

February 22, 2005

MEMORANDUM TO: Luis A. Reyes  
Executive Director for Operations

FROM: J. E. Dyer, Director */RA/ R. W. Borchardt for*  
Office of Nuclear Reactor Regulation

Carl J. Paperiello, Director */RA/ J. W. Craig for*  
Office of Nuclear Regulatory Research

SUBJECT: SEMIANNUAL REPORT - STATUS OF IMPLEMENTATION OF  
DAVIS-BESSE LESSONS LEARNED TASK FORCE REPORT  
RECOMMENDATIONS

By memorandum dated March 7, 2003, the Office of Nuclear Reactor Regulation (NRR) and the Office of Nuclear Regulatory Research (RES) submitted an overall plan to implement the recommendations of the Davis-Besse Lessons Learned Task Force (LLTF). The plan requires semiannual reports on the status of implementation of all LLTF recommendations.

This is the fourth status report, covering the period from September 2004 to February 2005. During this period, on December 8, 2004, the staff also briefed the Commission on the status of implementation of LLTF recommendations.

During this period, we continued to make substantial progress in completing the recommended actions. The following table shows the progress in completing the recommendations.

PRIORITY	NUMBER	AUGUST 2004	FEBRUARY 2005
HIGH	21	13	16
MEDIUM	16	10	15
LOW	12	8	10
TOTAL	49	31	41

With two possible exceptions, we plan to complete implementation of all recommendations by May 31, 2005. The two recommendations that may not be implemented by May 2005 depend on completion of industry initiatives and potential rulemaking or other regulatory activities.

CONTACT: Brendan T. Moroney, NRR/DLPM  
301-415-3974

These are the recommendations to update the reactor pressure vessel head inspection requirements in the American Society of Mechanical Engineers (ASME) Code and the recommendation to improve the reactor coolant system (RCS) leakage limits.

The following discussion summarizes the significant activities in each of the four major categories during this report period. The attached table contains detailed information on the current status of implementation of all Davis-Besse LLTF recommendations.

### 1. Assessment of Stress Corrosion Cracking

Activities related to reactor pressure vessel head inspection included continued monitoring of licensee outage inspection results pursuant to First Revised Order EA-03-009, following up on plants discovering defects, and evaluating requests for alternatives to the order. NRC inspectors reviewed licensee inservice inspection activities and boric acid corrosion control programs using the revised inspection procedures developed in response to the LLTF recommendations.

The staff continued to support the efforts of the ASME in developing a code case for inspection of reactor vessel upper heads and upper head penetrations during refueling outages, but the ASME has not yet produced a code case as a replacement for the requirements of the order. In the interim, the order continues to provide adequate protection of public health and safety.

The staff completed its assembly of information on boric acid corrosion from domestic and foreign sources. The staff plans to issue a NUREG in March 2005 to present the information on boric acid corrosion, information previously collected on Alloy 600 nozzle cracking, and the staff's evaluation of the primary water stress corrosion cracking susceptibility models. The staff's evaluation of the data on boric acid corrosion and nozzle cracking confirms the need for additional inspections of the RCS to identify leakage from primary water stress corrosion cracking and to prevent boric acid corrosion. The staff will work with the industry to determine whether industry actions will satisfy the need for additional inspections to identify such leakage.

### 2. Assessment of Operating Experience

A team of NRR and RES staff members developed the revised operating experience program framework in December 2004, based on the recommendations of the Operating Experience Task Force. Management Directive (MD) 8.7, "Reactor Operating Experience Program," and the associated handbook have been implemented in draft form for 1 year and will be finalized at the end of this evaluation period. NRR Office Instruction LIC-401, "NRR Operating Experience Program," was revised to conform with the new MD.

The follow-on verification of licensee actions in response to previous generic communications, focusing on Generic Letter 89-13, "Service Water Problems Affecting Safety-Related Equipment" and Regulatory Issues Summary 2004-05, "Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power," was completed in November 2004. The review concluded that generic communications are generally effective in addressing issues and informing licensees. The review also concluded that effectiveness is enhanced when there are followup inspection activities through temporary instructions or the Reactor Oversight Process (ROP). This activity also satisfied the follow-on review of resolved generic issues (GIs), since

issues are generally resolved by issuing generic communications. Thus, a second verification of generic communications would have been redundant.

The RES staff completed its evaluation of the guidance for proposing candidate GIs and revised MD 6.4, "Generic Issues Program."

### 3. Evaluation of Inspection, Assessment, and Project Management Guidance

Management review of the report from the task force that evaluated the effectiveness of previous lessons learned reports was completed. The task force recommended development of an agency-wide corrective action program, based on the finding that previous LLTFs had conducted thorough reviews and identified areas for improvement, but the recommendations were not always effectively implemented. Management accepted this recommendation and a team has been formed to develop a corrective action program. The program will be ready for implementation by December 31, 2005. The Commission endorsed this action in a staff requirements memorandum (SRM) after the December 8, 2004, briefing and directed the staff to provide the development and implementation schedule by March 15, 2005.

The Commission issued an SRM on August 30, 2004, responding to the staff's proposals for reviewing licensee safety culture and safety-conscious work environment. The SRM requires the staff to enhance the ROP treatment of crosscutting issues, rather than develop an inspection process to systematically address safety culture. Based on the Commission's direction, action on the LLTF recommendation is complete and future actions will be tracked in response to the SRM.

The staff identified two alternate plant performance evaluation mechanisms for self-assessing NRC processes. These are the evaluations performed by the Institute for Nuclear Plant Operations and the International Atomic Energy Agency. Inspection Manual Chapter (IMC) 0305, "Operating Reactor Assessment Program," was revised to include consideration of these independent assessments during mid-cycle and end-of-cycle plant performance reviews and the annual ROP self-assessment. If these alternate mechanisms identify deficiencies that were not identified in NRC reviews, the staff will determine whether baseline inspection resources should be directed to evaluate possible deficiencies and whether process changes are warranted.

A metric for resident inspector staffing was pilot-tested during 2004 and issued to the regions for use in December 2004. A criterion has been established to maintain at least 90-percent resident inspector coverage at reactor sites. The metric will be evaluated as part of the ROP self-assessment process.

### 4. Assessment of Barrier Integrity Requirements

The Argonne National Laboratory report on the Barrier Integrity Research Program was issued as NUREG/CR-6861 in December 2004. A working group of NRR and RES staff is using the report to evaluate whether the NRC should revise RCS leakage limits and require plants to install enhanced leakage detection equipment. The group will make recommendations by March 31, 2005.

A second working group of NRR and RES staff is evaluating the adequacy of analysis methods for assessing the risk of passive component degradation. This group will also make recommendations by March 31, 2005.

Inspection guidance in IMC 2515, Appendix D, "Plant Status," was revised to provide additional guidance and techniques necessary for assessing potential adverse trends and action levels in response to increasing levels of RCS unidentified leakage.

Attachment: Status of LLTF Recommendations

A second working group of NRR and RES staff is evaluating the adequacy of analysis methods for assessing the risk of passive component degradation. This group will also make recommendations by March 31, 2005.

Inspection guidance in IMC 2515, Appendix D, "Plant Status," was revised to provide additional guidance and techniques necessary for assessing potential adverse trends and action levels in response to increasing levels of RCS unidentified leakage.

Attachment: Status of LLTF Recommendations

DISTRIBUTION: See next page

Package No.: ML050420473

ADAMS Accession No: ML050420471 Attachment: ML050420472

NRR-106

OFFICE	LPDII-2: Lead PM	LPDII-2: LA	Tech Editor	LPDII-2: SC	LPDII: PD	NRR: LT	NRR: D
NAME	BMoroney	BClayton	PKleene	MLMarshall	EHackett	LMarsh	JDyer (RWBorchardt for)
DATE	02/16/05	02/16/05	02/15/05	02/16/05	02/16/05	02/16/05	02/22/05

OFFICE	DET/MEB:Lead Eng	DET/MEB/CMS:SC	DET/MEB:BC	DET:D	RES:D
NAME	MSrinivasan	ALee	TBergman	MMayfield	CPaperiello (JCraig for)
DATE	02/14/05	02/14/05	02/14/05	02/16/05	02/22/05

**OFFICIAL RECORD COPY**

SUBJECT: SEMIANNUAL REPORT - STATUS OF IMPLEMENTATION OF DAVIS-BESSE  
LESSONS LEARNED TASK FORCE REPORT RECOMMENDATIONS

Dated: February 22, 2005

DISTRIBUTION:

NON-Public  
NRR Mail Room (WITS20030006)  
EDO Reading File  
PDII-2 Reading File  
RidsEdoMailCenter  
RidsNrrOd  
RidsNrrAdpt  
RidsNrrPmas  
RidsNrrDlpm  
RidsNrrDe  
RidsNrrDrip  
RidsNrrDipm  
RidsNrrDssa  
RidsNrrDlpmLpdii  
RidsNrrDlpmLpdii-2  
RidsNrrPMBMoroney  
TReis  
SRichards  
JAndersen  
RGibbs  
RidsResOd  
JCraig  
MMayfield  
TBergman  
ALee  
CAder  
MSrinivasan  
TClark  
RidsRgn1MailCenter  
RidsRgn2MailCenter  
RidsRgn3MailCenter  
RidsRgn4MailCenter  
RSchroll, SECY  
ALipuma, OIG  
ABlanco, OIG