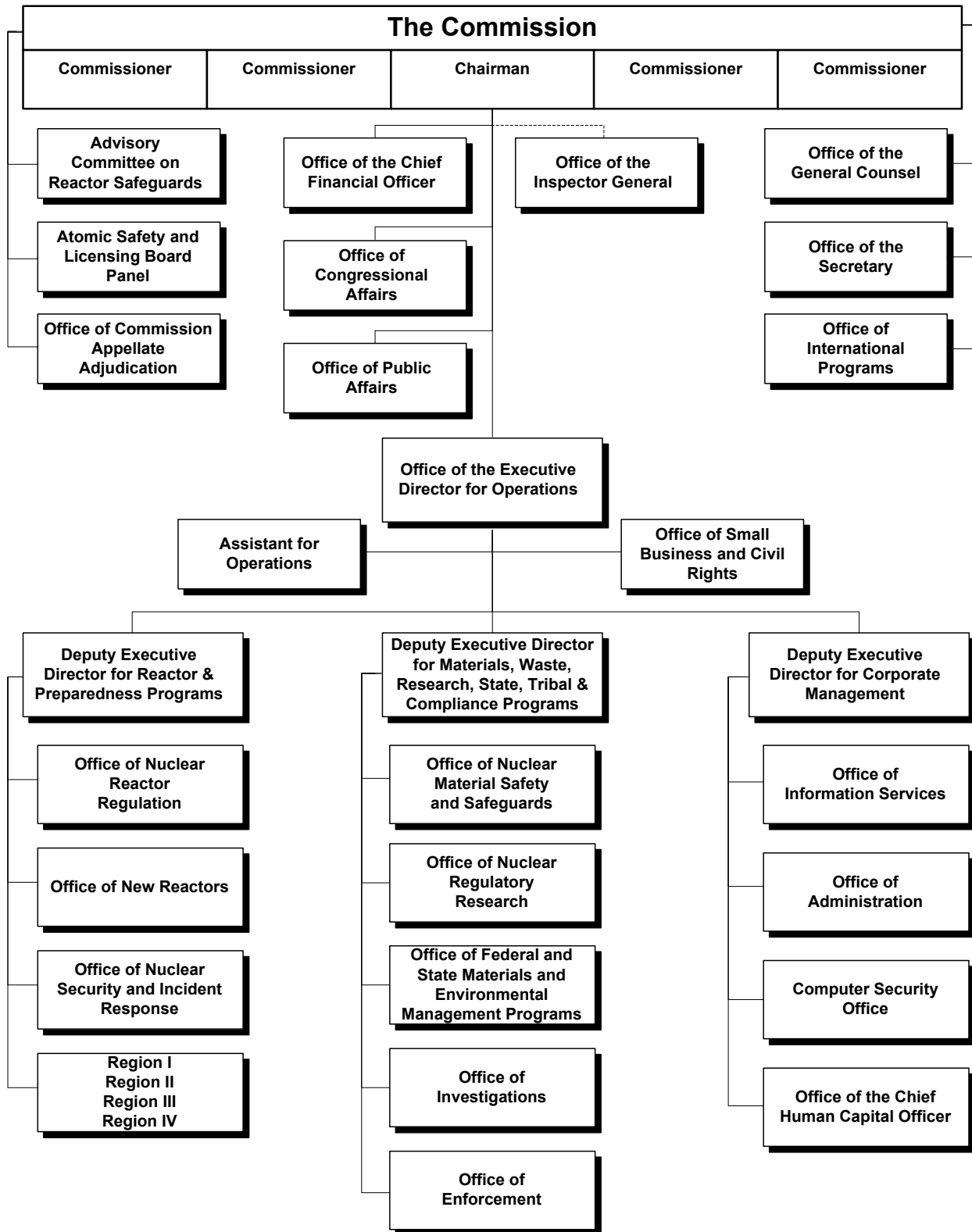


Figure 2 NRC organization chart

In addition, 37 States have signed agreements with the NRC under which they assume regulatory responsibility over the use of certain radioactive materials for civilian purposes in their respective States. The NRC works closely with these Agreement States, which administer approximately 18,900 licenses, to ensure that they maintain an adequate and compatible regulatory program.

As part of its licensing activities, the NRC contributes to the protection of the environment through compliance with the National Environmental Policy Act which includes consideration of impacts to the environment unrelated to the release of radiation. These environmental impacts can include socio-economic impacts and environmental justice, impacts to endangered species, and water rights and usage.

The NRC also licenses the import and export of radioactive materials; participates in international nuclear activities, including multilateral and bilateral safety and security activities; and works closely with its international counterparts to enhance nuclear safety and security worldwide.

Stakeholder Engagement

In keeping with the agency's longstanding commitment to openness, the NRC solicited stakeholder input to develop its plan. In February 2013, representatives of various stakeholder groups (including licensees, public interest groups, State governments, Federal agencies, and others) participated in an assessment of agency strengths and weaknesses, as well as an assessment of opportunities and threats facing the NRC during the upcoming planning period. The NRC also received input from members of Congress and solicited comments from the public. The input that the NRC received highlighted many of the challenges the agency faces and included strategies for addressing challenges as reflected later in this plan.

Future Challenges

During the upcoming planning period, the NRC will face new challenges as it continues to operate in a dynamic environment. Key factors the agency has considered in developing this plan include the following:

- the need for continued implementation of enhancements to improve reactor safety based on insights arising from operating experience reviews and lessons learned from the 2011 nuclear accidents at the Fukushima Dai-ichi nuclear facility in Japan
- continual learning and adaptation of the regulatory framework to address knowledge of and appropriate response to the specific hazards and risks associated with each reactor site;
- continued readiness to review applications involving new technologies such as small modular reactors and medical isotope production facilities
- continued changes in the demographics, experience, and knowledge of the workforce;
- the ongoing need to cooperate with and support the development of nuclear safety regulations around the world

- changing economic conditions in the energy market affecting current and planned applications to construct and operate new nuclear facilities or decommission existing ones
- the continued globalization of nuclear technology and the nuclear supply chain, driving the need for increased international engagement on the safe and secure use of radioactive material and the need for new oversight approaches, including ensuring that foreign components used in U.S. nuclear facilities are in compliance with NRC requirements
- continuous monitoring of the a threat environment necessary to ensure the security of facilities and accountability controls for radioactive materials

These and other factors are discussed further in Appendix A, “Key External Factors.”

To meet these challenges, the NRC must use its resources effectively and efficiently, enhance the regulatory framework as appropriate to address existing or emerging issues, and deploy effective and innovative strategies for maintaining staff competence and readiness. Even as the NRC works to address these challenges, the agency’s mission and values remain unchanged. The agency will remain a strong, independent, stable, and effective regulator with highest priority on ensuring the safety and security of existing operating facilities.

Organization of the Plan

This strategic plan describes the NRC’s key strategic goals of safety and security—the high-level results or outcomes that the agency will strive to achieve. Each goal has objectives and strategies—the lower-level results that are needed to achieve the goals. Some of the strategies are specific to a particular safety or security objective, while others apply to all of the objectives. The plan also includes key management objectives that contribute to achieving its goals. See Figure 3 for a graphical depiction of these components and their interrelationships.



Figure 3 Graphical depiction of plan components

Appendix A covers key external factors that could affect the agency’s ability to effectively execute this Plan.

Appendix B discusses the research and program evaluations that were used in developing this Plan.

Appendix C provides the schedule of planned program evaluations that the agency will use to adjust and refine its performance.

Appendix D offers a glossary of terms used in the plan.

THE PLAN

Mission: The Nuclear Regulatory Commission licenses and regulates the Nation’s civilian use of radioactive materials to protect public health and safety, promote the common defense and security, and protect the environment.

Vision: A trusted, independent, transparent, and effective nuclear regulator

To be successful, the NRC must not only excel in carrying out its mission, but must do so in a manner that engenders the trust of the public and stakeholders. This vision is an outgrowth of the NRC operating in a manner consistent with its longstanding Principles of Good Regulation— independence, openness, efficiency, clarity, and reliability—and its organizational values (see box). These principles guide the agency—from decisions on safety, security, and environmental issues; to how the NRC performs administrative tasks; to how its employees interact with their fellow employees and other stakeholders.

By adhering to these principles and values, the NRC maintains and conveys its regulatory competence to stakeholders and promotes trust in the agency.

The next several sections of this plan lay out the NRC’s strategic goals, strategic objectives, and strategies for achieving them. Consistent with the agency’s vision, this material includes crosscutting strategies that are focused on regulatory effectiveness and openness.

NRC Organizational Values

- Integrity** in our working relationships, practices, and decisions
- Service** to the public and others who are affected by our work
- Openness** in communications and decisionmaking
- Commitment** to public health and safety, security, and the environment
- Cooperation** in the planning, management, and performance of agency work
- Excellence** in our individual and collective actions
- Respect** for individuals’ diversity, roles, beliefs, viewpoints, and work/life balance

Strategic Goals

Goal 1: Ensure the safe use of radioactive materials.

Goal 2: Ensure the secure use of radioactive materials.

The NRC’s two strategic goals are the results it must achieve to successfully carry out its mission. These are the drivers for the rest of the NRC’s plan. In addition, the plan contains several strategic objectives with associated strategies that expand upon how the agency will achieve its goals. Performance goals for the strategic objectives show how the agency will measure its success.

SAFETY

Strategic Goal: Ensure the safe use of radioactive materials.

For this goal, a successful outcome is one in which the Nation can continue to use radioactive material for civilian purposes while preventing significant radiation exposures and significant releases of radioactive material that may harm people or the environment.

Objectives

Objective 1.1: Prevent and mitigate accidents, ensure radiation safety, and protect the environment.

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

Strategies and Contributing Activities

- 1.1-1 Continue to enhance the NRC's regulatory programs using lessons learned from domestic and international operating experience and other sources.
 - Continue to enhance the NRC's regulatory programs using insights from the Near-Term Task Force review of the Fukushima Dai-ichi accident, "Recommendations for Enhancing Reactor Safety in the 21st Century," in a manner that is consistent with their safety significance.
 - Apply lessons learned after completion of the initial combined license (COL) reviews for nuclear reactors as well as those learned during the first year of construction to enhance the effectiveness and efficiency of subsequent COL reviews and construction oversight.
 - Evaluate domestic and international operating events and trends for risk significance and generic applicability.
 - Evaluate and implement, as appropriate, recommendations from the Inspector General, the Government Accountability Office, and internal assessments.
- 1.1-2 Use a risk-informed and performance-based regulatory framework (consisting of rulemaking, licensing, oversight and associated guidance), where appropriate, in response to advances in science and technology, policy decisions, and other factors.
 - Maintain stable and predictable regulatory programs and policies.
 - Engage in research activities to confirm the safety of operations and enhance the regulatory framework by addressing changes in technology, science, and policies.

- Develop and implement the regulatory infrastructure for the review of small modular reactor design certification and license applications.
 - Implement the regulatory infrastructure to effectively and efficiently conduct licensing activities for applicants developing domestic production of molybdenum-99 for use in medical applications.
 - Consult with the NRC's regulatory partners in the Agreement States, to ensure adequate protection of the public and compatibility with the National Materials Program.
 - Participate in the development of domestic consensus codes and standards and international standards to ensure that they are soundly based and determine whether substantial safety improvements can be identified and incorporated in NRC requirements.
 - Work with international counterparts to exchange information, expertise, operating experiences, and ongoing research to recognize and respond to emerging technical issues and to promote best practices and participate in the development and evaluation of international standards.
- 1.1-3 Ensure the effectiveness and efficiency of licensing and certification activities to maintain both quality and timeliness of licensing and certification reviews.
- Conduct new reactor preapplication activities and review applications for design certification, early site permits, and combined licenses.
 - Resume the review of DOE's application to construct a deep geologic repository at Yucca Mountain – consistent with available funding.
 - Conduct timely reviews of operating reactor licensing requests (e.g., amendments, power uprates, renewals, decommissioning and license termination) and licensing requests for other authorized uses of nuclear material and issue quality reviews consistent with the established performance metrics.
 - Conduct environmental reviews as appropriate to ensure that actions comply with the National Environmental Policy Act of 1969.
 - Implement recommendations for a licensing process-improvement initiative in the spent fuel storage and transportation.
- 1.1-4 Ensure that licensees continue to comply with NRC requirements and license conditions by maintaining effective and consistent oversight of licensee performance.
- Continue to implement, review, and refine the Reactor Oversight Process—the principal program for overseeing nuclear power plant operation—to ensure timely identification of significant performance issues and to ensure that licensees take appropriate actions to maintain acceptable safety performance.

- Consult with DOE to monitor the Department's disposal of wastes incidental to reprocessing to assess compliance with the NRC's licensing requirements for land disposal of radioactive waste.
 - Continue to ensure that licensees, certificate holders, and vendors are taking appropriate actions to prevent the presence of counterfeit, fraudulent, and suspect items that could cause safety risks in nuclear facilities or in the use of radiation sources.
- 1.1-5 Ensure the NRC's readiness to respond to incidents and emergencies involving NRC-licensed facilities and radioactive materials, and other events of domestic and international interest.
- Use operational experience and lessons learned from emergency-preparedness exercises to inform the regulatory activities.
 - Coordinate with Federal, State, local, and Tribal partners to strengthen national readiness and response capabilities.
 - Employ outreach before, during, and after emergency-preparedness exercises, and increase collaboration and sharing of best practices and lessons learned after emergency-preparedness exercises and incidents.
- 1.1-6 Ensure that nuclear facilities are constructed in accordance with approved designs and that there is an effective transition from construction to operation.
- Conduct inspections of reactors under construction in accordance with the NRC's established construction reactor oversight programs.
 - Conduct inspections of fuel facilities under construction in accordance with the established inspection program.
- 1.1-7 Ensure that the environmental and site safety regulatory infrastructure is adequate to support the issuance of early site permits and combined licenses for new reactors.
- Implement the lessons learned insights from the rulemaking on the combined license process for new reactors. Revise regulatory guides in light of knowledge gained from the lessons learned from the initial combined license reviews and construction activities and from research and licensing activities.

SECURITY

Strategic Goal: Ensure the secure use of radioactive materials.

For this goal, a successful outcome is preventing instances of sabotage, theft, diversion, or loss of risk-significant quantities of radioactive material.

Objectives

Objective 2.1: Ensure protection of nuclear facilities and radioactive materials.

Nuclear facilities and materials are protected against hostile intent by two primary means: (1) control of access to facilities and materials, and (2) accountability controls for radioactive materials. The controls are intended to prevent those with hostile intent from either: damaging a nuclear facility such that a significant release of radioactive material to the environment occurs, or obtaining enough radioactive material for malevolent use.

Strategies and Contributing Activities

- 2.1-1 Ensure the effectiveness of the regulatory framework (consisting of rulemaking, licensing, oversight, and associated guidance) using information gained from operating experience and external and internal assessments, and in response to technology advances and changes in the threat environment.
- Evaluate domestic and international operating events and trends for security implications and enhance the regulatory framework where warranted.
 - Evaluate and implement, as appropriate, recommendations from the Inspector General, the Government Accountability Office, and internal assessments
 - Assess the threat environment to maintain an adequate regulatory framework through cooperation and liaison with the intelligence and law enforcement communities, as well as international partners.
 - Conduct threat assessments, determine the consequences of a range of threats, and ensure protection of nuclear facilities and radioactive materials consistent with existing safety, safeguards, and security requirements. Consistent with established protocols, share the agency's results to the extent possible to support integrated protection of the Nation's critical infrastructure.
 - Coordinate with Federal, State, local, and Tribal partners to define, develop, and implement integrated response plans, so that responding agencies can coordinate effectively with licensees during an incident.
- 2.1-2 Ensure that licensees continue to comply with NRC security requirements and license conditions by maintaining effective and consistent oversight of licensee performance.

- Conduct inspections to assess licensees' security performance, including force-on-force exercises. Conduct followup reviews, inspections, investigations, and enforcement, as needed.
 - Conduct security performance evaluations at each applicable nuclear facility to assess each licensee's protective strategy capabilities and to evaluate support functions provided by Federal, State, local, and Tribal law enforcement.
- 2.1-3 Support U.S. national security interests and nuclear nonproliferation policy objectives, as appropriate and within the NRC's statutory mandate, through cooperation with domestic and international partners.
- Support and participate in international security activities, including International Atomic Energy Agency (IAEA) nonproliferation and guidance development initiatives, and bilateral physical security initiatives undertaken with countries that receive special nuclear material and equipment from the United States.
 - Participate with Agreement States, Conference of Radiation Control Program Directors, and the DOE's National Nuclear Security Administration in identification, location, and recovery of unwanted and uncontrolled radioactive materials, often referred to as "orphan sources."
 - Support U.S. government goals to secure nuclear materials internationally through bilateral agreements to support material control and accounting programs.
- 2.1-4 Ensure material control and accounting for special nuclear materials.
- Update, as appropriate, consolidate, and integrate material control and accounting regulations and guidance to make them more risk-informed and performance based.
- 2.1-5 Protect critical digital assets.
- Ensure nuclear power reactor cyber security guidance remains informed by operating experience and monitoring of the cyber security threat environment.
 - Evaluate the need for cyber security requirements for fuel cycle facilities, spent fuel storage facilities, non-power reactors, and byproduct materials licensees.
- 2.1-6 Ensure timely distribution of security information to appropriate stakeholders and international partners.
- Enhance communication tools and key information technology investments for dissemination of sensitive security information.

Objective 2.2: Ensure protection of classified and Safeguards Information

Controlling access to classified and Safeguards Information is a key component of the Nation's and the NRC's security program to ensure that potential adversaries cannot use the information for malevolent purposes.

Strategies and Contributing Activities

- 2.2-1 Ensure programs for the handling and control of classified and Safeguards Information are effectively implemented at the NRC and licensee facilities.
- Coordinate with licensees to reduce the risks from insiders with access to systems or information that could assist in malevolent activity.
 - Train NRC staff on the appropriate handling of classified and Safeguards Information, ensuring that the training is up-to-date and consistent with national policy.
 - Apply the inspection and enforcement programs for classified information security.

CROSSCUTTING STRATEGIES

The agency's vision—"A trusted, independent, transparent, and effective nuclear regulator"—highlights several attributes the agency views as critical to its success. To achieve this vision, the agency plans to use a number of strategies that crosscut and support the fulfillment of both the safety and security objectives. These strategies are grouped into two areas: (1) regulatory effectiveness and (2) openness.

Regulatory Effectiveness

The NRC's regulatory effectiveness strategies address key aspects of the way that the NRC conducts its regulatory activities to best achieve its goals and objectives. These strategies are:

Regulatory Effectiveness Strategy 1: Proactively identify, assess, understand, and resolve safety and security issues.

Contributing Activities

- Evaluate and apply, as appropriate, insights from the operational experience review and lessons learned programs.
- Systematically assess and apply changes to the knowledge base concerning internal and external hazards such as seismic activity, flooding, plant component age-related degradation, and physical and cyber attacks.
- Resolve generic safety and security issues and ensure implementation of enhancements within timeframes commensurate with their risk-significance.
- Conduct confirmatory and anticipatory research to resolve safety and security issues and confirm the safety and security bases for the use of radioactive materials.
- Emphasize the importance of developing and maintaining an effective nuclear safety culture for all NRC-regulated activities.

Regulatory Effectiveness Strategy 2: Ensure that regulations effectively and efficiently manage known risks, and are consistently applied, practical, and responsive to changes in technology.

Contributing Activities

- Use risk-informed and performance-based regulations and inspection approaches, where appropriate, to enhance the effectiveness of the regulatory framework, clarify expectations for the regulated community, eliminate unnecessary rules and other regulatory encroachments, and focus agency resources on activities most important to safety.
- Complete an integrated evaluation of the current NRC program to regulate the safe and secure management of spent fuel and apply risk insights from operational experience

and spent fuel dry storage probabilistic risk assessments in licensing reviews and inspections.

- Apply regulatory tools (e.g., rulemaking, regulatory guides, and orders) consistently across and within business lines, where appropriate.
- Ensure the effectiveness, efficiency, and consistency of the licensing and oversight (inspection, assessment, and enforcement) processes.
- Engage the regulated community, the public, and other interested stakeholders.
- Use and adapt externally generated guidance, to the extent feasible.
- Conduct long-term research to understand the safety of current and emerging technologies.
- Improve the regulatory infrastructure, including superior tools for systems analysis, phenomenological analysis, risk assessment, and other regulatory needs to enhance the long-term effectiveness and efficiency of regulatory decision making.
- License emerging technologies that meet regulatory requirements (e.g., small modular reactors)

Regulatory Effectiveness Strategy 3: Integrate safety and security programs to identify and avoid unintended consequences.

Contributing Activities

- Implement safety/security interface initiatives to manage the potential for adverse effects on safety and security before implementing changes to requirements, plant configurations, facility conditions, or security.
- Coordinate and share information on the safety/security interface with Federal, State, local, and Tribal agencies and with the international community, as appropriate.

Openness

As an independent regulatory agency, the NRC conducts its regulatory activities as openly as possible with meaningful stakeholder involvement. The NRC anticipates increasing public interest and expectations across the range of regulatory responsibilities for nuclear power, use of nuclear materials, decommissioning activities and management of radioactive waste. The NRC considers public involvement in, and information about, its activities to be a cornerstone of strong, fair regulation of the nuclear industry. The NRC recognizes the public's interest in the proper regulation of nuclear activities and provides opportunities for citizens to be heard. For that reason, consistent with *The NRC Approach to Open Government*¹, the agency is committed to providing opportunities for the public to participate meaningfully in the NRC's

¹ U.S. Nuclear Regulatory Commission, *The NRC Approach to Open Government*, <http://www.nrc.gov/public-involve/open.html>, December 16, 2013

decisionmaking process. The avenues and resources for participation are fully described in the public participation section² of the agency's public Web Site.

The NRC's openness strategies are focused on three elements: (1) transparency, (2) participation, and (3) collaboration.

Transparency promotes accountability by providing the public with information about the NRC's activities. More specifically, this means that public stakeholders should have timely access to clear and understandable information about the NRC's role, processes, activities, and decisions.

Participation allows the public to contribute ideas and expertise so that the NRC can make regulatory decisions with the benefit of information from a wide range of stakeholders. These stakeholders should have a reasonable opportunity to participate meaningfully in the NRC's regulatory processes.

Collaboration improves the effectiveness of government by encouraging partnerships and cooperation within the Federal government, with State, local, and Tribal governments, and with international regulatory authorities.

Openness Strategy 1—Transparency: Make NRC information accessible to stakeholders.

Contributing Activities

- Enhance readability of NRC materials for the public and include plain-language summaries for technical documents of high public interest.
- Use plain language, where appropriate, and improve employee writing skills.
- Provide up-to-date information and enhance ease of use of the NRC public Web Site.
- Expand mobile device access to NRC information of high public interest.
- Provide developer tools such as Web application programming interfaces to facilitate download and analysis of key agency information.

Openness Strategy 2—Participation: Enhance interaction with the public and other stakeholders through use of social media and further enable opportunities for meaningful participation in, and mutual understanding of, NRC regulatory processes.

Contributing Activities

- Use social media analytics to capture and better focus the reach of the NRC's social media platforms in order to further improve public communications.
- Engage the public in dialogue using social media.

² U.S. Nuclear Regulatory Commission, *Public Participation*, <http://www.nrc.gov/public-involve/open/public-participation.html>, December 16, 2013

- Improve the agency's Public Meeting Notification System to help members of the public be aware of and participate in the agency's public meetings.
- Provide electronic and mobile access to the Public Meeting Feedback System to make it easier for members of the public to provide feedback on the agency's public meetings.
- Hold public meetings and make information publicly available throughout the rulemaking process.
- Ensure the capability for persons to remotely attend and participate in significant NRC public meetings and improve public meeting access for individuals consistent with the spirit of the Americans with Disabilities Act.

Openness Strategy 3—Collaboration: Ensure opportunities for working with and sharing of best practices with other Federal agencies, and with State, local, and Tribal governments, and increase collaboration. Share best practices among the international nuclear regulatory community to promote global nuclear safety and security.

Contributing Activities

Collaboration with Federal, State, Local and Tribal Governments

- Collaborate, as appropriate, with other Federal agencies in the development of regulatory activities.
- Through the State Liaison Officer Program and the Agreement State Program, identify and pursue opportunities to collaborate and interact with State and local governments in the agency's regulatory programs and processes.
- Through Tribal interaction and consultation, identify and implement ways to enhance intergovernmental collaboration related to regulatory activities and government-to-government consultation and coordination.

Collaboration with the International Regulatory Community

- Provide assistance and training to countries embarking on nuclear power and nuclear materials programs for the first time to help them to build their regulatory infrastructure. Through this collaboration, build international partnerships that can result in new formal technical and cooperative arrangements with the NRC.
- Work with international counterparts to exchange information, expertise, operating experiences, and ongoing research to recognize and respond to emerging technical issues and to promote best practices.

MANAGEMENT OBJECTIVES

The agency has chosen two key management objectives for fiscal years (FY) 2014-2018 that focus on (1) human capital and (2) information and information technology (IT) because of their direct impact on the NRC's safety and security goals.

Key Management Objective 1—People

Objective: Attract, develop, and retain a high-performing, diverse, and engaged workforce with the skills needed to carry out the NRC's mission now and in the future.

Strategies and Contributing Activities:

1-1 Maintain qualified staff and close skill gaps in mission-critical occupations.

- Conduct workforce assessments to identify skill gaps and use human capital strategies to close them with diverse and qualified employees.
- Implement activities to enhance the NRC's organizational structure, increase operational effectiveness, and address critical skill imbalances.
- Use mission-critical occupation information to identify and plan activities and programs to train, retain, and recruit employees.
- Maintain critical technical expertise in regulatory areas such as licensing and inspection.
- Engage U.S. universities and colleges to support relevant programs and pursue ongoing recruitment.

1-2 Identify, retrieve, and capture high-value information from employees.

- Provide innovative agency support structures for knowledge management.
- Identify high-value opportunities for creation of communities of practice that enable the

Additional Management Objectives:

More generally, the agency will continue to improve the performance of all of its internal support functions, with a focus on helping the staff to achieve the agency's safety and security goals while making the most efficient use of agency resources.

Cyber and Information Security:

Prevent unauthorized disclosures or modifications of NRC information and minimize disruption of the NRC's mission.

Financial Management: Improve the efficiency of financial systems and processes and the usefulness of the resultant financial information for management decisionmaking.

Financial Stewardship: Maintain appropriate accountability and controls to ensure effective use of government resources.

Performance Management: Increase the use of results-oriented performance indicators at all levels and improve the utility of performance data for agency decisionmaking.

Space and Facilities Management: Optimize the use of space to maintain the NRC's regulatory effectiveness, operational efficiency, and emergency response capability and provide a physically safe and secure work environment for personnel, information, facilities, and equipment.

Acquisitions: Acquire best value goods and services in a timely manner to meet mission needs.

Internal Customer Services: Improve the accessibility, delivery, and utility of the services that employees and business units need to work effectively.

sharing of knowledge and skills among employees who perform the same job function.

- Capture operating experience, new information on safety and security issues, and knowledge gained from research and licensing activities in regulatory guidance.
- Capture relevant critical knowledge from employees departing the agency, recapture knowledge from former employees where possible, communicate leadership expectations for knowledge-sharing, formalize knowledge-management values and principles, and incorporate knowledge management practices within agency work processes.

1-3 Promote a strong NRC safety culture with an open collaborative work environment.

- Ensure agency policy, procedures, self-assessment programs, and training programs encourage adherence to NRC values and foster an open, collaborative work environment, including the expression of differing views and raising mission-related concerns without fear of retaliation.
- Conduct self-assessments and apply organizational development principles to selected areas to address organization-specific challenges and enhance NRC safety culture.

1-4 Strengthen workforce diversity and inclusion.

- Identify and eliminate barriers to recruitment, development, advancement, and retention of employees, including those in underrepresented groups.
- Promote diversity management with the goal of enabling all employees to reach their full potential in pursuit of the organization's mission. This includes fostering an environment where diversity and inclusion are commonplace and enhance execution of the agency's objectives.
- Hold managers accountable for making sound decisions while ensuring a diverse, inclusive organization.

Key Management Objective 2—Information and IT

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

Strategies and Contributing Activities:

2-1 Better enable NRC's staff and external stakeholders to easily find and use the information they need.

- Continue to centralize and organize the NRC's information repositories and Web sites to increase the currency and usefulness of information.
- Identify and require the use of authoritative data sources across the organization.

- Improve the life-cycle management of the agency's information and records to include the capture, usage, storage, and disposition of information.

2-2 Develop a flexible technology infrastructure that provides the foundation to consistently deliver the IT solutions customers need.

- Upgrade network capacity to meet increasing demand for data communication.
- Upgrade video teleconferencing and other meeting support technologies to enhance meeting capabilities and reduce travel time and expenses.
- Explore implementing cloud-based data center capabilities as a means to consolidate services and reduce costs.
- Reduce the number of the NRC's current data centers.
- Implement an effective cybersecurity program for protection of NRC's IT assets and identification of attempts at compromise.

2-3 Improve the business value of the NRC's IT solutions by providing the right products and services when and where needed.

- Implement mobile Web capabilities for NRC staff where needed, for example, tablet-based inspection capabilities for inspectors at nuclear power plants.
- Provide the NRC's external stakeholders Web access to NRC information on any device.
- Improve IT systems supporting key business functions, including operating reactor oversight, nuclear materials licensing and tracking, and agency resource management.
- Expand the use of common IT platforms to enhance agency business processes.

2-4 Improve enterprise IT planning, budgeting, and performance management to effectively manage resources.

- Improve access to integrated IT investment information needed for decision-making from budget through operation.
- Improve project management and execution standards through evaluating how IT projects perform against approved budgets, schedules, and requirements.

APPENDICES

Appendix A—Key External Factors

The ability of the U.S. Nuclear Regulatory Commission (NRC) to achieve its objectives is influenced by many external factors, including industry operating experience, national priorities, threat environment, legislation, market forces, and resource availability. This appendix discusses the most significant of these factors for each objective. The NRC will continue to manage change and maintain its readiness to respond promptly to any priority shifts resulting from the factors that are beyond its control and will make efforts to influence those factors that enable the NRC to achieve its strategic objectives.

Objective 1.1: Prevent and mitigate accidents, ensure radiation safety, and protect the environment.

Market Pressures on Operating Plants and License Applications

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

Significant Operating Incident at a Non-U.S. Nuclear Facility

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

Significant Operating Incident at a Domestic Nuclear Facility

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

International Nuclear Standards Developments

The NRC should maintain cognizance of standards and guidance issued by the international community, primarily through the International Atomic Energy Agency (IAEA). The NRC will maintain cognizance of international standards and guidance by actively engaging with the international community on a multilateral basis, including the IAEA.

International Treaties and Conventions

As part of the international response to lessons learned from the Fukushima Dai-ichi nuclear accident in Japan, the international nuclear regulatory community is reviewing the Convention on Nuclear Safety. As one of the contracting parties to the Convention, the NRC is a member of

the working group that is reviewing the Convention. Likewise, the NRC participates in the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

Globalization of the Nuclear Technology and the Nuclear Supply Chain

Components for nuclear facilities are increasingly manufactured overseas, resulting in challenges of providing effective oversight to ensure that these components are in compliance with NRC requirements. In addition, the continuing globalization of nuclear technology is driving the need for increasing international engagement on the safe use of radioactive material.

Objective 2.1: Ensure protection of nuclear facilities and radioactive materials.

Significant Terrorist Incident

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

International Treaties and Conventions

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

Globalization of Nuclear Technology

The continuing globalization of nuclear technology is driving the need for increased international engagement on the secure use of radioactive material.

Objective 2.2: Ensure protection of classified and Safeguards Information.

Lost, Misplaced, Intercepted, or Delayed Information

Classified or Safeguards Information can be lost, misplaced, or intercepted and fall into the hands of unauthorized persons.

Appendix B—Evaluations and Research

In developing this strategic plan, the U.S. Nuclear Regulatory Commission (NRC) used the following information from research and program evaluations to assess the efficacy of existing programs and to help shape the agency's objectives and strategies:

- Abnormal Occurrence (AO) Report for Congress. The annual AO report documents unscheduled incidents or events across all of its (and the Agreement States) regulated activities that the NRC determines to be significant from the standpoint of public health or safety and of significant stakeholder interest.
- The NRC's Annual Industry Trends Report details the industry's performance with respect to significant adverse trends in nuclear security and safety, including trends for significant events, radiation exposure, safety system actuations, automatic control rod insertions in nuclear power reactors, occurrence of reactor accident precursors, and safety system failures.
- Reactor Oversight Process (ROP). The ROP is a risk-informed, tiered approach for ensuring the safety of nuclear power plants. It includes collecting information about licensee performance, assessing the safety significance of the information, taking appropriate actions, and ensuring that licensees correct deficiencies.
- Annual Report to the Commission on the Accident Sequence Precursor (ASP) Program. The ASP Program systematically evaluates U.S. nuclear plant operating experience to identify, document, and rank those operating events that were most significant in terms of the potential for inadequate core cooling and severe core damage.
- Integrated Materials Performance Evaluation Program (IMPEP) Reviews of NRC regional offices and Agreement States. The IMPEP review is a structured process for evaluating the performance of NRC regional offices and Agreement States in overseeing the safe and secure use of nuclear materials.

Review of this information confirmed that the NRC has a strong, solid, and mature regulatory program as evidenced by the achievement of the strategic outcomes in past Strategic Plans and historical industry performance trends. The data demonstrates that licensees have made long-term improvements in nuclear safety and security. However, these reviews and significant external events revealed areas for continued improvement and regulatory vigilance.

Planned program evaluations for FY 2014–2018 appear in Appendix C.

Appendix C—Planned Program Reviews

Abnormal Occurrence (AO) Report

Expected Completion Date: Annually.

Objective: To ensure that licensed activities are conducted safely, the Abnormal Occurrence Report provides a summary of the review of and response to industry operating experience.

Scope: The AO report helps to identify safety and security deficiencies and ensure that corrective actions are taken to prevent recurrence. Through the assessment, the U.S. Nuclear Regulatory Commission (NRC) and industry review and evaluate operating experience to identify safety concerns, and the NRC responds to risk-significant issues through licensing reviews, inspections, and enhancements to its regulations.

Accident Sequence Precursor (ASP) Program

Expected Completion Date: Annually.

Objective: The ASP Program systematically evaluates U.S. nuclear power plant operating experience to identify, document, and rank the operating events that are most likely to lead to inadequate core cooling and severe core damage (precursors) that would contribute to the likelihood of additional failures.

Scope: The annual assessment (1) provides a comprehensive, risk-informed view of nuclear power plant operational experience and a measure for trending nuclear power plant core damage risk, (2) provides a partial check on dominant core damage scenarios predicted by probabilistic risk assessments, (3) provides feedback to regulatory activities, and (4) helps the agency monitor performance against the safety goals established in the agency's Strategic Plan.

Construction Reactor Oversight Process (cROP)

Expected Completion Date: Annually.

Objective: The annual cROP self-assessment has three objectives: (1) to determine whether the ongoing program is effective in supporting the achievement of the performance goals and the agency's strategic goals, (2) to provide timely, objective information to inform program planning and to develop recommended improvements to the cROP, and (3) to inform the Commission, NRC senior management, and the public of the results of the cROP self-assessment program, including any conclusions and resultant improvement actions.

Scope: At a minimum, the annual self-assessment includes (1) an evaluation of the construction inspection program, the construction significance determination process, the Inspections, Tests and Acceptance Criteria (ITAAC) closure verification program, the construction enforcement program, and the construction assessment program; (2) discussions and assessments of cROP communications and cROP resource expenditures; and (3) updates on recent issues associated with ITAAC and recent domestic and international construction experience being incorporated into the NRC's programs.

Corporate Support

Expected Completion Date: Annually.

Objective: Each program evaluation will determine whether the corporate support services (e.g., administrative services, human capital management, financial management (including contract management), and information technology and information management) are being delivered in ways consistent with the overall goals and whether internal and external customer needs and requirements are met.

Scope: The annual questionnaire, survey, or checklist will determine (1) whether the program area delivers the promised results, (2) the level of customer satisfaction, and (3) program strengths and weaknesses.

Integrated Materials Performance Evaluation Program Reviews of NRC Regional Offices and Agreement States

Expected Completion Date: Individual State and regional reviews usually conducted every 4 years; review of the National Materials Program conducted annually.

Objective: Each program evaluation will determine whether the regional offices and Agreement States are conducting programs that meet the objectives set out in Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)," dated February 26, 2004.

Scope: The evaluations include common criteria and criteria specific to Agreement States and NRC regional office activities and responsibilities. The staff factors any recommendations or good practices into future reviews of materials programs.

Operator Licensing Program

Expected Completion Date: Annually.

Objective: The annual evaluation of the Operator Licensing Program ensures that the program is effective and consistently implements the requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 55, "Operators' Licenses"; the guidance in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, issued July 2004; and other policy documents.

Scope: The annual evaluation of the Operator Licensing Program involves audits of one or two written examinations and operating tests in each NRC region to ensure consistent quality, level of difficulty, administration, and grading. The evaluation also includes a detailed review of the operator licensing function in two regional offices each year, with each NRC region performing a similar self-assessment during the alternate years. The detailed reviews assess seven functional areas: (1) administrative requirements, (2) written examinations, (3) operating tests, (4) requalification program oversight, (5) regional operations, (6) licensing assistant activities, and (7) resource use.

Reactor Oversight Program

Expected Completion Date: Annually.

Objective: The annual reactor oversight program evaluation has two objectives: (1) to determine whether the ongoing program is effective in supporting the achievement of the performance goals and the agency's strategic goals and (2) to provide timely, objective information to inform program planning and improvements.

Scope: At a minimum, the evaluation includes (1) the efficiency of the agency's baseline inspection program, (2) the effectiveness of the significance determination process, (3) the usefulness of current performance indicators for enhancing agency planning and response, and (4) the effectiveness of the assessment program in prescribing appropriate regulatory oversight to those plants with performance deficiencies.

Appendix D—Glossary

Agreement State: A State that has signed an agreement with the U.S. Nuclear Regulatory Commission (NRC) providing for the State to regulate the use of certain radioactive materials within its borders and relinquishing Federal authority in that State. The agreements do not apply to the regulation of operating commercial nuclear reactors.

Byproduct Material: Includes any radioactive material (except enriched uranium or plutonium) produced by a nuclear reactor. It also includes the tailings or wastes produced by the extraction or concentration of uranium or thorium or the fabrication of fuel for nuclear reactors. Additionally, it is any material that has been made radioactive through the use of a particle accelerator or any discrete source of radium-226 used for a commercial, medical, or research activity.

Effectiveness: The ability to achieve the intended outcome(s) of an activity, program, or process. A program cannot be considered effective if it is not meeting its objectives and achieving the intended outcome(s).

Efficiency: The ability to act with a minimum of waste, expense, or unnecessary effort. Efficiency embodies a combination of productivity, cost, timeliness, and quality.

High-Level Waste: The highly radioactive materials that are produced as byproducts of the reactions that occur inside nuclear reactors. Such wastes take one of two forms, becoming either spent (used) reactor fuel when it is accepted for disposal or waste materials that remain after spent fuel is reprocessed.

Performance-Based: An approach to regulatory practice that establishes performance and results as the primary bases for decisionmaking. Performance-based regulations have the following attributes: (1) measurable, calculable or objectively observable parameters exist or can be developed to monitor performance; (2) objective criteria exist or can be developed to assess performance, (3) licensees have flexibility in determining how to meet the established performance criteria in ways that will encourage and reward improved outcomes; and (4) a framework exists or can be developed in which the failure to meet a performance criterion, while undesirable, will not in and of itself constitute or result in an immediate safety concern.

Regulatory Framework: Involves several interrelated aspects, such as (1) the NRC's mandate from Congress in the form of enabling legislation; (2) the NRC's licenses, orders, and regulations in Title 10 of the *Code of Federal Regulations* (10 CFR); (3) regulatory guides, review plans, and other documents that clarify and guide the application of NRC requirements and amplify agency regulations; (4) the licensing and inspection procedures used by NRC employees; and (5) the enforcement guidance.

Risk Assessment: A systematic method for addressing the following three questions as they relate to the performance of a particular system, including its human component: (1) What can go wrong? (2) How likely is it? and (3) What are the consequences?

Risk-Informed: An approach to decisionmaking in which risk insights are considered along with other factors such as engineering judgment, safety limits, and redundant and/or diverse safety systems. Such an approach is used to establish requirements that better focus licensee and

regulatory attention on design and operational issues commensurate with their importance to public health and safety.

Risk Insights: Refers to the results and findings that come from risk assessments and may include improved understanding of the likelihood of possible outcomes, sensitivity of the results to key assumptions, relative importance of the various system components and their potential interactions, and the areas and magnitude of the uncertainties.

Safety Culture: The core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety and security over competing goals to ensure protection of people and the environment.

Source Material: (1) Uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores which contain by weight one-twentieth of one percent (0.05 percent) or more of: (i) uranium, (ii) thorium or (iii) any combination thereof.

Special Nuclear Material: Means (1) plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material that the Commission, under the provisions of Section 51 of the Atomic Energy Act, determines to be special nuclear material, but does not include source material; or (2) any material that is artificially enriched by any of the foregoing but does not include source material.

Spent Fuel: Fuel that has been withdrawn from a nuclear reactor following irradiation and that has not been chemically separated into its constituent elements by reprocessing.

Stakeholders: Members of the public; Federal, State, Tribal and local agencies; and license applicants and licensees with a specific interest in a given topic.

Standards: Technical requirements and recommended practices for performance of any device, apparatus, system, or phenomenon associated with a specific field.