

Assessment Program Evaluation

Scope and Objectives—The staff of the U.S. Nuclear Regulatory Commission (NRC) evaluated the assessment program in accordance with Inspection Manual Chapter (IMC) 0307, “Reactor Oversight Process Self-Assessment Program.” The staff used self-assessment metrics and other pertinent information to provide insights regarding the effectiveness of the Reactor Oversight Process (ROP) in fulfilling the regulatory principles of being objective, risk-informed, understandable, and predictable, as well as ensuring safety, openness, and effectiveness. The staff also obtained input from internal stakeholders through counterpart meetings, focus groups, and the internal feedback process. In addition, the staff obtained external feedback through a *Federal Register* solicitation for comments and through periodic meetings with the industry and other stakeholders.

Based on the metric results, stakeholder feedback, and other lessons learned through ongoing program monitoring, the staff identified certain issues and actions to further improve the assessment program. Enclosure 5 contains a complete listing of implementation issues and their status. In addition, the annual ROP performance metric report, available through the Agencywide Documents Access and Management System (ADAMS), provides the data and staff analysis for each of the program area metrics (reference ADAMS Accession No. ML060590135).

Summary of Previous Self-Assessment—In SECY-05-0070, “Reactor Oversight Process Self-Assessment for Calendar Year 2004,” issued April 25, 2005, the staff described the status of the ROP assessment program and identified issues for staff action during calendar year (CY) 2005. The SECY paper and the subsequent staff requirements memorandum (SRM) identified several significant issues, including (1) the need to monitor and improve the existing guidance with regard to substantive cross-cutting issues, (2) monitor the effectiveness of the revised guidance for staff actions when plants transition out of the increased oversight columns of the Action Matrix, and (3) monitor the effectiveness of the revised guidance for considering the conclusions of independent reviews in order to self-assess the NRC’s inspection and assessment processes. As a result of the CY 2004 self-assessment, the staff committed to further improve existing guidance related to cross-cutting issues to support the midcycle review meetings in August 2005.

Substantive Cross-Cutting Issues—In CY 2004, the staff revised the guidance regarding substantive cross-cutting issues in IMC 0305, “Operating Reactor Assessment Program,” to address Commission direction and to incorporate lessons learned from implementation during the midcycle and end-of-cycle review meetings. Following the end-of-cycle review meetings in February 2005, the staff concluded that the cross-cutting issue guidance was more consistently implemented across the regions. However, the end-of-cycle review meetings revealed additional lessons learned and the industry showed significant interest in this area during the March 2005 Regulatory Information Conference. Based upon further evaluation and discussions with regional management, the staff revised IMC 0305 in November 2005 to clarify the development and treatment of substantive cross-cutting issues, provide better definitions of the human performance and problem identification and resolution sub-categories, and clarify the exit criteria for substantive cross-cutting issues. Additionally, the staff revised Appendix E to IMC 0612, “Power Reactor Inspection Reports,” to include examples of cross-cutting aspects

associated with sample findings. Stakeholders have responded positively to these revisions, as noted in the external survey. The staff will closely couple future revisions regarding cross-cutting issues with the efforts of the safety culture working group.

Evaluating Safety Culture—In SECY-04-01111, “Recommended Staff Actions Regarding Agency Guidance in the Areas of Safety Conscious Work Environment and Safety Culture,” issued July 1, 2004, the staff provided the Commission with the status of the staff’s efforts to prepare a safety-conscious work environment (SCWE) guidance document discussing best practices and to provide options for enhancing NRC oversight of SCWE issues and the broader area of safety culture. The Commission responded in an SRM on August 30, 2004, and provided further clarification in another SRM on December 21, 2005, that directed the staff to take actions in the SCWE and safety culture areas.

The staff has been working to develop an approach with involvement of internal and external stakeholders to enhance the treatment of cross-cutting areas in the ROP and in supplemental procedures to more fully address safety culture. The planned approach is within the ROP framework and is consistent with ROP basic regulatory principles. The staff expects to accomplish the safety culture enhancements to the cross-cutting areas and selected inspection procedures and manual chapters by May 2006, conduct training for regional inspectors and management by June 2006, and fully implement the enhancements by July 2006.

Evaluation of Action Matrix Deviations—As requested by the Commission and incorporated into the self-assessment program, the staff reviewed the causes of the four Action Matrix deviations during CY 2005 and evaluated them for potential improvements to the program. The following summarizes these evaluations.

(1) The NRC issued a deviation for the Davis-Besse plant in May 2005 to allow for an increased level of oversight as Davis-Besse transitioned out of the process outlined in IMC 0350, “Oversight of Reactor Facilities in a Shutdown Condition Due to Significant Performance and/or Operational Concerns,” to the normal ROP assessment process on July 1, 2005. Based on a review of this deviation, the staff revised IMC 0305 to allow the regional offices to use additional followup actions for plants that are exiting the IMC 0350 process. This revision allows the regional offices to use some of the actions that are consistent with the multiple/repetitive degraded cornerstone or degraded cornerstone columns of the Action Matrix for a period of 1 year after the original findings have been resolved. These actions, which now do not constitute a deviation from the Action Matrix, include: (1) senior management participation at periodic meetings and site visits that are focused on reviewing the results of licensee improvement initiatives, such as efforts to reduce corrective action backlogs and progress in completing the Performance Improvement Plan; (2) limited Inspection Procedure (IP) 95003, “Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input,” activities and confirmatory action letter followup inspections beyond the baseline inspection program; (3) senior management attendance at the annual public meetings; and (4) signature authority for the subsequent assessment letters. These actions were previously made available for plants exiting the multiple/repetitive degraded cornerstone of the Action Matrix. The programmatic changes made as a result of this deviation will prevent the need for similar deviations in the future.

(2) The NRC issued a deviation for the Salem/Hope Creek plants in July 2005 to renew the August 2004 deviation to provide heightened NRC oversight to closely monitor the licensee’s

actions to address significant SCWE issues. The actions taken at Salem/Hope Creek were considered in the NRC's safety culture initiative described above. Programmatic changes will be made as a result of that initiative that are expected to prevent the need for similar deviations in the future.

(3) The NRC issued a deviation for the Indian Point 2 plant in October 2005 to closely monitor the utility's performance in addressing issues associated with the spent fuel pool, including onsite tritium contamination, and improving the reliability and availability of the alert and notification system, including implementation of the backup power requirements in the Energy Policy Act of 2005. This deviation addressed a variety of performance issues unique to the site and represented a customized approach as envisioned in IMC 0305. The staff does not anticipate any programmatic changes to the assessment program as a result of this deviation, although on-site tritium issues may be a generic concern that could result in safety issue inspections in the future.

(4) The NRC issued a deviation for the Point Beach plant in December 2005 to waive the requirement for a separate supplemental inspection for a finding of white significance in the emergency preparedness cornerstone. The NRC previously inspected the performance deficiency associated with this finding in accordance with IP 95003 and its attachment 95003.01, "Additional Emergency Preparedness Cornerstone Inspection." Ongoing investigations by the Office of Investigations and the Department of Justice delayed the formal NRC technical resolution for this finding. In addition, the finding related to an old inspection item did not reflect current licensee performance; therefore, this deviation represented a unique situation. The NRC does not anticipate any programmatic changes as a result of this deviation.

Independent Assessments of Plant Performance—The Davis-Besse Lessons Learned Task Force (DBLLTF) recommended that the staff identify alternative mechanisms to independently evaluate plant performance as a means of self-assessing NRC processes (reference DBLLTF item 3.3.3(1)). The staff revised program guidance to address this concern. Specifically, the revision requires that the midcycle and end-of-cycle review meetings consider conclusions of independent evaluations, such as the Institute of Nuclear Power Operations (INPO) and the International Atomic Energy Agency (IAEA) Operational Safety Review Team inspections, in order to self-assess the NRC's inspection and assessment processes. The staff plans to evaluate the effectiveness of this program change in CY 2006.

IMC 0350 Process Improvements and Implementation—As noted in SECY 05-0070, the staff revised IMC 0350 to address DBLLTF recommendations and anticipated making further revisions as a result of recommended improvements developed by the Davis-Besse Oversight Panel. As required by IMC 0350, the Davis-Besse Oversight Panel provided several recommendations and valuable insights in a memorandum in July 2005. The staff incorporated these recommended improvements into the most recent revision to IMC 0350 in December 2005. Regarding process implementation, the staff notified the licensee in a letter dated May 19, 2005, of its intentions to disband the Davis-Besse Oversight Panel and transition from the IMC 0350 process back to the ROP (reference ADAMS Accession No. ML051400049). No additional plants were under the IMC 0350 process in CY 2005.

Assessment Program Performance Metrics—For the period covered by this self-assessment, all of the performance metrics in the assessment area met their established criteria or goals with the exception of the number of Action Matrix deviations, which increased in CY 2005 compared

to the past few years. Completed and planned staff actions to address this metric were discussed above. The other assessment program metrics that met their criteria include (1) the number of significant departures from the requirements of IMC 0305 and IMC 0350, (2) the appropriateness of actions taken for greater-than-green performance indicators and findings, (3) the number and scope of any additional actions recommended at the Agency Action Review Meeting, (4) the number of timeliness goals for the assessment program that are not met, (5) the timeliness and availability of assessment letters in ADAMS and on the NRC's Web site, (6) the number of revisions to IMC 0305 and IMC 0350, (7) the timeliness of completing supplemental inspections for risk-significant performance indicators and inspection findings, and (8) the number of instances in which plants move more than one column to the right in the Action Matrix from one quarter to the next. Two other metrics, discussed below, evaluate feedback received from stakeholders.

Stakeholder Survey Results—The staff did not conduct an internal survey in CY 2005; therefore, the input to this discussion came solely from the external survey conducted in October 2005. Participants in the external ROP survey included seven private citizens or public interest groups, nine industry representatives, four State government agencies, and one anonymous individual. The survey asked participants (1) if the ROP takes appropriate actions to address performance issues for those licensees that are outside of the licensee response column of the Action Matrix and (2) if the information contained in assessment reports is relevant, useful, and written in plain language.

The industry and States generally agreed that the NRC has taken appropriate actions for plants outside of the licensee response column. Some public interest groups criticized NRC actions, expressing specific concerns with NRC actions at plants with significant performance problems, such as Cooper, Davis-Besse, and Perry. Overall, the level of external stakeholder satisfaction in this area was generally favorable and similar to previous years.

The industry and States generally agreed that the information contained in assessment reports is relevant, useful, and written in plain English. One public interest group stated that the assessment letters contained too much boilerplate information that precluded substantive insights about performance at individual sites. The level of external stakeholder satisfaction in this area was generally favorable and similar to previous years. Enclosure 6 provides more detail on the results of the external survey.

Self-Assessment Conclusions—The staff concludes that the assessment program has met the goals and intended outcomes of the ROP based on the metric results, stakeholder feedback, and other lessons learned through ongoing program monitoring. The most significant work on the assessment program in CY 2006 will include implementing the changes associated with Commission's direction on enhancing the ROP to more fully address safety culture. Additionally, the staff plans to closely monitor the effectiveness of (1) staff actions if and when the Point Beach and Perry plants transition out of the increased oversight columns of the Action Matrix and (2) the inclusion of independent reviews such as the INPO and IAEA inspections in order to self-assess the NRC's inspection and assessment processes during the midcycle and end-of-cycle review meetings.