

March 24, 2004

MEMORANDUM TO: Stephen Dembek, Chief, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

FROM: Meena Khanna, Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

/RAI

SUBJECT: SUMMARY OF MARCH 4, 2004, SENIOR MANAGEMENT MEETING
WITH THE BOILING WATER REACTOR OWNERS GROUP (BWROG)
(TAC NO. MC0931)

On March 4, 2004, the staff held a public meeting with the BWROG, whereby industry actions to address potential adverse flow effects resulting from power uprate operation including boiling water reactor (BWR) steam dryer integrity and other concerns were discussed. Mr. James Dyer, Director of the Office of Nuclear Reactor Regulation, provided opening remarks, which included the staff's review status of the Davis-Besse restart issue, Quad Cities steam dryer crack issues, various grid reliability issues, emergency preparedness, and budget issues regarding advanced reactor permits.

The meeting continued with a discussion of the status of several BWROG topical reports (TRs) that are currently under staff review. The staff addressed the review status for the containment isolation valve allowed outage time TR, the banked position withdrawal sequence TR, and the technical specification task force change regarding the revision to the safety limit minimum critical power ratio (TSTF-357). With respect to TSTF-357, the staff indicated that it would get back to the BWROG, after its internal meeting, if a meeting to provide clarification would be needed.

The BWROG then provided a brief discussion of the TRs that will be submitted in the near future. The discussion included an overview of the alternate source term for extended fuel burn-up, and the separation of loss-of-offsite power and large break loss-of-coolant accident. The BWROG indicated that they would like to set up a meeting with the staff prior to their submittal of the alternate source term for extended fuel burn-up TR.

The meeting continued with the BWROG's discussion of the status of industry efforts related to power uprate. The BWROG indicated that its goals, with respect to the BWR extended power uprate (EPU) issue, were to ensure that operating experience and lessons-learned are incorporated into power uprate programs to assure safe and reliable operations and to provide oversight for a broad range of industry efforts related to BWR power uprates.

The BWROG indicated that the responsibilities of the industry EPU initiatives have been assigned to various licensees, vendors and owners groups. The specific responsibilities were addressed. Exelon and GE Nuclear Energy (GENE) have the responsibility for the EPU extent of condition evaluation for Dresden and Quad Cities, which is scheduled for completion on May 28, 2004. GENE is responsible for modifying the EPU process and evaluations, as required, which is scheduled for completion in June 2004. GENE has the responsibility of revising Service Information Letter (SIL) 644, to include more recent experience, which is scheduled to be completed in April 2004. The Boiling Water Reactor Vessel and Internals Project (BWRVIP) is responsible for submitting a TR on steam dryer inspection and evaluation guidelines which is scheduled for completion in September 2004. The BWRVIP and GENE will also validate a methodology for determining steam dryer loading using main steam acoustic circuit analysis and verification with scaled model testing and plant data. In addition, the BWRVIP will revise BWRVIP-06, "BWR Vessel and Internals Project, Safety Assessment of BWR Reactor Internals," to include revised guidance for addressing loose parts which is scheduled to be submitted in September 2004.

The BWROG then provided a discussion of its responsibilities regarding the assessment of industry experience. The BWROG indicated that they completed the analysis of the INPO power uprate and cycle events database on February 17, 2004. The BWROG EPU survey summary and evaluation is scheduled for completion in March 2004. In addition, the BWROG will be monitoring the best practices for steam dryer performance, which is to be completed in the third quarter of 2004.

The BWROG oversight of industry activities include: reviewing EPU extent of condition evaluation process and pilot for Dresden and Quad Cities which was completed on February 17, 2004; reviewing EPU-related vulnerabilities for "Tier 1" systems from EPU extent of condition evaluation process, which is to be completed in April 2004; and reviewing EPU extent of condition final recommendations, which is to be completed in May 2004. The BWROG will then issue a letter to the NRC summarizing the results of the BWROG EPU survey, the evaluation of the INPO database, and the integrated industry plan, which is scheduled to be sent in May 2004. In addition, the BWROG will develop EPU implementation recommendations for the BWR owners by July 2004, and they will continue to review the results of the industry programs and BWROG recommendations with NRC management. The BWROG indicated that they would see what capabilities are available to inform the NRC of the BWROG EPU implementation and recommendation status for each of the BWR plants.

The BWROG provided its preliminary results of the EPU survey. They indicated that responses had been received from 11 of the 13 BWRs. In addition, it was stated that almost all of the failures were related to flow-induced vibrations in the main steam, feedwater, and electro hydraulic EHC systems. In addition, the BWROG provided its preliminary results of the INPO database review of events from 1992 through January 2004. From the twelve INPO entries that were considered to be significant, all of the events were noted to have been caused by vibration, except for one, which was related to high transformer oil temperature.

The BWROG indicated that it will continue to provide oversight for the following activities: the BWRVIP, GENE, and Exelon's initiated efforts to address steam dryer reliability, results of the GENE and Exelon extent of condition evaluations to be used to improve power uprate processes, and the initiation of additional work on vibration monitoring and evaluation based on the review of industry data.

The staff then provided a status of Generic Safety Issue (GSI) -80, "Pipe Break Effects on Control Rod Drive Hydraulic Lines in the Drywells of BWR Mark I and II Containments" and GSI-189, "Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion During Severe Accidents."

The BWROG then provided a brief discussion regarding the Joint Owners' Group motor-operated valve (MOV) periodic verification program. In addition, the BWROG also provided a program status update of the direct current MOV methodology.

The staff thanked the BWROG for the presentation. This meeting was informational. No regulatory decisions were made. The meeting handouts can be found in ADAMS under Accession Nos. ML040650499 and ML040650502.

As a result of the meeting, the BWROG or NRC staff has agreed to provide the following:

1. The staff will inform the BWROG whether a clarification meeting for TSTF-357 is needed.
2. The BWROG will inform the staff of when they would like to set up a meeting to discuss the alternate source term for extended fuel burn-up TR.
3. The BWROG agreed to pursue options available to inform the staff of the BWROG EPU implementation and recommendation status for each of the BWR plants.

The BWROG indicated that they would like to have another meeting on August 12, 2004, to update the staff of its efforts related to the EPU.

Project No. 691

Attachment: Meeting Attendees

cc w/att: See next page

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Meeting Notice No.: ML040440511

PKG: ML040850308

ADAMS Accession No.: ML040840620

NRC-001

OFFICE	PDIV-2/PM	PDIV-2/LA	PDIV-2/SC
NAME	MKhanna*	EPeyton*	SDembek
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*previously concurred

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ATTENDANCE LIST

MEETING WITH THE BOILING WATER REACTORS OWNERS GROUP

STEAM DRYER INTEGRITY AND OTHER EXTENDED POWER UPRATE CONCERNS

MARCH 4, 2004

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J. Meister (Exelon)
J. Conen (DTE)
R. Libra (DTE)

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OTHER

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R. Dyle, SNC
M. Knapik, McGraw-Hill
A. Wyche, Bechtel
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