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

OFFICE OF THE
INSPECTOR GENERAL

November 17, 2009

MEMORANDUM TO: R. William Borchardt
Executive Director for Operations

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

SUBJECT: MEMORANDUM REPORT: AUDIT OF NRC'S MANAGEMENT DIRECTIVE 6.8, *LESSONS LEARNED PROGRAM* (OIG-10-A-03)

The Office of the Inspector General (OIG) conducted an audit of the Nuclear Regulatory Commission's (NRC) Management Directive (MD) 6.8, *Lessons Learned Program*. The audit was initiated based on concerns identified during OIG's *Audit of NRC's Oversight of Construction at Nuclear Facilities*. OIG's audit of MD 6.8 identified issues pertaining to the agencywide Lessons Learned Program (the program) that warrant your attention. Specifically,

- The program could have been more effectively communicated to NRC staff.

- Management's attention to and support for certain aspects of the program has diminished over time.

As a result, the program is missing opportunities to identify and inform NRC staff of significant agencywide lessons learned that would improve agency operations.

BACKGROUND

In 2002, NRC created the Davis-Besse Lessons Learned Task Force to evaluate the agency's regulatory processes used during the Davis-Besse event.[1] The Davis-Besse Lessons Learned Task Force recommended, among other things, that NRC conduct an effectiveness review of the actions taken in response to past lessons learned reviews. Consequently, the Office of Nuclear Reactor Regulation (NRR) established the Effectiveness Review Lessons Learned Task Force (ERLLTF). This task force found that some corrective actions implemented prior to the Davis-Besse event had not been effective. In response, the Executive Director for Operations assigned the ERLLTF to establish a program to institutionalize significant agencywide lessons learned.

On August 1, 2006, the agency issued MD 6.8 to establish the formal and structured process needed to manage corrective actions for significant agencywide lessons learned. The Executive Director for Operations has primary oversight of the program, but has delegated this responsibility to a Lessons Learned Program Manager (the program manager) and a Lessons Learned Oversight Board (the Oversight Board). The Oversight Board is composed of deputy office directors from NRR, the Office of New Reactors, the Office of Nuclear Material Safety and Safeguards, the Office of Federal and State Materials and Environmental Management Programs, the Office of Nuclear Regulatory Research (RES), the Office of Nuclear Security and Incident Response, and a representative from one of the four NRC regions. The Executive Director for Operations transferred primary oversight of the program to RES on May 26, 2009. The current program manager and Chairman of the Oversight Board are both RES employees.

MD 6.8 establishes the process for screening, evaluating, and implementing potential agencywide lessons learned. The program manager is responsible for compiling potential lessons learned issues. The program manager then schedules an Oversight Board meeting to discuss whether the selected issues should be considered as agencywide lessons learned. The Oversight Board compares the issues to threshold criteria established in MD 6.8, and only if the criteria are met can an issue be considered an agencywide lessons learned. Issues that do not meet the lessons learned criteria established in MD 6.8 may be addressed by NRC offices through other corrective action mechanisms. The program manager posts the Oversight Board meeting minutes and annual program updates in the Agencywide Document Access and Management System.

[1] In March 2002, plant workers at the Davis-Besse Nuclear Power Station found significant damage to a reactor vessel while conducting a routine repair. This problem led to a leakage of reactor cooling water, which contains boric acid and can damage other areas of the nuclear reactor.

The Executive Director for Operations assigns a lead NRC office to create and implement a corrective action plan when a lesson learned is identified. Once the lead office implements the corrective action plan, the Oversight Board determines if that plan was satisfied. Upon successful completion of the corrective action plan, the Oversight Board determines when the lead office conducts an effectiveness review. When completed, the Oversight Board reviews and makes recommendations if necessary.

PURPOSE

The objective of this audit was to determine whether NRC's agencywide Lessons Learned Program meets its intended purpose to ensure that knowledge gained from significant lessons learned is retained and disseminated in a manner that will maximize its benefit and usefulness to the staff.

RESULTS

Although NRC has identified significant agencywide lessons learned, agency staff are generally unaware of the program's lessons and activities. The purpose of the program is to ensure that knowledge gained from significant lessons learned is retained and disseminated in a manner which maximizes its benefit and usefulness to staff. However, the program could have been more effectively communicated to staff, and management's attention to and support for certain aspects of the program has diminished over time. As a result, the program is missing opportunities to identify and inform NRC staff of significant agencywide lessons learned that would improve agency operations.

Purpose of the Lessons Learned Program

MD 6.8 establishes the formal and structured process needed to manage the Lessons Learned Program. The purpose of the program is to ensure that:

- Knowledge gained from significant lessons learned is retained and disseminated.
- Knowledge is beneficial and useful to agency staff.
- Major organizational problems identified by lessons learned will not recur.

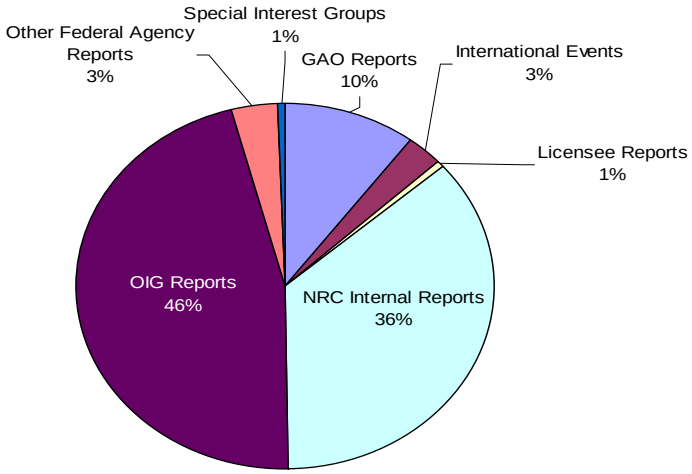
NRC Staff Generally Unaware of the Program

Although the Oversight Board has identified significant lessons learned, agency staff are generally unaware of the program's lessons and activities. Specifically, staff are unaware of the issues considered for potential agencywide lessons learned, the lessons learned identified, and who has oversight of the program.

Staff Unaware of Issues Considered and Identified as Agencywide Lessons Learned

As seen on the following chart, the Oversight Board evaluates a broad range of issues from multiple sources including the following: Government Accountability Office (GAO) reports, OIG reports, internal NRC documents, and external events. Oversight Board members also bring to the meetings issues for consideration as lessons learned. From these sources, the Oversight Board has identified a few significant agencywide lessons learned and assigned corrective actions to incorporate these lessons into agency guidance and procedures.

Sources of Issues Reviewed by the Lessons Learned Oversight Board



Source: OIG analysis and review of Oversight Board meeting minutes dated September 12, 2006, through May 5, 2009.

Although the Oversight Board has considered multiple issues and identified significant agencywide lessons learned, agency staff are generally unaware of these activities. The Oversight Board meeting minutes document that four

agencywide lessons learned have resulted from the program (see table, below). However, OIG interviewed 24 NRC office points-of-contact (POCs) identified by the Office of the Executive Director for Operations and found that 92 percent of the POCs had limited knowledge of the program. Moreover, none of the POCs could identify all the agencywide lessons learned established through the program and many could not identify where to find information about the program.

Lessons Learned Identified by the Oversight Board

Oversight Board Meeting Date	Source	Agencywide Lessons Learned Identified
11-20-2007	GAO-07-1038T, *Actions Taken by NRC to Strengthen Its Licensing Process for Sealed Radioactive Sources are Not Effective.*	There are weaknesses in the process NRC uses to approve license applications.
11-20-2007	Actions taken to address findings identified by the Information Technology (IT) Development Analysis Team, a task team established to evaluate the process used for awarding and managing large IT system development contracts.	NRC needs to incorporate greater consistency in its processes related to planning, developing, and implementing large IT systems.
11-25-2008	*Report of Lessons Learned from the June 25, 2008, Medical Event at the Executive Boulevard Building.*	Further efforts are required to clarify and expand on procedures to be followed during medical emergencies.
05-05-2009	OIG-09-A-07, *Audit of NRC's Occupant Emergency Program.*	NRC staff lacks awareness of emergency procedures, emergency equipment is inadequate and poorly maintained, and signage in NRC's White Flint complex is inadequate and inconsistent.

Source: OIG analysis and review of Oversight Board meeting minutes dated September 12, 2006, through May 5, 2009.

Current and former Oversight Board members were unable to name all of the lessons identified through the program and acknowledged that the program could do a better job of gathering issues from the "non-technical" offices. Although agencywide lessons learned identified by the Oversight Board are documented in meeting minutes and annual reports, most of the current and former Oversight Board members could only identify some of the lessons learned, and none could identify all four. OIG also noted that three out of the four identified agencywide lessons learned were "non-technical" in nature (see table above); however, the

Oversight Board does not have any representatives from the "non-technical" offices.

Potential lessons learned are also gathered through the agency's Knowledge Management (KM) program; however, there is not a direct linkage between the KM program and the Lessons Learned Program. MD. 6.8 states that a successful lessons learned program should be integrated with other agency knowledge management initiatives. An NRC staff member involved with the KM program stated that there is little interaction between the Lessons Learned Program and the KM program. Moreover, MD 6.8 does not describe how the Lessons Learned Program is linked to agency knowledge management efforts.

Staff Unaware of Program Oversight

Office POCs identified by OEDO are also unaware of who has oversight of the Lessons Learned Program. Despite statements by several Oversight Board members that the program manager position is a key element to the success of the program, most of the POCs and some Oversight Board members did not know who is designated as the program manager. OIG analysis showed that since the program's inception in 2006, there have been five different program managers. All program managers held the position for less than a year, including one who held the position for only 2 months.

Further, current and former Oversight Board members and project managers were unaware of the status of a Lessons Learned Program database, the *SharePoint Enterprise Lessons Learned* (SPELL). SPELL was developed for the Lessons Learned Program so that issues considered by the Oversight Board and the identified agencywide lessons learned could be documented and shared with agency staff. Specifically, Oversight Board members and program managers were unsure as to:

- What information should be available in SPELL.
- Who has ownership of the system.
- Who should have access to the system.

OIG identified that the Office of Information Services (OIS) currently has ownership of SPELL, which has been ready for use since November 2008. During the development of SPELL, a former project manager used the system to document two Oversight Board meetings in fiscal year 2009. However, the system has not yet been implemented for agencywide use and OIS is unsure as to who will take eventual ownership of the system. As of June 2009, SPELL has cost the agency about $342,000.

OIS demonstrated to OIG that SPELL has the capability to track the issues considered by the Oversight Board and the identified lessons learned and corrective actions associated with them. It also allows staff to submit issues for consideration as potential lessons learned.

After OIG completed this audit, NRC issued a communications plan for SPELL on October 7, 2009. The communications plan demonstrates how NRC intends to use SPELL as a mechanism to support the agency's knowledge management efforts.

The Program Has Not Been Effectively Communicated; Program Missing Opportunities

The program could have been more effectively communicated to NRC staff, and management's attention to and support for certain aspects of the program has diminished over time. As a result, the program may be missing opportunities to:

- Obtain potential lessons learned information from staff.
- Inform staff of significant agencywide lessons learned that would improve NRC operations.

Without proper knowledge of the identified agencywide lessons learned by the NRC staff associated with the Lessons Learned Program, MD 6.8 cannot achieve its purpose of disseminating agencywide lessons learned. Consequently, NRC runs the risk of repeating problems that have already been identified. By enhancing communication to the staff, the program can achieve its intended purpose to ensure that knowledge gained from significant lessons learned is retained and disseminated in a manner that will maximize its benefit and usefulness to the staff.

RECOMMENDATIONS

OIG recommends that the Executive Director for Operations:

1. Develop and implement a strategy for communicating agencywide lessons learned and program activities to agency staff.
2. Implement the plan to release SPELL for agency staff use.
3. Re-affirm and communicate management's support for the program.

AGENCY COMMENTS

OIG held an exit meeting with NRC management on September 25, 2009. After the meeting, agency management provided informal comments to the draft report. On October 8, 2009, OIG held an additional meeting with NRC management to discuss the agency's informal comments to the draft report. After that meeting, OIG provided NRC with a revised draft report and agency management generally agreed with the report's finding and recommendations. The agency decided not to provide formal comments. This report incorporates revisions made, where applicable, as a result of meetings with NRC staff.

Please provide information on actions taken or planned on each of the recommendations within 30 days of the date of this report. Actions taken or planned are subject to OIG followup as stated in MD 6.1.

SCOPE AND METHODOLOGY

To accomplish the audit objective, the OIG audit team reviewed NRC lessons learned task force reports, MD 6.8, Oversight Board meeting minutes, documentation regarding SPELL, and other program related documentation. The audit team interviewed agency staff, including past and current program managers and Oversight Board members and agency POCs.

OIG conducted this audit between June 2009 and August 2009 in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our finding and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our finding and conclusions based on our audit objective.

Major contributors to this report were Sherri Miotla, Team Leader; Eric Rivera, Audit Manager; Catherine Colleli, Audit Manager; Timothy Wilson, Senior Analyst; and Vidya Sathyamoorthy, Student Management Analyst.

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