POLICY ISSUE
INFORMATION

April 8, 2012 SECY-12-0055

FOR: The Commissioners

FROM: R. W. Borchardt
Executive Director for Operations

SUBJECT: REACTOR OVERSIGHT PROCESS SELF-ASSESSMENT FOR CALENDAR YEAR 2011

PURPOSE:

The purpose of this paper is to present the results of the U.S. Nuclear Regulatory Commission (NRC) staff's annual self-assessment of the Reactor Oversight Process (ROP) for calendar year (CY) 2011.

SUMMARY:

The results of the CY 2011 self-assessment indicate that the ROP met its program goals and achieved its intended outcomes. The staff found that the ROP met the agency's strategic goals of ensuring safety and security through objective, risk-informed, understandable, and predictable oversight. The staff implemented several ROP improvements in CY 2011, and will continue to solicit input from the NRC's internal and external stakeholders to further improve the ROP based on feedback and lessons learned.

BACKGROUND:

The staff performed the CY 2011 self-assessment in accordance with Inspection Manual Chapter (IMC) 0307, "Reactor Oversight Process Self-Assessment Program," dated March 23, 2009. The staff has issued an ROP self-assessment Commission paper annually since ROP implementation in 2000 and has briefed the Commission on the results following the Agency Action Review Meeting (AARM). The Commission provides the staff with direction as a result of this briefing in the form of a staff requirements memorandum (SRM). In SRM M110527, "Briefing on the Results of the Agency Action Review Meeting, May 27, 2011," dated June 3, 2011, the Commission did not identify any new requirements for staff action.

CONTACT: Ronald K. Frahm, Jr., NRR/DIRS
301-415-2986

The ROP self-assessment program uses program evaluations and performance metrics to evaluate the overall effectiveness of the ROP in meeting its preestablished goals and intended outcomes. The ROP includes the four specific program goals of being objective, risk informed, understandable, and predictable, as well as the applicable organizational excellence objectives (e.g., openness and effectiveness) from the NRC's Strategic Plan for Fiscal Years (FY) 2008–2013. The program goals and organizational excellence objectives support the NRC's mission and its strategic goals of safety and security. IMC 0307 specifies the intended outcomes of the ROP, which help form its basis and are incorporated into the ROP processes.

DISCUSSION:

The staff conducted numerous activities during the 12th year of ROP implementation (CY 2011) and obtained data from many sources to ensure that it performed a comprehensive and robust self-assessment. Data sources included the ROP performance metrics described in IMC 0307, internal and external stakeholder feedback, and direction and insight that the Commission has provided in recent years. The staff analyzed this information to gauge ROP effectiveness and potential areas for improvement. The scope of the staff's self-assessment included key ROP program areas, ROP communication activities, independent and focused evaluations, ROP resources, and resident inspector (RI) demographics and staffing.

The staff performed evaluations in all four key ROP program areas: the performance indicator (PI) program, inspection program, significance determination process (SDP), and assessment program. The staff noted that the PI program continued to offer insights into ensuring plant safety and security, and the staff made several improvements to PI program guidance and implementation in CY 2011. NRC inspectors independently verified that licensees operated plants safely and securely, and the staff improved the inspection program through its biennial realignment process and continual integration of operating experience. Most notably, the staff promptly developed and implemented two separate inspections in response to the Fukushima Daiichi accident in Japan to ensure that there were no immediate safety issues at reactor sites in the United States and to gather information to inform the agency's licensing process. These prompt actions reflect the flexibilities and responsiveness of the ROP in addressing emergent potential safety vulnerabilities and verifying compliance with requirements, while working systematically with the agency's licensing process. The SDP continued to be an effective tool for determining the safety and security significance of inspection findings, and the staff made several improvements to the SDP guidance and made significant progress on other SDP initiatives. Of note, the staff perceived the need to develop an SDP tool for evaluating the significance of licensed operator performance issues. Staff implementation of the assessment program ensured that staff and licensees took appropriate actions to address performance issues in CY 2011, commensurate with their safety significance. Enclosure 1, "Reactor Oversight Process Program Area Evaluations," provides details on these ROP program evaluations.

In summary, the staff completed several significant actions in CY 2011 to improve the efficiency and effectiveness of the ROP, many of which address the commitments made as a result of last year's self-assessment.

- The staff prepared SECY-11-0076, "Improving the Public Radiation Safety Cornerstone of the Reactor Oversight Process," dated June 9, 2011, to request Commission direction

on possible enhancements to performance assessment tools within the Public Radiation Safety Cornerstone.

- The staff evaluated and reported on the effectiveness of the relocation and retention enhancements for RIs in SECY-11-0180, "Effectiveness Review of Actions to Enhance Relocation and Retention of Employees," dated December 21, 2011.

- The staff issued SECY-11-0073, "Staff Proposal to Reintegrate Security into the Action Matrix of the Reactor Oversight Process Assessment Program," dated June 5, 2011, proposing to include the Security Cornerstone in the ROP assessment program, which is governed under IMC 0305, "Operating Reactor Assessment Program," dated July 6, 2011.

- The staff reported to the Commission, in a memorandum dated June 6, 2011, its final results on how the proposed enhancements to the force-on-force physical protection SDP would improve on the CY 2009 force-on-force exercise findings.

- A working group is evaluating the need to revise ROP program guidance and training, as necessary, to ensure alignment with the Commission's "Final Safety Culture Policy Statement" (76 *Federal Register* (FR) 34773; June 14, 2011).

The staff continued to improve the ROP based on feedback from all stakeholders. The staff used a variety of communication vehicles to ensure that all stakeholders have access to ROP information and results and have an opportunity to participate in the process and provide feedback. The staff continued to conduct monthly public meetings with external stakeholders and conducted a survey to actively solicit and analyze external stakeholder feedback. The staff continued the internal feedback process and held biweekly telephone conferences and frequent meetings with internal stakeholders. In addition, the staff maintains the ROP Web pages to ensure that they remain useful tools for communicating accurate and timely information to all stakeholders.

The staff issued its external survey in an FR notice (76 FR 73738, "Solicitation of Feedback on the Effectiveness of the Reactor Oversight Process"; November 29, 2011), and used many other methods to maximize awareness of the survey's availability, including direct mailings, the NRC Web site, the NRC blog, and a press release. The survey requested responses to 20 questions specifically related to ROP performance metrics as defined in IMC 0307. The NRC received 15 responses to the survey; 7 were from utility representatives, 4 were from State or local officials, 2 were from the public, and 2 were from NRC employees. These responses are publicly available at the NRC's Agencywide Documents Access and Management System (ADAMS) at Accession No. ML12033A103. The responses were generally positive, but some respondents noted concerns and areas for improvement. The number of CY 2011 survey responses was up from the CY 2009 and CY 2007 surveys and were more in line with previous years. Nevertheless, as a result of the limited number of survey participants, the staff plans to review the content and frequency of the ROP surveys and plans to explore alternative venues to obtain stakeholder feedback.

All 45 performance metrics for the ROP met the established criteria as defined in Appendix A, "Reactor Oversight Process Self-Assessment Metrics," dated March 23, 2009, to IMC 0307. Enclosure 1 contains a brief discussion of the staff's analysis of the performance metrics and

external survey responses for each ROP program area. The annual ROP performance metric report provides data and a staff analysis for each ROP metric as well as additional detail on the results and analysis of the external survey (ADAMS Accession No. ML12037A175). The staff plans to prepare a consolidated response to the CY 2011 external survey to address the comments more specifically. The staff will post this paper, the annual ROP performance metric report, and the consolidated response to the CY 2011 external survey to the ROP Web page.

The staff continued to implement the ROP reliability initiatives effectively in 2011. The Deputy Regional Administrators initiated these activities to improve ROP implementation through sharing inspection resources, conducting Branch Chief benchmarking visits to other NRC Regions, discussing reliability topics, and assessing inspection report quality.

The staff received and evaluated feedback from licensees as part of the regulatory impact process. Over the past year, the staff received and compiled feedback from 92 site visits to 50 reactor sites across all four regional offices. More than 90 percent of the 185 distinct comments were favorable and in line with the favorable percentage and distribution of comments from previous years, although some concerns were noted. Enclosure 2, “Regulatory Impact Summary,” summarizes the feedback and the staff’s evaluation and actions to address the concerns.

The NRC collects and analyzes industry-wide data to monitor the overall safety performance of operating plants. These industry-level data also serve as indicators of ROP effectiveness. The staff is reporting the FY 2011 results of the Industry Trends Program to the Commission in an annual paper that complements this paper. The results of the Industry Trends Program, along with the results of this annual self-assessment, will be reviewed at the AARM.

Overall staff effort to implement the ROP in CY 2011, as reflected in expended hours, increased by 1 percent compared with CY 2010. Fluctuations were noted in the baseline, plant-specific, and generic safety issues inspections, as well as in the performance assessment and other ROP support activities, which demonstrates the typical level of variation from year to year. Enclosure 3, “Reactor Oversight Process Resources,” discusses ROP resources in greater detail.

Based on the annual resident demographic and site staffing analysis, the staff concluded that sites continue to be staffed with knowledgeable and experienced RIs and senior resident inspectors (SRIs). Staff turnover rates in both the RI and SRI ranks have remained relatively stable. The NRC initiated several actions to preserve an experienced and stable RI and SRI population, as described in SECY-09-0050, “Actions to Enhance Relocation and Retention for Employees,” dated March 30, 2009. In accordance with the SRM dated June 26, 2009, the staff recently reported on the effectiveness of these enhancements in SECY-11-0180, as previously noted. The staff will continue to closely monitor RI and SRI demographics and site staffing in 2012. Enclosure 4, “Resident Inspector Demographics,” provides detailed analyses of the 2011 RI and SRI demographics and site staffing.

COMMITMENTS:

The staff made five commitments in last year's ROP self-assessment to improve the efficiency and effectiveness of the ROP. The actions the staff has taken to address these commitments were summarized in the discussion above. Enclosure 1 contains additional details on these efforts.

The staff did not identify any specific commitments as a result of the CY 2011 self-assessment, but it will continue to make program improvements based on feedback and lessons learned.

CONCLUSIONS:

The self-assessment results for CY 2011 indicate that the ROP met program goals and achieved its intended outcomes. The ROP was successful in being objective, risk informed, understandable, and predictable. The ROP also ensured openness and effectiveness in support of the agency's mission and its strategic goals of safety and security. The NRC appropriately monitored operating nuclear power plant activities and focused agency resources on performance issues in CY 2011, and plants continued to receive a level of oversight commensurate with their performance. The ROP has developed into a mature oversight process over the past 12 years; however, the staff recognizes the value of continuous improvement and therefore, actively solicits stakeholder feedback to apply lessons learned and improve various aspects of the ROP.

RESOURCES:

NRC Headquarters and Regions need resources for ROP management, development, oversight, and licensee performance assessment activities. The table below includes estimates to conduct these activities in the Office of Nuclear Reactor Regulation (NRR), the Office of Nuclear Safety and Incident Response (NSIR), the Office of Nuclear Regulatory Research (RES), and the Regions.

The staff does not anticipate that these activities will utilize any resources beyond those already included in the FY 2012 Current Estimate and FY 2013 President's Budgets. Resources required beyond FY 2013 will be addressed during the Planning, Budgeting, and Performance Management process.

	FY 2012		**FY 2013**	
	FTE	**$K**	**FTE**	**$K**
NRR	30.8	1,055	30.8	1,105
NSIR	6.0	--	6.0	--
RES	9.7	3,170	9.7	3,455
Regions	37.7	--	37.7	--
TOTAL	**84.2**	**4,225**	**84.2**	**4,560**

COORDINATION:

The Office of the General Counsel has reviewed this Commission paper and has no legal objection. The Office of the Chief Financial Officer has reviewed this Commission paper and determined that there is no financial impact.

/RA by Martin J. Virgilio for/

R. W. Borchardt
Executive Director
for Operations

Enclosures:
1. Reactor Oversight Process Program Area Evaluations
2. Regulatory Impact Summary
3. Reactor Oversight Process Resources
4. Resident Inspector Demographics

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WITS 201100134/EDATS: SECY-2011-0220 (NRR)
WITS 200700335/EDATS: SECY-2012-0145 (NSIR)

ADAMS ACCESSION NO.: ML12053A297 Pkg *Concurrence via email

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