February 1, 2000

MEMORANDUM TO: Cynthia A. Carpenter, Chief
Generic Issues, Environmental, Financial
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Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

FROM: /s/ Peter C. Wen, Project Manager
Generic Issues, Environmental, Financial
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Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF JANUARY 13, 2000, MEETING WITH THE NUCLEAR ENERGY INSTITUTE AND ELECTRIC POWER RESEARCH INSTITUTE REGARDING PWR MATERIALS RELIABILITY PROJECT

On January 13, 2000, a public meeting was held at the Nuclear Regulatory Commission (NRC) offices in Rockville, Maryland, with NRC senior management and executives of the pressurized-water reactor (PWR) Material Reliability Project (MRP). Attachment 1 lists attendees at the meeting, and Attachment 2 contains a copy of the material presented at the meeting.

The meeting was held so that MRP could inform NRC management of the status of the project activities, the schedule for product development, and anticipated NRC staff interactions in the coming years. The MRP represents member utilities, the Electric Power Research Institute (EPRI), and the Nuclear Energy Institute (NEI) to deal generically with PWR-specific technical issues.

During the meeting, a number of topics were discussed:

- Alloy 600 Issue - There are no technical issues pending, and the NRC is closing out Generic Letter 97-01. The MRP is developing inspection and evaluation guidelines for industry use.
- Reactor Pressure Vessel Integrity - The MRP will work with the staff to reevaluate the pressurized thermal shock criteria. The MRP also plans to use the master curve approach and the revised ASTM E-900 embrittlement correlation to address reactor pressure vessel integrity issues.
- Reactor Internals - The MRP informed the staff of the current worldwide inspection and research and development program in this area. The potential issues in this area include swelling, stress relaxation, stress-corrosion cracking, and irradiation embrittlement. The MRP's goal is to proactively manage the reactor internals aging issues.

- Thermal Fatigue Issue - The MRP is working on providing a consistent set of guidelines and methodology (computer code) for addressing piping thermal fatigue issues.
- Coordination of Reactor Pressure Vessel Issues - The material variability of the test sample was discussed. The MRP proposed a definition for "surrogate material" in the context of reactor vessel evaluations. The staff did not accept the proposed definition, but agreed that a definition agreed to by the staff and industry would be useful. It was agreed that such a definition would be pursued as part of ongoing work on reactor vessel integrity issues that NRC and industry are participating in.

The staff and MRP representatives agreed that the following items will be followed up:

1. The MRP is working on its Alloy 600 Inspection and Evaluation Guidelines and will keep the staff informed of its progress.

2. The staff will discuss its reevaluation of the embrittlement correction with the ASTM E10.02 committee as that committee considers revisions to the E-900 standard.

3. The MRP will submit the Interim Thermal Fatigue Management Guidelines for the NRC staff's review in September 2000. At a later date, the industry will propose a plan for implementation, depending on the conclusions pertaining to safety significance, plant economics, and reliability considerations.

4. Regarding the application of the master curve approach, the MRP will propose a definition of "surrogate material." A further dialogue on this issue may be accomplished through the Kewaunee licensee's response to the staff's questions on this issue.

5. The MRP will further discuss the issue related to "heat treatment" in its presentation on the characterization of the vessel fabrication and test plate diagram (MRP Presentation Slide # 26) .

6. The MRP will consider the form of its products in the context of existing Part 50 operating licenses and also in the context of supporting license renewal applications and 10 CFR Part 54.

Finally, discussion during the meeting on how the MRP initiatives would be implemented and credited in the regulatory process led to a discussion of the broader issue of crediting industry voluntary initiatives in lieu of regulatory action. The staff is in the process of developing guidelines on this subject and noted the importance of receiving stakeholders input to assist in this effort. In particular, the staff pointed out that a *Federal Register Notice* (FRN) soliciting comments on this subject had been issued (64FRN238, dated December 13, 1999) and specifically encouraged the industry, through NEI, to respond to the FRN with comments up to and, preferably including, a set of proposed guidelines.

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NRC/MRP SENIOR MANAGEMENT MEETING
LIST OF ATTENDEES
January 13, 2000

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Brian Sheron	NRR
Jack Strosnider	NRR/DE
Bill Bateman	NRR/DE/EMCB
Chris Grimes	NRR/DRIP/RLSB
P.T. Kuo	NRR/DRIP/RLSB
Peter Wen	NRR/DRIP/RGEB
Michael Mayfield	RES/DET
Mark Kirk	RES/DET/EMB
Mark Marchi	Wisconsin Public Service
Mike Tuckman	Duke Power
Michael Robinson	Duke Power
Jeff Gilreath	Duke Power
Jack Woodard	Southern Nuclear Co.
Rick Mullins	Southern Nuclear Co.
Bob Hardies	BG&E
Dana Covill	GPU Nuclear
Mike Short	Southern California Edison
Dave Modeen	NEI
Gary Vine	EPRI
Avtar Singh	EPRI
Albert Machiels	EPRI
Altheia Wyche	Serch/Bechtel

Attachment 1