

October 3, 2003

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

FROM: Alan B. Wang, Project Manager, Section 2 **/RA/**
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF MEETING WITH THE BOILING WATER
REACTOR OWNERS GROUP (BWROG) REGARDING OPTION 3,
LOSS-OF-COOLANT ACCIDENT/LOSS-OF-OFFSITE POWER
RISK-INFORMED IMPLEMENTATION

On September 17, 2003, a meeting was held between the BWROG and the NRC staff to discuss the BWROG efforts to separate the loss-of-offsite power (LOOP) from loss-of-coolant accidents (LOCA) based on a risk-informed approach. The BWROG reiterated the logic and advantages that separating LOCA-LOOP could provide. The BWROG presentation dealt mostly with the thermal-hydraulic results and analyses needed in support of Option 3.

The BWROG provided some of the results of their thermal-hydraulic analyses from MAAP. The analyses were based on a generic boiling water reactor (BWR) model assuming the following: (1) BWR 4 with Mark 1 containment, (2) single unit, (3) did not assume any plant specific enhancements, (4) added consequential LOOP, and (5) all large break LOCA-LOOP events go directly to core damage. The BWROG was hoping that a generic model could be used to bound most plants. The application of the proposed licensing topical report (LTR) would only require a plant to demonstrate that the generic model bounds its configuration or provide plant-specific analyses for where it deviates. The staff asked if the adoption of this LTR would affect the emergency operating procedures (EOP). The BWROG stated the EOPs would need to be revised on a plant-specific basis. MAAP was used for identifying the limiting cases for detailed studies to be analyzed using TRACG. MAAP was used to analyze (1) the effects of changing diesel generator unavailability and failure rate, (2) operator action failure rate, and (3) automatic load of battery chargers. Using MAAP for three cases (1) diesels only, (2) AC independent injection, and (3) black start capability, the results indicate that the proposed changes have a negligible effect on large early release fraction (LERF). The BWROG hopes to have two TRACG runs by the next meeting. Based on the results of the MAAP runs, the requirement to mitigate all breaks with on-site power is not necessary to protect the health and safety of the public.

The BWROG again asked the staff if we had considered further if the GENE generic probabilistic risk assessment model would be a good pilot for the DG-1122 submittal and if it did, could it qualify for a fee waiver. The staff said it still had not reached a decision.

EPRI gave a short presentation on EPRI activities that coincide with the BWROG's efforts. EPRI is or has performed the following: (1) expert elicitation for frequency of LOOP given a LOCA, (2) grid reliability monitoring method investigation - response to NRC concern for frequency of LOOP given a LOCA, (3) evaluation of NRC analysis of "post deregulation" LOOP, (4) investigating the nuclear power plant impacts of the August 14, 2003, blackout, (5) studies of double sequencing for pressurized water reactors and BWRs, and (6) BWR large LOCA taxonomy.

The BWROG noted that it is planning to have an LTR to the staff before the end of the year. They propose to have one more meeting before submitting the LTR. The BWROG wants to minimize the request for additional information by getting as much NRC staff input as possible before the submittal of the LTR. The BWROG is waiting for a lead plant or plants. The staff thanked the BWROG for the presentation and encouraged an update on developments. The staff expressed that this would be an ambitious undertaking as the NRC staff believes using a generic model that bounds all plants would have limited applicability. This meeting was informational. No regulatory decisions were made. The BWROG proposed to meet in four to six weeks.

The meeting handout can be found in ADAMS under Accession No. ML032691224. The attendance list is attached.

Project No. 691

Attachment: Meeting Attendees

cc w/att: See next page

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MEETING WITH THE BOILING WATER REACTORS OWNERS GROUP

LOCA/LOOP OPTION 3

SEPTEMBER 17, 2003

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