January 31, 2007

MEMORANDUM TO: Stacey L. Rosenberg, Chief
Special Projects Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

FROM: Tanya M. Mensah, Senior Project Manager **/RA/**
Special Projects Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF NOVEMBER 30 - DECEMBER 1, 2006, CATEGORY 2 PUBLIC MEETING WITH THE ELECTRIC POWER RESEARCH INSTITUTE (EPRI) AND THE MATERIALS RELIABILITY PROGRAM (MRP) COMMITTEE TO DISCUSS IMPLICATIONS OF WOLF CREEK DISSIMILAR METAL WELD INSPECTIONS (TAC NO. MD0694)

On November 30, 2006, a Category 2 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff and industry representatives at NRC headquarters. The meeting was scheduled to begin on November 30, 2006, and end on December 1, 2006. However, the meeting was completed on November 30, 2006, and the second meeting day was not needed. A list of meeting attendees is enclosed.

The purpose of this meeting was to discuss the NRC staff and industry analyses performed to understand the implications of the recent pressurizer nozzle dissimilar metal butt weld inspection results obtained at Wolf Creek in October 2006. These analyses were performed to obtain information used in evaluating the butt weld inspection schedules contained in Materials Reliability Program (MRP)-139, "Primary System Piping Butt Weld Inspection and Evaluation Guideline." MRP-139 is available in the NRC's Agencywide Documents Access and Management System (ADAMS) at Accession No. ML052150196. It was anticipated that certain portions of this meeting pertaining to proprietary MRP documents would be closed. However, it was determined during the meeting that it would not be necessary to discuss proprietary information.

The first presentation provided background information on studies performed by the industry to support the MRP-139 guidelines. The industry representatives also presented a summary of how they performed their analyses in the MRP supporting documents and how the results of the calculations were obtained that were presented during a related public meeting on November 16, 2006. The November 16, 2006, public meeting summary is located in ADAMS Accession No. ML063320131.

The NRC staff presented a summary of the methods, models, assumptions, and loadings used to analyze the Wolf Creek inspection results. The industry representatives agreed that the models and assumptions used by the NRC staff were reasonable for the fracture mechanics scoping study that was performed.

Subsequent discussions included concepts for improvements that could be made to the fracture mechanics scoping studies. The NRC staff indicated that it did not plan to perform more calculations but would perform qualitative evaluations of the effect that the improvements may have on analysis results. The industry representatives indicated that it may quantitatively characterize the effect of including residual stress relaxation in the fracture mechanics analyses.

An EPRI representative indicated that EPRI is recasting the plant status/survey information in a format that will make the information more readily usable. EPRI will also incorporate changes that have occurred in inspection/mitigation plans since the survey was sent in to the NRC in November (ADAMS Accession No. ML063190480).

An industry representative indicated that all plants plan to have inspected or mitigated their pressurizer nozzle dissimilar metal butt welds by the spring of 2008, rather than the fall of 2008, with the exception that at one plant, an examination performed was not fully qualified to the requirements of Appendix VIII, "Performance Demonstration for Ultrasonic Examination Systems," of Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code." It was not fully qualified to the requirements because the weld connection involves a cast stainless steel pipe. The examination was performed using a combination of an ASME Section XI, Appendix VIII, procedure and an ASME Section XI, Appendix III, "Ultrasonic Examination of Vessel and Piping Welds," procedure to obtain full coverage. No indications were found - this weld will be mitigated in the fall of 2008.

An industry representative described a concept for a probabilistic evaluation of the available inspection data for primary water stress corrosion cracking in piping. The objective of the probabilistic evaluation would be to characterize the change in likelihood of a loss-of-coolant accident as a function of inspection time until spring 2008 using the Wolf Creek flaws, growth rates provided in MRP-115, "Crack Growth Rates for Evaluating Primary Water Stress Corrosion Cracking (PWSCC) of Alloy 82, 182, and 132 Welds," (ADAMS Accession No. ML051450555), and NRC staff analysis models and assumptions. The NRC staff indicated that such an analysis may provide useful insights.

More detailed information is contained in the following presentation slides and meeting handouts:

- NRC Presentation Slides (ADAMS Accession No. ML063560346)
- Industry Presentation Slides and Draft Report (ADAMS Accession Nos. ML063560358 and ML063560363)

Members of the public were in attendance. No public meeting feedback forms were received.

Project Nos. 669 and 689

Enclosure: List of Attendees

cc w/encl: See next page

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ADAMS Package Accession Number: ML070320482
Meeting Notice Accession Number: ML063210259
Meeting Handout Accession Numbers: ML063560346, ML063560358, ML063560363
Meeting Summary Accession Number: ML063560371 NRC-001

OFFICE	PSPB/PM	PSPB/LA	DCI/CPNB	PSPB/BC
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DISTRIBUTION FOR MEETING SUMMARY:

Dated: January 31, 2007

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List of Meeting Attendees	
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Theresa Clark	NRC
Ken Chang	NRC
Dana Covill	Progress Energy
Bradley Cox	BWX Technologies
Aladar Csontos	NRC
Jim Davis	NRC
Guy DeBoo	Exelon
Reddy Ganta	Westinghouse
Kim Gruss	NRC
Heshan Gunawardane	AREVA NP
Gary Hammer	NRC
Bob Hardies	NRC
Craig Harrington	Electric Power Research Institute (EPRI)
Daniel Horner	McGraw-Hill
Kevin Hour	BWX Technologies
Kaihwa Hsu	NRC
Steve Hunt	ESH, LLC
Greg Kammerdeiner	FENOC
Tanya M. Mensah	NRC
Iouri Prokofiev	NRC
Pete Riccaroella	Structural Integrity
Jim Riley	Nuclear Energy Institute (NEI)
Dave Rudland	EMC^2
Simon Sheng	NRC
William Sims	Entergy
David A. Steininger	EPRI
Edmund Sullivan	NRC
Dennis Weakland	First Energy
Glenn White	Dominion Engineering, Inc.
Ken Yoon	AREVA NP

ENCLOSURE

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Project No. 689
Project No. 669

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