

October 12, 2004

MEMORANDUM TO: Cathy Haney, Program Director  
Policy and Rulemaking Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

FROM: Joseph L. Birmingham, Project Manager */RA/*  
Policy and Rulemaking Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF SEPTEMBER 8, 2004, MEETING WITH NUCLEAR  
ENERGY INSTITUTE (NEI) AND ELECTRICAL POWER RESEARCH  
INSTITUTE (EPRI) ON REACTOR VESSEL CLOSURE HEAD (RVCH)  
PENETRATIONS SAFETY ASSESSMENT

On September 8, 2004, Nuclear Regulatory Commission (NRC) staff met with representatives of the Nuclear Energy Institute, industry, and the EPRI Material Reliability Program (MRP), in a public meeting at NRC headquarters in Rockville, Maryland. At the meeting, industry presented proposed inspection guidance based on its safety assessment for the RVCH penetrations. Meeting attendees are identified in Attachment 1. The presentation viewgraphs, a list of reference documents, and certain backup slides presented at the meeting by industry are in Attachment 2 in Powerpoint format (ADAMS Accession No. ML042530295 ).

Industry presented to the staff the proposed inspection guidance contained in EPRI MRP-117, "(DRAFT): Inspection Plan for Reactor Vessel Closure Head Penetrations in US PWR Plants." The technical basis for the proposed guidance is in MRP-110 which industry presented to the staff at an April 2004 meeting. The presentation slides in Attachment 2 provide an overview of MRP-117 and outline the inspection guidance described in detail in MRP-117. The inspection guidance provides inspection timing based on the following considerations:

(1) the baseline inspection is based on Effective Degradation Years (EDY)

EDY = EFPY normalized to 600°F using 50 kcal/mole activation energy  
(characteristic of PWSCC initiation)

(2) the examination frequencies are based on Re-Inspection Years (RIY)

RIY =  $\Delta$ EFPY normalized to 600°F using 31 kcal/mole activation energy  
(characteristic of PWSCC growth).

Detailed guidance was given for frequency of visual and volumetric examinations and also for examination coverage.

The staff asked questions on the guidance particularly on the application of Re-Inspection Years as the use of RIY differs from the use of EDY as used in Order EA-03-009. The staff indicated that it would look closely at the proposed inspection plan delineated in MRP-117.

The MRP then discussed future actions. The MRP is currently working with the American Society of Mechanical Engineers (ASME) to develop a Code Case which would be applicable for the reactor vessel closure head and penetration nozzles. The Code Case is essentially based on the work developed by the MRP and documented in several EPRI reports including MRP-110 and MRP-117. The goal of the MRP is to revise the ASME Code to incorporate the proposed inspection requirements for the reactor vessel closure head. The staff discussed the possibility of providing comments on MRP-117 to the MRP in November 2004. The staff comments would be beneficial to a formal ASME review of the draft code case tentatively scheduled for December 2004 with ASME approval of the final code case possibly in the second quarter of 2005. The MRP stated that it planned to issue a final MRP-117 but whether it would be used as a stand-alone approach had not been determined.

At the end of the meeting, the staff noted that the MRP had accomplished a comprehensive review and analysis of a large amount of data and material. The staff indicated that the MRP presentation provided a better understanding of the problem which should be beneficial in future staff and industry actions to address the issue. The staff agreed to try to hold a teleconference to discuss the staff's comments on MRP-117 in November 2004.

Having completed the discussion the staff asked for public comments or questions. After answering the public questions, the staff adjourned the meeting.

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NAME	JBirmingham	TChan	EMcKenna
DATE	10/ 04 /2004	10/06/2004	10/12/2004

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**List of Attendees for September 8, 2004**  
**Material Reliability Program on Reactor Pressure Vessel Head Penetrations**  
**MRP-117 Inspection Guidance**

<b>NAME</b>	<b>ORGANIZATION</b>
Bill Bateman	NRC/NRR/EMCB
Terence Chan	NRC/NRR/EMCB
William Koo	NRC/NRR/EMCB
Bill Cullen	NRC/RES
Steve Long	NRC/NRR/DSSA
Ken Chang	NRC/NRR/RLEP
Todd Mintz	NRC/RES
Eric Reichelt	NRC/NRR/EMCB
Andrea Keim	NRC/NRR/EMCB
Wallace Norris	NRC/RES
Jay Collins	NRC/NRR/EMCB
Joe Birmingham	NRC/DRIP/RPRP
Jim Riley	NEI
Christine King	EPRI
Larry Matthews	Southern Nuclear
Craig Harrington	TXU Energy
William Sims	Entergy
Jack Lareau	Westinghouse
Steve Fyfitch	AREVA
Pete Riccardella	Structural Integrity Associates
Glenn White	Dominion Engineering
Altheia Wyche	SERCH/Bechtel
Dan Horner	McGraw Hill
Deann Raleigh	LIS, Scientech

Nuclear Energy Institute

Project No. 689

cc: Via email

Mr. Jim Riley, NEI  
jhr@nei.org

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**Distribution:** Mtg w/NEI MRP/EPRI on RPV head materials issues 9/08/04  
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