

# AUDIT REPORT

Audit of NRC's Management of Licensee Commitments

OIG-A-17 September 19, 2011



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

**OFFICE OF THE  
INSPECTOR GENERAL**

September 19, 2011

MEMORANDUM TO: R. William Borchardt  
Executive Director for Operations

FROM: Stephen D. Dingbaum */RA/*  
Assistant Inspector General for Audits

SUBJECT: AUDIT OF NRC'S MANAGEMENT OF LICENSEE  
COMMITMENTS (OIG-11-A-17)

Attached is the Office of the Inspector General's (OIG) audit report titled, *Audit of NRC's Management of Licensee Commitments*.

The report presents the results of the subject audit. Agency comments provided at a meeting with NRC management officials and staff on August 12, 2011, and an August 23, 2011, exit conference have been incorporated, as appropriate, into this report.

Please provide information on actions taken or planned on each of the recommendations within 30 days of the date of this memorandum. Actions taken or planned are subject to OIG follow up as stated in Management Directive 6.1.

We appreciate the cooperation extended to us by members of your staff during the audit. If you have any questions or comments about our report, please contact me at 415-5915 or RK Wild, Team Leader, Nuclear Reactor Safety Team, at 415-5948.

Attachment: As stated

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## **EXECUTIVE SUMMARY**

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### **BACKGROUND**

The U.S. Nuclear Regulatory Commission (NRC) regulates commercial nuclear power plants that generate electricity through a combination of regulatory requirements and licensing, inspection, and enforcement activities. One way NRC provides oversight of licensees is through the management of regulatory commitments (commitments).

Commitments are docketed, written statements describing a specific action that the licensee has agreed or volunteered to take. They often result from a licensing action such as a license amendment, including power uprates, or from a generic communication, such as generic letters and bulletins. Commitments are neither legally binding nor obligations of a license; however, a commitment may be escalated into a legally binding obligation only if NRC staff deems that the commitment is essential for ensuring public health and safety.

Licensees are responsible for creating, tracking, and handling all commitments made to NRC. The licensee is entirely responsible for tracking the commitments, and this includes any changes to the commitments and notification to NRC about such changes. NRC expects licensees to honor commitments in good faith.

### **PURPOSE**

The audit objective was to assess the extent to which NRC appropriately and consistently utilizes and manages regulatory commitments for power reactor licensees.

### **RESULTS IN BRIEF**

Part of NRC's mission is to identify and accomplish those actions that provide the level of nuclear plant performance necessary to ensure adequate protection of public health and safety. A commitment is one tool that NRC uses in the overall licensing process to add flexibility, improve efficiency, and maintain the flow of information between the staff and

licensees. OIG identified opportunities for improvement in the following three areas:

- Consistent implementation of commitment management audits.
  - NRC inconsistently implements the audits of licensee commitment management programs. This is because agency guidance concerning its performance of required triennial audits is incomplete and imprecise. Incomplete and imprecise guidance concerning the conduct of commitment management audits can result in ineffective audits, inefficient use of resources, and the appearance that NRC provides disparate oversight of similarly situated licensees.
  
- Staff understanding of the definition and use of commitments.
  - The definition and use of commitments is not consistently understood throughout the agency. This occurs because NRC training on commitments is insufficient. Specifically, training does not effectively address the definition and use of commitments and is not provided to all agency staff involved in reviewing licensee commitments. This could potentially result in the misapplication of commitments by NRC staff.
  
- NRC tracking of commitments.
  - NRC does not systematically track commitments because the agency does not have an adequate tool for tracking them, in part, because the agency has not identified a need for such a tool. Consequently, NRC cannot completely ensure oversight of commitments, which has implications for the agency's continuing awareness of significant commitments, the effectiveness of the triennial commitment management audits, and institutional knowledge management.

## **RECOMMENDATIONS**

This report makes five recommendations to improve the agency's management of licensee commitments. A consolidated list of these recommendations appears in Section V of this report.

## **AGENCY COMMENTS**

On August 9, 2011, the Office of the Inspector General (OIG) issued the discussion draft of this report to the Executive Director for Operations. OIG met with NRC management officials and staff on August 12, 2011, at which time the agency provided informal comments to the draft report. OIG subsequently met with agency management and staff during an August 23, 2011, exit conference to discuss agency informal comments that OIG incorporated into the draft report as appropriate. At this meeting, agency management provided supplemental information that has also been incorporated into this report as appropriate. NRC management and staff reviewed the revised draft report and generally agreed with the recommendations in this report. Furthermore, the agency opted not to provide formal comments for inclusion in this report.

## **ABBREVIATIONS AND ACRONYMS**

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ADAMS	Agencywide Documents Access and Management System
CFR	Code of Federal Regulations
DORL	Division of Operating Reactor Licensing
FSAR	Final Safety Analysis Report
MD	Management Directive
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
OGC	Office of the General Counsel
OIG	Office of the Inspector General
UFSAR	Updated Final Safety Analysis Report

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## I. BACKGROUND

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The U.S. Nuclear Regulatory Commission (NRC) regulates commercial nuclear power plants that generate electricity through a combination of regulatory requirements and licensing, inspection, and enforcement activities. One way NRC provides oversight of licensees is through the management of regulatory commitments (commitments), which are non-legally binding actions that the licensee agrees or volunteers to take. Licensees are responsible for creating, tracking, and handling all commitments made to NRC. Within NRC, the primary responsibility for managing commitments lies with Division of Operating Reactor Licensing (DORL) project managers in the Office of Nuclear Reactor Regulation (NRR). However, other NRC staff—such as DORL branch chiefs, NRR technical reviewers, and Office of the General Counsel (OGC) staff—are involved in decisionmaking processes that use commitments.

### Guidance on Commitments

Although the term "regulatory commitment" is not defined in NRC's regulations, commitments are used in the context of interactions between NRC and licensees for commercial nuclear reactors. The license renewal rule—Title 10, Code of Federal Regulations, Section 54.3 (10 CFR § 54.3)—references commitments in the definition of a "current licensing basis."<sup>1</sup> In February 2000, NRC endorsed Nuclear Energy Institute (NEI)<sup>2</sup> guidance document NEI-99-04, *Guidelines for Managing NRC Commitment Changes*, which the agency found to be an acceptable method for licensees to follow for managing and changing their commitments to NRC. In 2003, NRR released office instruction LIC-105, *Managing Regulatory Commitments Made by Licensees to NRC*,<sup>3</sup> to provide common references for handling commitments.

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<sup>1</sup> Per 10 CFR § 54.3 "Definitions," the *current licensing basis* is the set of NRC requirements applicable to a specific plant and a licensee's written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect.

<sup>2</sup> NEI is the policy organization for the nuclear technologies industry.

<sup>3</sup> LIC-105 is applicable to NRR staff, and provides them and their stakeholders with a common reference for handling regulatory commitments made by licensees for commercial nuclear reactors to NRC staff.

## Definition of a Commitment

According to NEI-99-04, commitments are docketed, written statements describing a specific action that the licensee has agreed or volunteered to take. Agency and industry guidance documents distinguish between the safety importance and regulatory significance of different types of licensee actions such as obligations and commitments. In summary:

- Obligations are conditions or actions that are legally binding requirements imposed on licensees through applicable rules, regulations, orders, and licenses (includes technical specifications and license conditions).
- Commitments are appropriate for matters that are of significant interest to staff but do not warrant either (1) legally binding requirements, or (2) inclusion in the Updated Final Safety Analysis Reports (UFSAR)<sup>4</sup> or programs subject to a formal regulatory change control mechanism.

Unlike regulatory requirements contained in regulations, technical specifications, licenses, and orders, commitments are neither legally binding nor obligations of a license. According to LIC-105, NRC staff should escalate a commitment into a legally binding obligation only if the staff deems that the commitment is essential for ensuring public health and safety. NRC management asserts that once a commitment is escalated into a requirement, it is no longer a commitment, but rather it becomes a legal obligation and must be converted to an NRC enforceable requirement, such as a condition of the facility operating license.

## Purpose of Commitments

As noted above, commitments are appropriate for matters that are of significant interest to staff, but do not warrant legally binding obligations. According to LIC-105, the regulatory process relies on commitments to, among other things, support the justification for a proposed licensing action or resolution of other regulatory related activities. Commitments

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<sup>4</sup> The Final Safety Analysis Report (FSAR) is the principal document upon which the NRC bases its safety evaluation supporting the issuance of an operating license for a nuclear power plant. Changes made after the operating license has been issued are documented in a new document, the UFSAR, which serves as the official source of current plant design and analyses.

often result from a licensing action such as a license amendment, including power uprates, or from a generic communication, such as generic letters and bulletins. Further, LIC-105 states that NRC expects licensees to honor commitments that have a safety or regulatory purpose. Appendix A provides examples of commitments.

NRC expects licensees to honor commitments in good faith; however, noncompliance with a commitment can result in the issuance of a Notice of Deviation. A Notice of Deviation describes a licensee's failure to satisfy a commitment and requests a licensee to provide a written explanation or statement describing corrective steps taken (or planned), the results achieved, and the date when corrective action will be completed.<sup>5</sup> A Notice of Deviation is an administrative mechanism that is less severe than a Notice of Violation,<sup>6</sup> but allows NRC staff to request information from a licensee if the implementation of an action was not consistent with the mutually agreed-upon commitment.

### **Licensee Commitment Responsibilities**

According to NEI-99-04, licensees are responsible for creating, implementing, and tracking all commitments made to NRC. As part of their business practices, licensees maintain a commitment management program to track a variety of commitments, including commitments made to NRC<sup>7</sup> and to non-regulatory organizations, as well as corrective actions and self-assessments.

The licensee is entirely responsible for tracking the commitments, and this includes any changes to the commitments and notification to NRC about such changes. NEI-99-04 includes guidance for changing commitments and criteria for determining if and when to inform NRC staff about a change. Although there is no regulatory requirement for such reporting, licensees will periodically report changes in commitments to the NRC via docketed correspondence. NEI-99-04 also provides flowcharts outlining a

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<sup>5</sup> According to NRC staff, the agency has not issued any Notices of Deviation to licensees since 2007 for not fulfilling a commitment.

<sup>6</sup> According to NRC's *Enforcement Manual*, a Notice of Violation is a written notice that identifies an NRC requirement and how it was violated.

<sup>7</sup> NRC does not have comprehensive data on the number of commitments made by licensees each year, but licensee staff and NRC project managers estimated that 3 to 10 commitments are created for each plant annually.

commitment management change process to assist licensees in identifying changes that are significant to safety and/or of high regulatory interest that should be communicated to NRC.

### **NRC's Commitment Responsibilities**

The primary responsibility for managing commitments within NRC is assigned to DORL project managers, but other NRC staff involved in decisionmaking processes that use commitments include DORL branch chiefs, NRR technical reviewers, and OGC.

DORL project managers are responsible for the general oversight and coordination of NRR activities—including management of commitments—related to the processing of licensing actions, generic issues, or policy issues for a specific licensee. Specifically, as part of NRC's oversight responsibilities, project managers are required every 3 years to audit licensee commitment management programs by assessing the adequacy of licensee implementation of a sample of commitments made to the NRC in past licensing actions.<sup>8</sup> Performance of these audits is not a requirement of NRC's inspection program, which does not assess how well licensees control commitments. Instead, the triennial audit requirement is described in LIC-105.

DORL branch chiefs are expected to ensure that the triennial audits of licensee commitment management programs are performed. In addition, they are expected to ensure that the project managers are appropriately trained and provided with the necessary tools during their reviews of specific licensing actions or other licensing tasks.

It is the role of NRR technical staff to review licensing actions and the supporting documentation—including any applicable commitments—to ensure that appropriate consideration has been given to technical issues. In many cases, project managers will seek subject matter expertise from the technical reviewers during the decisionmaking process.

According to NRR office instructions, NRR staff should coordinate their programmatic efforts with OGC. LIC-100, *Control of Licensing Bases for Operating Reactors*; and NEI-99-04, *Guidelines for Managing NRC Commitment Changes*, states that OGC plays a critical role in defining the

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<sup>8</sup> The commitment audit requirement was initiated in 2003. As of February 2010, 65 nuclear power plants had been subject to an initial audit, and 23 plants had been subject to a followup audit.

elements of the licensing bases of nuclear facilities, in defining the appropriate controls for and other attributes of the elements of the licensing bases, and in processing some plant-specific changes to licensing bases information. Further, NRR staff should coordinate their programmatic and plant-specific efforts with OGC to ensure NRC products (e.g., licensing documents) comply with legal requirements.

## **II. PURPOSE**

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The audit objective was to assess the extent to which NRC appropriately and consistently utilizes and manages regulatory commitments for power reactor licensees. Appendix B contains information on the audit scope and methodology.

## **III. FINDINGS**

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Part of NRC's mission is to identify and accomplish those actions that provide the level of nuclear plant performance necessary to ensure adequate protection of public health and safety. A commitment is one tool that NRC uses in the overall licensing process to add flexibility, improve efficiency, and maintain the flow of information between the staff and licensees. The Office of the Inspector General (OIG) identified opportunities for improvement in the following three areas:

- Consistent implementation of commitment management audits.
- Staff understanding of the definition and use of commitments.
- NRC tracking of commitments.

## **A. Commitment Management Audits Are Inconsistently Implemented**

To achieve NRC's mission of adequately protecting the public health and safety and the environment, NRC programs and processes should be carried out effectively, efficiently, and consistently. However, NRC inconsistently implements the audits of licensee commitment management programs. This is because agency guidance on implementing the triennial audits is incomplete and imprecise. Incomplete and imprecise guidance concerning the conduct of commitment management audits can result in ineffective audits, inefficient use of resources, and the appearance that NRC provides disparate oversight of similarly situated licensees.

### **Consistent Implementation of NRC Programs and Processes**

To achieve NRC's mission of adequately protecting public health and safety and the environment, NRC programs and processes should be carried out effectively, efficiently, and consistently. Consistent implementation of NRC programs and processes facilitates a consistent regulatory framework for overseeing commercial nuclear power plants. One element of NRC's regulatory oversight process is the management of commitments, which includes conducting triennial audits of licensee commitment management programs. The triennial audits are a primary tool used by NRC for assessing licensee commitment management programs. In accordance with NRC's mission, the triennial audits of licensee commitment management programs should be implemented consistently.

### **Commitment Management Audits Are Inconsistently Implemented**

NRC's triennial commitment management audits are not consistently implemented. There are disparities in how staff members develop samples of commitments for review and the thoroughness of the audits.

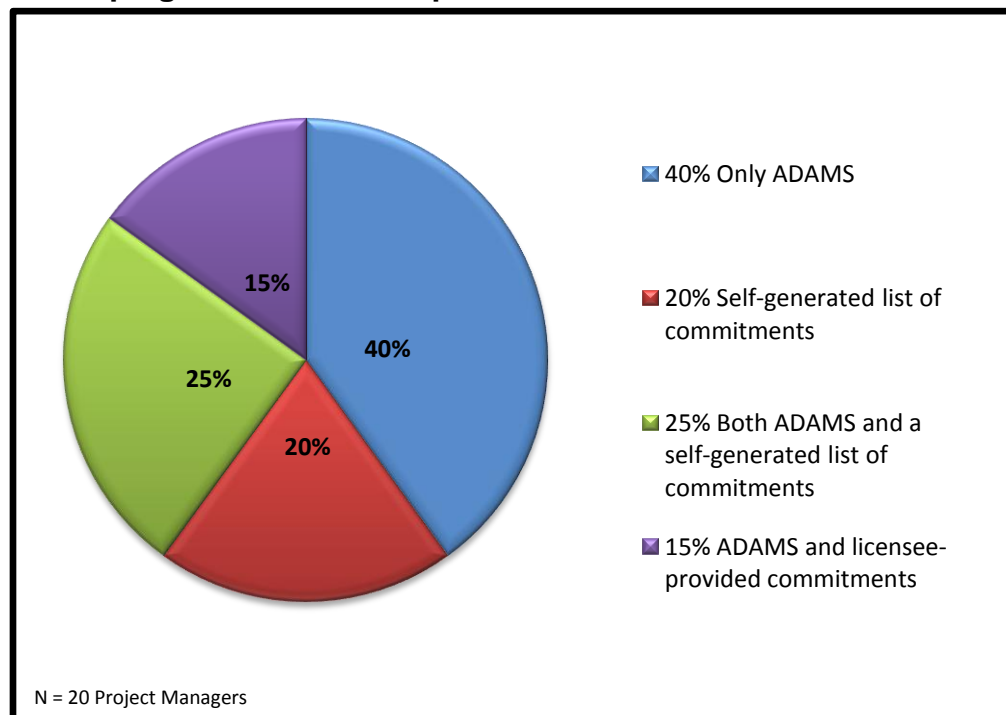
DORL project managers inconsistently identify the universe of commitments eligible for sampling for the triennial audits. Some of the various sources of information that project managers use to identify the universe of commitments include:

- Generic communications.
- Licensee correspondence.
- Prior commitment audit reports.

- UFSAR changes.
- Agencywide Documents Access and Management System (ADAMS).<sup>9</sup>
- NRC amendment logs.
- Licensee commitment tracking systems.
- Licensee corrective action programs.

Most project managers explained that when developing their audit sample, they consult various sources and/or combinations of sources, including ADAMS, their own records, and/or licensee kept records. For example, during the development of a commitment audit sample, some project managers indicated that they depended on a self-generated list of commitments to extract a sample of commitments for the audit, while other project managers said they rely solely upon ADAMS searches as their source of commitments (see Figure 1).

**Figure 1: Percent of Project Managers Indicating Source for Developing Their Audit Sample**



Source: OIG analysis of interviews with staff.

<sup>9</sup> ADAMS is the official recordkeeping system through which NRC provides access to libraries or collections of documents related to the agency's regulatory activities.

DORL staff members have varying views on what constitutes a thorough audit, and OIG observed differences in the conduct of the audits. For example, project managers and branch chiefs provided contrasting responses on whether the commitment management audit includes physical verification of commitments. Approximately half of the project managers interviewed said they would not physically or visually inspect the accomplishment of commitments, while all of the branch chiefs that OIG interviewed agreed that project managers should physically or visually inspect the accomplishment of commitments.

Further, OIG observed the performance of several commitment management audits of licensees and noted significant differences in how they were conducted. Two of the audits were performed at licensee nuclear power plant sites while one was performed at NRC headquarters. The two site audits differed markedly from each other in the depth of the review, including the degree to which the project manager reviewed supporting documentation and performed physical verification activities at the nuclear power plant. For example, one of the project managers verified that the licensee had completed a specific commitment, and when asked if further verification was needed, the project manager said that the commitment review stops at the completion of the commitment. However, another project manager reviewed the completion of the commitment and then requested additional supporting documentation that went beyond the documented completion of the specific commitment to ensure the proper changes and procedures had been correctly implemented. The project manager also reviewed associated documents that were directly or indirectly affected by the commitment to ensure that the licensee had made all relevant changes that were impacted by the commitment.

### **NRC Guidance Is Incomplete and Imprecise**

Staff interpretations concerning conduct of the triennial commitment management audits vary because agency guidance<sup>10</sup> on conducting the audits is incomplete and imprecise. Specifically, agency guidance on developing a commitment management audit sample does not provide detailed direction on the sources to be used for identifying a universe of commitments. Furthermore, guidance on conducting the audits does not

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<sup>10</sup> Although LIC-105 is the agency's primary guidance on managing commitments, other guidance documents such as LIC-100, *Control of Licensing Bases for Operating Reactors*, and LIC-101, *License Amendment Review Procedures*, reference commitments.



articulate the depth-of-review expectations and guidelines for performing the audits.

LIC-105 guidance on developing an audit sample is incomplete because it does not provide detailed direction on sources that should be used to identify the universe of commitments in preparation for an audit. For commitment sample selection, the guidance directs project managers to review commitments specifically made by licensees. The guidance does not offer the specific sources where commitments can be found. Based on this guidance, it is questionable whether project managers consistently draw their samples from an appropriate, representative, or inclusive universe.

Further, the LIC-105 section on conducting triennial commitment management audits is imprecise because it does not clearly articulate the depth-of-review expectations and guidelines for performing the audits. This guidance does not specifically address management expectations of staff to verify that commitments have been appropriately implemented in the plant facility, procedures, program, or other plant documentation. Rather, guidance simply notes that the project manager is responsible for determining the level of physical verification and document review depending on the nature of each commitment. This non-prescriptive approach affords the project manager a degree of flexibility in conducting the audit. However, it does not provide sufficient guidance to ensure that the audits are conducted consistently with regard to thoroughness and level of review.

### **Reduced Effectiveness and Efficiency, and the Appearance of Disparate Treatment**

Incomplete and imprecise guidance on the conduct of triennial commitment management audits can result in ineffective audits, inefficient use of resources, and the appearance that NRC provides disparate oversight of similarly situated licensees.

The lack of clear direction from agency guidance contributes to reduced effectiveness of the triennial audits. Unless project managers identify the full universe of commitments for the audit sample and until the guidance provides more clarity with regard to the depth of the audit, the audits may not fully support NRC's objective to determine whether licensees successfully implement their commitments. This may lead to NRC staff

perceptions that the commitment management audits are ineffective. Indeed, some staff articulated to OIG a reluctance to continue performing the audits. Those audits that do not sample a complete universe of commitments or lack the rigor and depth to ensure that commitments were implemented represent an inefficient use of agency resources.

The inconsistencies in the implementation and conduct of the audits also lend an appearance of disparate treatment among licensees. Ideally, NRC should audit two licensees with similar commitments in a similar fashion. However, if two separate project managers reviewed the two licensees with different standards of proof and documentation, the result could be two very different outcomes, giving the appearance of different treatment.

### **Recommendations**

OIG recommends that the Executive Director for Operations:

1. Revise the section of LIC-105, *Managing Regulatory Commitments Made by Licensees to NRC*, on conducting triennial commitment management audits to include detailed sampling direction, such as a checklist of sources to be used in identifying a universe of commitments from which to sample.
2. Revise LIC-105, *Managing Regulatory Commitments Made by Licensees to NRC*, to include well-defined expectations and guidelines regarding the conduct of commitment management audits. The guidelines should include an expectation that audited commitments are reviewed to ensure that they have been appropriately implemented in the plant facility, procedures, program, or other plant documentations.

## **B. Definition and Use of Commitments Are Inconsistently Understood**

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Agency staff should have a consistent understanding of commitments to perform their work effectively; however, the definition and use of commitments is not consistently understood throughout the agency. This occurs because NRC training on commitments is insufficient. Specifically, training does not effectively address the definition and use of commitments and is not provided to all agency staff involved in reviewing licensee commitments. This could potentially result in the misapplication of commitments by NRC staff.

### **Importance of Performance Management**

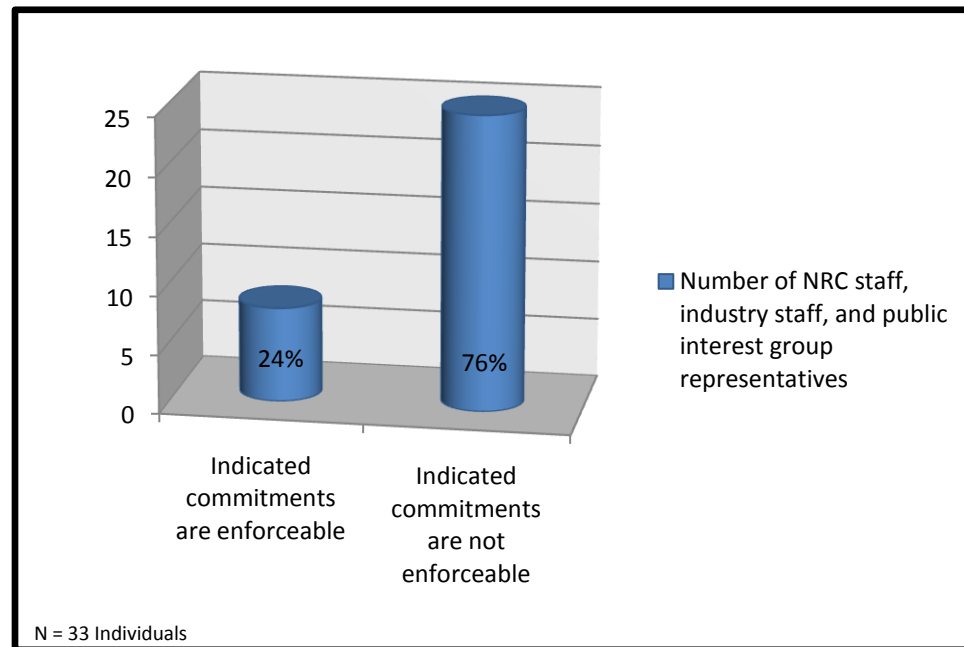
Good performance management practices dictate that agency staff should have a consistent understanding of NRC's regulatory tools and their use, including commitments, so they can perform their work and collectively ensure protection of public health and safety and the environment. Furthermore, the agency's approach to performance management requires staff members to be highly trained in the technical disciplines relating to their duties, the regulatory processes that govern agency actions, and the regulatory principles inherent in making the agency a strong, independent, stable, and predictable regulator. Being a stable and predictable regulator implies that NRC must operate in a consistent regulatory framework. This requires staff associated with a particular regulatory program to have a consistent understanding of that regulatory program and associated policies, including the definitions and the tools used for evaluating and implementing the program.

### **Definition and Use of Commitments Are Inconsistently Understood**

Agency staff, industry, and the public have various views on the definition of a commitment. Furthermore, agency staff expressed conflicting descriptions for the use of commitments.

#### Commitments Are Various Defined by Stakeholders

Agency staff, industry personnel, and the public have various views of the definition of a commitment and whether commitments are enforceable. Figure 2 below shows the views expressed by members of these groups when asked whether commitments can be enforced by the NRC.

**Figure 2: Perceptions of Enforceability of Commitments**

**Source:** OIG analysis of interview data.

DORL project managers explained that because commitments are not enforceable,<sup>11</sup> it is their responsibility to assess the level to which NRC staff rely on commitments and to make sure a commitment is the appropriate tool to ensure that the action is completed. Further, NRC staff explained that commitments are not a part of the license and are therefore not legally enforceable.<sup>12</sup> Under that interpretation, NRC could not issue a violation if a licensee fails to fulfill a commitment. However, other agency staff said that NRC could enforce commitments. For example, one branch chief said that a commitment is part of the licensing basis and is therefore enforceable. Other NRC staff members, including project managers, branch chiefs, and an OGC attorney, contended that the agency could take enforcement action if a licensee failed to fulfill the commitment.

Agency and industry staff articulated a hierarchy of commitments that the agency guidance does not specifically address. Some NRC staff have differentiated commitments based on their intended application and NRC's ability to oversee commitments using the terms "big C" commitments and

<sup>11</sup> The term "enforceable" describes a legally binding obligation, such as a condition of a facility's operating license.

<sup>12</sup> According to LIC-105, issues regarding the use of regulatory commitments usually center on the legal standing of the commitment and NRC staffs' ability to enforce the action committed to by a licensee. While licensees are not legally bound to fulfill a commitment, the NRC staff may use the administrative enforcement tool of a Notice of Deviation if a licensee fails to satisfy a commitment.

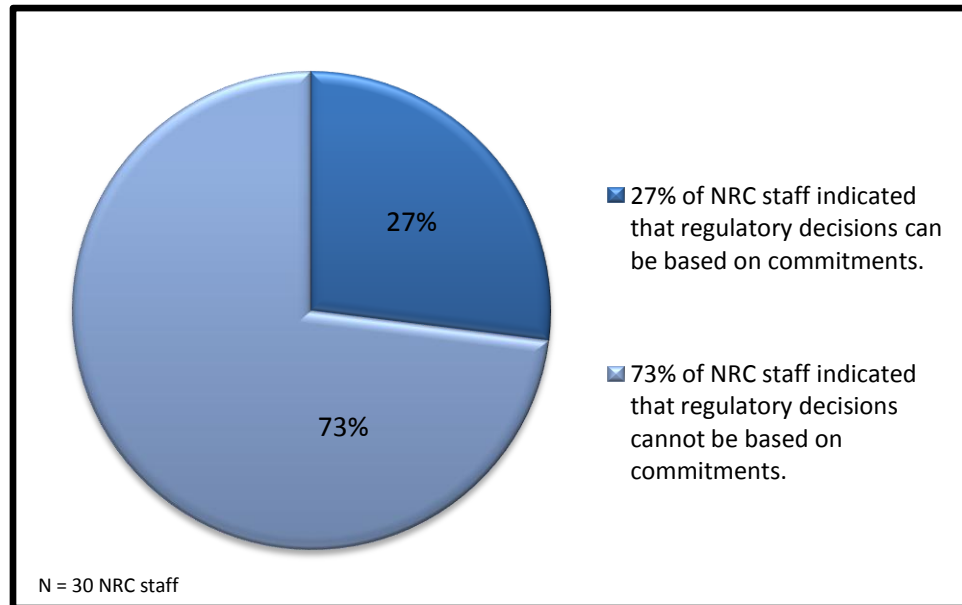
"small c" commitments. Some NRC staff have also used the terms "regulatory commitments" and "commitments" to differentiate between the "big C" and "small c" commitments, respectively. Furthermore, the definitions provided by staff for these different types of commitments were contradictory. For example, one project manager said that "big C" or "regulatory commitments" are safety-significant commitments that could become an obligation or condition of the license, while another project manager along with an OGC staff member explained that a "regulatory commitment" is similar to a "small c" commitment which is a non-enforceable, voluntary agreement between the licensee and NRC. Industry staff also articulated two kinds of commitments—"obligatory commitments" and "non-obligatory commitments"—to differentiate between commitments made in association with a requirement in a regulation and those commitments not explicitly identified in a regulation.

Moreover, there is a difference in the way the public and industry understands a commitment versus NRC staff's view of a commitment. Of 54 NRC staff members interviewed, 28 understood a commitment to be a low-level promise between NRC and the licensees. For example, seven staff members referred to commitments as a "gentleman's agreement" or as the "icing on the cake," essentially providing NRC additional assurance that licensees will take a particular action beyond that specified in the requirements. However, some industry staff and a public interest group see commitments as more formal, enforceable agreements.

#### Agency Staff Have Conflicting Views on Use of Commitments

Various agency staff involved in handling commitments expressed conflicting descriptions for the use of commitments. Particularly, agency staff members have differing views on whether a regulatory decision (e.g., amendments to licensing documents) can be based on a commitment (see Figure 3). Many NRC staff members believe regulatory decisions should be made without reliance on a commitment and the commitment should serve merely as extra assurance for NRC; however, other staff members believe that licensing actions could be approved with commitments and that, in some cases, NRC could not have approved the licensing action without a commitment.

**Figure 3: NRC Staff Views on Role of Commitments in Regulatory Decisions**



**Source:** OIG analysis of interviews with staff.

Some NRC staff are aware of a regulatory practice that incorporates the content of a commitment into a licensing action implementation statement, while others are unaware of this option. The term "implementation statement" is not defined in the agency guidance for commitments.<sup>13</sup> However, NRC staff members who reported using the implementation statement explained that it requires the licensee to place their commitment(s) into the UFSAR. This makes the commitment subject to the provisions of 10 CFR § 50.59<sup>14</sup> such that changes to the commitment by the licensee would result in a process to determine if prior NRC approval may be required. Additionally, NRC has the opportunity to review changes to the commitment when the UFSAR is updated according

<sup>13</sup> The terms "implementation statement," "implementation clause," and "implementation requirement" were used interchangeably by some NRC staff. Although the term "implementation statement" is not defined in agency commitment guidance, NRC staff explained that they could add an implementation statement or clause to the licensing amendment. This section of the approval letter lists the items to be implemented and the implementation timeframe in conjunction with or prior to the approval of the amendment. The implementation language might state, for example, "the implementation of the amendment shall also include...." Within this "implementation statement" is where a commitment may be inserted and incorporated into the FSAR.

<sup>14</sup> 10 CFR 50.59, *Issuance, Limitations, and Conditions of Licenses and Construction Permits: Changes, Tests and Experiments*, outlines the instances in which a license amendment would or would not be required due to a change in the facility or procedures described in the FSAR (as updated) or a test or experiment not described in the FSAR (as updated).

to 10 CFR § 50.71(e).<sup>15</sup> Therefore, certain commitments that are formally captured and included into the UFSAR through the implementation statement would receive more scrutiny by NRC staff. However, the use of the implementation statement as a tool that allows NRC to have more oversight of selected commitments is not consistently known among NRC staff. Specifically, of DORL staff asked if they had the knowledge and/or understanding of an implementation statement, more than 40 percent said their branch did not use it and they were unaware of such a statement being used by other DORL branches.

### **Insufficient Commitment-Specific Training**

Current training on commitments does not sufficiently address the definition and use of commitments, and is not provided to all staff involved in reviewing licensee commitments. Providing commitment-specific training to all applicable NRC staff—including project managers, technical staff, and OGC involved in the formation or revision of reactor licensing actions—helps ensure that staff have the skills, knowledge, and abilities needed to perform their work. DORL is in the process of developing licensing-specific training for project managers that will address the application of commitments; however, this effort has not been addressed by all NRC offices involved in reviewing reactor licensee commitments.

### **Misapplication of Commitments**

Until the various understandings of the definition and use of commitments are clarified, NRC risks improper application of commitments. For example, NRC staff may inappropriately rely on a commitment for a licensing decision when an obligation was required. In fact, some NRC staff members said that they would not have approved a particular licensing action without a specific commitment being present. Therefore, lacking a sound understanding of the appropriate application of a commitment, NRC staff may be accepting licensees' proposed commitments in lieu of an appropriate regulatory requirement, such as applicable licensing conditions, orders, rules, or regulations.

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<sup>15</sup> 10 CFR § 50.71(e), *Maintenance of records, making of reports*, is the requirement for licensees to update their FSAR that was originally submitted as part of their application for a license. Subsequent revisions must be filed within a period not to exceed 24 months.

## **Recommendation**

OIG recommends that the Executive Director for Operations:

3. Develop training that sufficiently addresses the definition and use of commitments and provide it to all agency staff involved in reviewing reactor licensee commitments.

## **C. NRC Staff Do Not Systematically Track Commitments**

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According to Federal regulations for preserving records and NRC guidance on records management, NRC should maintain records that are sufficient to document matters dealt with by NRC, including significant decisions and the decisionmaking process. NRC does not systematically track commitments because the agency does not have an adequate tool for tracking them, in part, because the agency has not identified a need for such a tool. Consequently, NRC cannot completely ensure oversight of commitments, which has implications for the agency's continuing awareness of significant commitments, the effectiveness of the triennial commitment management audits, and institutional knowledge management.

### **Preservation of Documents**

Federal regulations require NRC to preserve records containing adequate and proper documentation of the functions, decisions, and essential transactions of the agency to ensure that the agency can find records when needed. According to Management Directive (MD) 3.53, *NRC Records Management Program*,<sup>16</sup> the agency should maintain records that are sufficient to document matters dealt with by NRC, including significant decisions and the actions taken to arrive at those decisions. This includes docketed commitments that are considered safety significant<sup>17</sup> and/or relied upon to make regulatory decisions. Documenting commitments that contain information supporting regulatory decisionmaking helps ensure that the agency captures pertinent information and that NRC can be responsive and accountable for its actions in communicating with reactor

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<sup>16</sup> MD 3.53 contains procedures, standards, and guidelines for managing NRC's official records in accordance with U.S. National Archives and Records Administration and General Services Administration regulations.

<sup>17</sup> The term "safety significant" refers to a function whose degradation or loss could result in a significant adverse effect on defense-in-depth, safety margin, or risk.



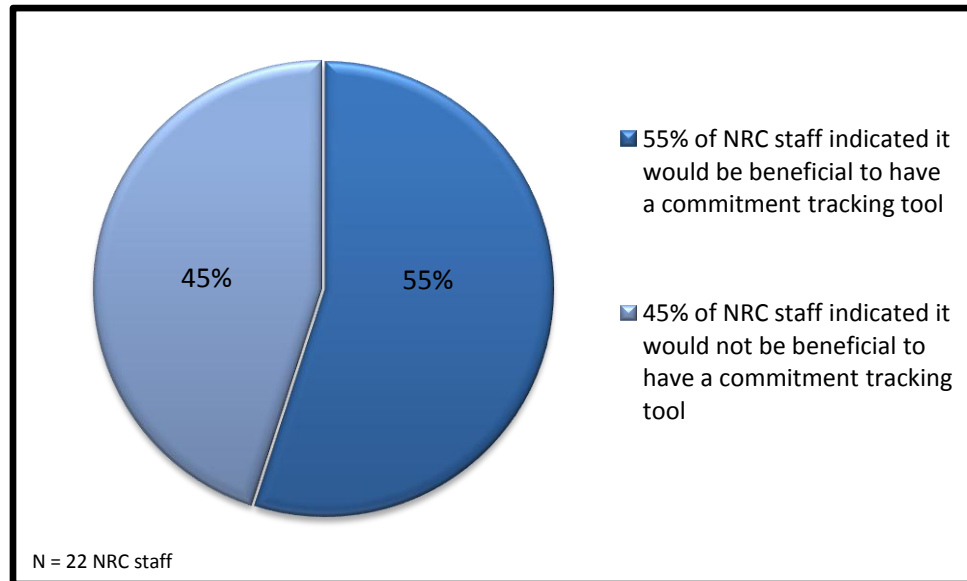
licensees. Moreover, capturing commitments would assist NRC in knowing the universe and status of all commitments.

### **NRC Does Not Systematically Track Commitments**

NRC does not systematically track commitments and, consequently, project managers cannot independently generate a list of all commitments related to a specific licensee, even those that were considered by staff to be safety significant and/or integral to approving a proposed licensing action. The agency does not collect commitments into a single document. Rather, commitments are included in various documents submitted by licensees. NRC relies on licensees to track their respective commitments and supply information to NRC on the status of the implementation/closure of commitments for the purpose of the triennial audit. This is problematic because some staff members view certain commitments as safety significant and/or necessary for approval of proposed licensing actions.

Although project managers are not required to track commitments, OIG learned that some project managers informally track commitments. With no requirement to track commitments, these project managers create their own mechanisms for tracking this information because they seek the ability to independently conduct timely and thorough commitment searches. One experienced project manager explained that maintaining one's own list of commitments provides the opportunity to independently verify that the licensee's commitment-related information is adequately captured, tracked, and managed. Furthermore, the majority of NRC staff interviewed indicated that having a formal tracking tool for licensee commitments would be beneficial (see Figure 4). Many of the staff members who disagreed believe that tracking commitments would not be beneficial did so solely because they felt it would be an administrative burden for project managers.

**Figure 4: NRC Staff View on Whether a Commitment Tracking Tool Would Be Beneficial**



Source: OIG analysis of interviews with staff.

### NRC Lacks an Adequate Commitment Tracking Tool

NRC does not have an adequate tool for tracking commitments, in part, because the agency has not identified a need for such a tool. NRC managers said that the agency staff should not rely on commitments for regulatory decisionmaking. However, these managers were unaware that some staff members had used commitments for the approval of licensing actions. Thus, the agency's lack of support for the tracking of commitments has been partly based on an assumption that staff were not using commitments for the purpose of regulatory decisionmaking.

OIG identified some instances of licensee commitments that were safety significant and/or necessary for approval of a proposed licensing action, as follows:

- **Commitment A:** Staff relied upon a commitment for approval of a licensee's amendment to make a technical specification change regarding reactor power monitoring equipment calibration. NRC's issuance letter stated that the approval of the amendment was based on the commitment. One interviewee—who was the branch chief at the time of the commitment—said, had the commitment not been fulfilled, NRC may have issued an order. Another NRC staff member, a technical reviewer, said that the license amendment

request would not have been accepted without the completion of the commitment.

- Commitment B: After a licensee conducted a power uprate-related evaluation, the licensee made a commitment to operate at a lower power level than allowed by the nuclear power plant license. NRC staff members said that if the commitment had not been completed, it could have adversely impacted safe plant operations. NRC managers involved in the power level approval agreed that they could postulate a safety-related problem had the licensee opted not to implement the commitment. Later, an OGC attorney confirmed that a commitment was not appropriate in this instance; instead, a license amendment should have been used.
- Commitment C: For a requested amendment to extend the allowed out-of-service time for a plant's diesel generators, the staff determined that a commitment was necessary. Two NRC staff members, a technical reviewer and an OGC attorney, said that a commitment to modify a circuit breaker was necessary for the amendment.

OIG did not perform a detailed search and review of commitments to identify commitments, similar to the examples above, that were safety significant and/or necessary for approval of a proposed licensing action. Therefore, it is possible that additional examples exist. The agency also does not know the extent to which such commitments exist because it has not identified commitments that the staff had considered safety significant and/or necessary for approval of a proposed licensing action.

### **Agency Cannot Ensure Oversight of Commitments**

Until the agency tracks safety significant commitments, NRC will not be able to ensure oversight of such commitments. Consequently, there are implications for the agency's continuing awareness of significant commitments, the effectiveness of the triennial commitment management audits, and institutional knowledge management. Further, NRC risks erosion of its licensing logic, wherein the agency would rely on non-mandatory commitments in lieu of licensing conditions or obligations for nuclear power plant licensing.

### Agency Awareness of Commitments

Without a tracking system, significant commitments could be overlooked or forgotten. For example, a 1979 safety significant commitment resurfaced in 2007 when an NRC inspection found the commitment and issued a Notice of Deviation to the licensee because action to address the commitment had not been completed. If NRC had a process to independently track commitments, the agency would have been able to monitor the implementation of the commitment, and any failure by the licensee to take action would have been identified earlier. Instead, the oversight and tracking of commitment implementation by NRC is ad hoc, making it difficult for the agency and staff members to identify deviations from poorly documented plans. However, effective use of the triennial commitment management audits to identify potential inappropriately-applied commitments and agency training on the proper implementation of commitments, once implemented and reviewed by OIG, may obviate the need for a tracking system.

### Impact on Triennial Commitment Management Audits

NRC risks conducting ineffective triennial commitment management audits because significant commitments may not be included in the commitment management audit samples. OIG learned during an audit it observed that NRC missed commitments made during an entire year between NRC's initial and first followup audit of a licensee's commitment management program. OIG notified the project manager of the missed timeframe, and the project manager stated a belief that it was unnecessary to increase the audit sample to include the missed year's commitments because the licensee performs its own internal audits.

### Impact on Institutional Knowledge Management

Employee attrition could potentially result in the agency's loss of undocumented information, particularly in those instances where some project managers have developed their own commitment tracking systems. Commitment related information to support future projects or regulatory decisionmaking may not be available for germane agency staff if the agency does not formally capture the information. The commitment management audits should identify and correct situations where commitments were used inappropriately. Properly documenting relevant information is a critical aspect of effective oversight and demonstrates that

NRC operates with due care and can be accountable for its oversight of commitments.

### Risks to NRC's Licensing Logic

NRC risks not following its established licensing logic, leaving the agency in a potential position whereby the licensing of nuclear power plants depends on non-mandatory commitments. The licenses for operating nuclear power plants include requirements that ensure that the functional capability or performance levels of equipment required for safe operation of the facility are maintained. The requirements in licenses are mandatory and require compliance by the licensee. If NRC allows reliance on commitments for the approval of license amendments, it risks making the basis of safe operation reliant on actions that are not required.

### Recommendations

OIG recommends that the Executive Director for Operations:

4. Identify actions to determine the extent to which commitments that are considered safety significant and/or necessary for approval of proposed licensing actions exists. This could be accomplished by either: (1) NRR project managers identifying any such commitments as part of the triennial commitment management audits, or (2) conducting a review of all existing commitments and identifying any inappropriately applied commitments. Any such commitments should be identified to NRC management for appropriate action.
5. Depending on the outcome of the efforts to meet recommendation 4, develop and utilize a tool for systematically tracking the status of commitments that are deemed safety significant and/or necessary for approval of proposed licensing actions.

## IV. CONCLUSION

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NRC commitments are a valuable regulatory tool that add flexibility to the regulatory review framework. They also play a key role in facilitating the agency's decisionmaking process on matters that can be highly safety significant. Specifically, they provide additional assurance to the agency that a licensee action will not adversely affect the safe operation of the plant. Therefore, it is essential that all agency staff who work with commitments clearly understand the appropriate application and role of commitments to facilitate their consistent use. However, not all NRC staff understand the appropriate use of commitments. By enhancing agency guidance and training on the role and use of commitments, as well as requiring routine review and capture of commitments pertaining to safety-significant decisions, the agency can further strengthen its pledge to promote the safe operation of the nation's power reactors.

## V. CONSOLIDATED LIST OF RECOMMENDATIONS

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OIG recommends that the Executive Director for Operations:

1. Revise the section of LIC-105, *Managing Regulatory Commitments Made by Licensees to NRC*, on conducting triennial commitment management audits to include detailed sampling direction, such as a checklist of sources to be used in identifying a universe of commitments from which to sample.
2. Revise LIC-105, *Managing Regulatory Commitments Made by Licensees to NRC*, to include well-defined expectations and guidelines regarding the conduct of commitment management audits. The guidelines should include an expectation that audited commitments are reviewed to ensure that they have been appropriately implemented in the plant facility, procedures, program, or other plant documentations.
3. Develop training that sufficiently addresses the definition and use of commitments and provide it to all agency staff involved in reviewing reactor licensee commitments.
4. Identify actions to determine the extent to which commitments that are considered safety significant and/or necessary for approval of

proposed licensing actions exists. This could be accomplished by either: (1) NRR project managers identifying any such commitments as part of the triennial commitment management audits, or (2) conducting a review of all existing commitments and identifying any inappropriately applied commitments. Any such commitments should be identified to NRC management for appropriate action.

5. Depending on the outcome of the efforts to meet recommendation 4, develop and utilize a tool for systematically tracking the status of commitments that are deemed safety significant and/or necessary for approval of proposed licensing actions.

## **VI. AGENCY COMMENTS**

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On August 9, 2011, OIG issued the discussion draft of this report to the Executive Director for Operations. OIG met with NRC management officials and staff on August 12, 2011, at which time the agency provided informal comments to the draft report. OIG subsequently met with agency management and staff during an August 23, 2011, exit conference to discuss agency informal comments that OIG incorporated into the draft report as appropriate. At this meeting, agency management provided supplemental information that has also been incorporated into this report as appropriate. NRC management and staff reviewed the revised draft report and generally agreed with the recommendations in this report. Furthermore, the agency opted not to provide formal comments for inclusion in this report.

## EXAMPLES OF COMMITMENTS

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Commitments are generated from different sources, including license amendments, notices of enforcement discretion, generic letters, and other operational and licensing documents. However, the commitments are documented as written communication from the licensee to NRC. The following examples illustrate some of the sources and types of commitments utilized by the industry and NRC.

### Example 1: Commitment to upgrade a spent fuel pool crane

All heavy load lifts in or around the spent fuel pool made using the upgraded Auxiliary Building crane lifting system will meet the guidance in NUREG-0612.

This commitment was made in support of a license amendment related to the plant's spent fuel pool crane. In this case, the licensee committed to limit use of the crane so that objects above a specific weight would not be lifted unless the crane was upgraded.

### Example 2: Commitment to maintain a minimum amount of fuel oil available

The licensee commits to administratively control the amount of fuel oil in each fuel oil storage tank such that a minimum usable amount of 25,000 gallons (including the day tanks) is available to supply each EDG [emergency diesel generator] (without reliance on a portable transfer pump), for the duration of the enforcement discretion.

In this case, a licensee made a commitment in support of the licensee receiving approval for temporary enforcement discretion for a requirement related to an emergency diesel generator. The licensee committed to maintain an amount of fuel in the plant's fuel oil storage tanks that was greater than the minimum amount normally required.



Example 3: Commitment to modify the containment emergency sump of a nuclear power plant

Installation of Unit 1 and Unit 2 new post loss of coolant accident containment sump recirculation screens, completion of required modifications and implementation of required procedural changes.

A licensee made this commitment to the NRC in response to an NRC Generic Letter. NRC originally sent the Generic Letter to licensees of pressurized water reactors to communicate a generic concern with their containment emergency sumps. In response to this concern, this licensee committed to make modifications to its reactors' sumps recirculation screens.

## SCOPE AND METHODOLOGY

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The audit objective was to assess the extent to which NRC appropriately and consistently utilizes and manages regulatory commitments for power reactor licensees. The audit focused on reviewing the oversight of commitments through an examination of documents, interviews, and observations.

OIG reviewed relevant Federal regulations regarding the management and use of commitments, including 10 CFR § 54.3, *Requirements for Renewal of Operating Licenses for Nuclear Power Plants*, and 10 CFR § 50.59, *Issuance, Limitations, and Conditions of Licenses and Construction Permits: Changes, Tests and Experiments*. OIG also reviewed agency and industry guidance, including LIC-105, *Managing Regulatory Commitments Made by Licensees to the NRC*; LIC-100, *Control of Licensing Bases for Operating Reactors*; and NEI-99-04, *Guidelines for Managing NRC Commitment Changes*. OIG reviewed generic communication documents as well as licensing documents such as license amendments. Furthermore, OIG reviewed NRC inspection procedures, SECY papers, office handbooks, and all (88) NRC commitment audit reports published between January 2004 and February 2009.

OIG interviewed NRC staff who participated in activities related to the management of commitments. These interviews included resident inspectors, OGC staff, NRC technical reviewers, DORL project managers, DORL staff, and agency managers. In all, OIG conducted interviews with 54 NRC staff members to obtain staff insights into the oversight of licensees' commitments and commitment management programs.

OIG also conducted interviews with industry representatives, a public interest group representative, and licensee staff. The audit team also observed three audits of licensee's commitment management programs performed by DORL project managers.

This performance audit was conducted at NRC headquarters (Rockville, MD) and selected commitment audit sites in Regions II and III, from October 2010 through May 2011, in accordance with generally accepted Government auditing standards. Those standards require that the audit is planned and performed with the objective of obtaining sufficient,

appropriate evidence to provide a reasonable basis for any findings and conclusions based on the stated audit objective. OIG believes that the evidence obtained provides a reasonable basis for the report findings and conclusions based on the audit objective. Internal controls related to the audit objective were reviewed and analyzed. Throughout the audit, auditors were aware of the possibility or existence of fraud, waste, or misuse in the program.

The audit work was conducted by R.K. Wild, Team Leader; Kevin Nietmann, Senior Technical Advisor; Jaclyn Storch, Audit Manager; Andrea Ferkile, Senior Management Analyst; Joseph Capuano, Auditor; and Dana Furstenau, Student Management Analyst.