UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

July 14, 2006

MEMORANDUM TO: Luis A. Reyes
Executive Director for Operations

FROM: Loren R. Plisco **/RA/**
Deputy Regional Administrator

SUBJECT: SUMMARY OF EFFECTIVENESS REVIEWS COMPLETED IN SUPPORT OF DEVELOPING A LESSONS-LEARNED PROGRAM

In January 2005, you chartered a team to develop a process to institutionalize agency lessons learned. During its development effort, the team determined, primarily through its benchmarking effort, that the value of a lessons-learned system is significantly enhanced by including relevant historical (i.e., legacy) lessons-learned information. By including legacy lessons-learned information, employees will immediately benefit because they will be able to identify previous lessons that are relevant to their current activities rather than waiting for the system to be populated in the future. However, effort to review the status of past corrective actions and to populate the lessons-learned system with legacy information would require significant resources to research the lessons learned, locate the relevant documents, and put the information and documents in a format that is easy to understand and that can be used by the system.

In addition to identifying and collecting legacy lessons-learned information, there is also value in reviewing the corrective actions taken in response to recommendations from previous lessons learned to determine if the corrective actions are still effective. In January 2006, the team recommended to you that a sample of legacy lessons-learned report recommendations be reviewed and that effectiveness reviews be conducted for the associated corrective actions. On January 27, 2006, you directed that effectiveness reviews be conducted for a sample of six legacy lessons-learned reports. The purpose of these reviews was to (1) better understand the extent of condition for the problems identified with institutionalizing corrective actions from lessons learned, and (2) ensure that important corrective actions continue to be implemented effectively.

The offices were requested to provide: (1) the completed templates, including the results of the effectiveness review, for the items researched by the staff; (2) the resources expended to perform the effectiveness review and template development for each report; (3) an assessment whether additional effectiveness reviews are warranted for the corrective actions reviewed; (4) an assessment of the desirability of broadening the scope of the effectiveness reviews to include additional lessons-learned reports; (5) suggested changes or additions to the list of legacy lessons-learned reports; and (6) any suggestions to improve the templates or other guidance that would be helpful to staff conducting similar reviews in the future.

Effectiveness reviews were completed for the corrective actions taken in response to the recommendations from the following legacy lessons-learned reports:

– "Loss of Vital AC Power and the Residual Heat Removal System During Mid-Loop Operations at Vogtle Unit 1 on March 20, 1990" (NUREG-1410, June 1990)

– "Indian Point 2 Steam Generator Tube Failure Lessons Learned Task Group" (S. Newberry memorandum dated October 23, 2000)

– "Potential Criticality Accident at the General Electric Nuclear Fuel and Component Manufacturing Facility, May 29, 1991" (NUREG-1450, August 1991)

– "Loss of and Iridium-192 Source and Therapy Misadministration at Indiana Regional Cancer Center, Indiana, Pennsylvania, on November 16, 1992" (NUREG-1480, February 1993)

– "Effect of Hurricane Andrew on Turkey Point Generating Station from August 20-30, 1992" (NUREG-1474, March 1993)

– "Unauthorized Forced Entry into the Protected Area at Three Mile Island Unit 1 on February 7, 1993" (NUREG-1485, April 1993)

The team has completed its review of the effectiveness review reports for the six legacy lessons-learned reports. Overall, the general conclusions from the reviews are:

- No outstanding safety issues associated with the reviewed reports were identified.

- No significant deficiencies in the effectiveness of the corrective actions were identified. However, the 2005 Hurricane Season Task Force report, which was also used to conduct the effectiveness review of the Hurricane Andrew report, found that one issue had recurred in 2005 (loss of normal communications with Waterford during Katrina). This item was given high priority status in formulating a corrective action plan. Immediate corrective action was completed prior to the start of the 2006 hurricane season. Longer term corrective actions regarding the communications issues are due in December 2006.

- Staff identified several areas where additional review may be warranted for some of the corrective actions taken that involve licensee actions. For example, in several areas specific followup inspection activities were not conducted to confirm licensee actions taken in response to the recommendations.

The reviewing offices were also requested to provide comments on the effectiveness review process. The key comments on the process from the offices were that:

- The conduct of the effectiveness reviews was worthwhile.

- The resources expended in conducting the effectiveness reviews and developing the template ranged from 100 to 200 hours, averaging approximately 150 hours for each lessons-learned report (excluding management review and administrative support).

- The staff found that the involvement of senior staff knowledgeable about the issues was essential for successfully conducting the document search, understanding the context of the information, and to providing insight into the effectiveness reviews. In some cases, the offices conducted interviews of staff involved in the lessons-learned effort to complete the story about the event, and to gain first-hand information that was not available in the documents.

- A number of difficulties were identified in conducting effectiveness reviews of legacy items:

  – The reviewers experienced significant challenges in locating key documents issued prior to the implementation of ADAMS. The resources needed to locate and gather historical documents from the legacy files were significant, and in some cases all relevant documents could not be located. Some relevant documents were identified in personal files of staff interviewed in the review that were not identified in the ADAMS search.

  - By using staff experienced and knowledgeable about the issues, there may be questions raised about the appropriate level of independence for the effectiveness review. Achieving the appropriate balance between sufficient knowledge about the topic to conduct the review and independence to ensure credibility of the review will be challenging in some cases.

  - The importance of the event, or specific corrective actions, may have changed over time. The use of current risk analysis tools may demonstrate that issues that were considered important in the past may not be risk significant.

  – The environment and regulations may have changed significantly since implementation of the original corrective actions, completely changing the context of the issue. This creates difficulty in determining whether the original corrective action was effective. For example, the corrective actions taken in response to the Three Mile Island security event have been superseded by recent increased security requirements put in place following the terrorist attacks of September 11, 2001.

- The scope of the effectiveness reviews were too broad and resources could be more efficiently used. Most of the legacy lessons-learned reports do not provide any priority to the individual recommendations - some are important to address the root cause of the problem and some are improvement items identified by the team during the course of the review.

- The reviewers suggested several format changes to the documentation template for the effectiveness reviews to assist in presenting the results more clearly and succinctly.

Following review of the effectiveness review reports and the comments from the offices, the team recommends the following:

- Continue to conduct additional effectiveness reviews of legacy lessons-learned reports. Although NSIR did not recommend additional effectiveness reviews be conducted, the bulk of the legacy lessons-learned reports involve NRR and NMSS programs.

- Limit the scope of future effectiveness reviews of legacy lessons-learned reports by reviewing each specific recommendation for threshold (using the threshold in MD 6.8, “Lessons-Learned Program”) and current relevance. The Lessons-Learned Oversight Board should review and approve future effectiveness reviews.

- Revise the draft guidance from MD 6.8 for the template and effectiveness reviews. (Completed)

- The program offices should budget resources to conduct future effectiveness reviews for legacy and future lessons-learned reports.

- The results of the reviews of legacy lessons-learned reports should be integrated into the NRC’s overall knowledge management program.

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