

October 15, 2003

MEMORANDUM TO: Cathy Haney, Program Director  
Policy and Rulemaking Program  
Division of Regulatory Improvement Programs, NRR

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

SUBJECT: SUMMARY OF SEPTEMBER 11, 2003 MEETING WITH NUCLEAR  
ENERGY INSTITUTE (NEI) AND MATERIALS RELIABILITY PROGRAM  
ON BUTT WELD SAFETY ASSESSMENT

On September 11, 2003, Nuclear Regulatory Commission (NRC) staff met with representatives of the Nuclear Energy Institute, the Electrical Power Research Institute (EPRI) Materials Reliability Program (MRP) and industry in a public meeting at NRC headquarters in Rockville, Maryland. At this meeting, industry discussed the interim Butt Weld Safety Assessment (MRP-44, Part 1); related recent inspections and results; NRC's comments and MRP's responses on MRP-44, Part 1; contents and schedule of the Final Safety Assessment, and future planned activities. MRP-44, Part 1, was an interim report dated April 2001 and represented the status of industry's safety assessment of Alloy 82/182 pipe butt welds at that time. The meeting attendees are listed in Attachment 1. The information presented by the MRP at the meeting is in Attachment 2 (ADAMS Accession No. ML032720003).

After introductions, the MRP gave a review of the MRP-44, Part 1, assessment methodology, conclusions, and recommendations that reflected the information and understanding of the MRP in 2001. The MRP presented some specific information from MRP-44, Part 1, Appendices A and B on the safety assessment for Westinghouse and Combustion Engineering, and Babcock and Wilcox designed plants. That information showed that there was not an immediate safety concern for cracks in Alloy 82/182 butt welds. The MRP presented information from recent inspections in domestic and foreign reactors which showed that about 150 dissimilar metal butt welds in domestic reactors had been inspected since 2001 with no indications detected but that some indications had been found in foreign reactors.

The MRP discussed their responses to NRC comments on MRP-44, Part 1, provided to the MRP in a letter dated June 14, 2001. The ADAMS accession number for the NRC letter is ML011670041. Details of the MRP responses to the comments are contained in Attachment 2. In general, the MRP response indicated that, while there was a basis for continued safe operation, additional work was necessary to understand the potential for significant circumferential cracking. Other NRC comments addressed staff expectations for the final safety assessment, visual inspections for leaks, the ability of leakage detection systems to detect small volumes of leakage, plant-specific factors such as insulation, In-Service-Inspection capability, flaw evaluation and leak-before-break, critical flaw size, cracking phenomenon, weld residual stress evaluation, risk assessment, and boric acid corrosion. In general, the MRP indicated that the final safety assessment would need to address each of these issues. The staff discussed the details of the responses with the MRP.

C. Haney

- 2 -

The MRP stated that their schedule was to submit the final butt weld safety assessment to the NRC by the end of first quarter 2004. The MRP expects to have an interim technical exchange meeting with the NRC possibly in December 2003 or January 2004.

The planned future activities include recommending changes to the ASME Code depending on inspection results, to evaluate recommendations for fleet-wide implementation under the NEI Materials Initiative, and to continue to monitor inspection results.

The NRC stated that the meeting had been helpful in updating them on the status of industry efforts towards a final safety assessment and in providing information on the responses to the NRC comments on MRP-44, Part 1. The MRP then summarized the meeting presentation and, as there were no further questions, the meeting adjourned.

Project No. 689

Attachments: As stated

cc: w/atts: See list

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cc: w/atts: See list

**ADAMS Accession # ML032950006**

\*See previous concurrence

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OFFICE	RPRP	EMCB\SC	RPRP\SC
NAME	JBirmingham	TChan	CHaney:DSkeen for
DATE	09/ 29 /2003	10/ 10 /2003	10/ 15 /2003

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**List of Attendees for September 11, 2003 Meeting with  
Material Reliability Program on Butt Weld Safety Assessment**

<b>NAME</b>	<b>ORGANIZATION</b>
Jim Riley	NEI
Larry Matthews	Southern Nuclear
Dana Covill	Progress Energy
Warren Bamford	Westinghouse
Ed Siegal*	Westinghouse
Ken Yoon	Framatome ANP
Patrick O'Regan	EPRI NDE Center
Frank Ammirato	EPRI NDE Center
Steve Hunt	Dominion Engineering
William Bateman	NRC/NRR/EMCB
Terence Chan	NRC/NRR/EMCB
Keith Wichman	NRC/NRR/EMCB
William Koo	NRC/NRR/EMCB
Edmund Sullivan	NRC/NRR/EMCB
Joseph Birmingham	NRC/NRR/RPRP
Allen Hiser	NRC/NRR/EMCB
Bill Cullen	RES/DET/MEB
Donald Naujock	NRC/NRR/EMCB
Deann Raleigh	LIS SCIENTECH

\* via telecon

cc: Via email (Use MS Word if available)

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**Distribution:** Mtg w/NEI MRP&EPRI on butt weld SA 9/11 /03  
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WBateman  
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