

January 29, 2013

MEMORANDUM TO: Sheldon D. Stuchell, Acting Chief
Licensing Processes Branch
Division of Policy & Rulemaking
Office of Nuclear Reactor Regulation

FROM: Joseph A. Golla, Project Manager */RA/*
Licensing Processes Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF NOVEMBER 28, 2012, CATEGORY II PUBLIC
MEETING WITH THE ELECTRIC POWER RESEARCH
INSTITUTE AND INDUSTRY REPRESENTATIVES

On November 28, 2012, U.S. Nuclear Regulatory Commission (NRC) staff met with representatives of the Electric Power Research Institute (EPRI), Westinghouse, and other nuclear power licensees and industry representatives in a public meeting at NRC headquarters in Rockville, Maryland. The purpose of the meeting was to discuss NRC staff expectations regarding licensee responses to Material Reliability Program (MRP) – 227-A, “Pressurized Water Reactor Internals Inspection and Evaluation Guidelines,” Action Items and other reactor vessel internals related issues.

Enclosed is a list of those in attendance. The EPRI and NRC staff’s meeting presentation materials may be viewed at Agencywide Documents Access and Management System (ADAMS) Accession No. ML13014A672. No members of the public were present at the meeting.

Opening remarks were made by Mr. Patrick Hiland, Director, Division of Engineering, NRC Office of Nuclear Reactor Regulation, and Mr. Tim Wells, Southern Nuclear Corporation, on behalf of the MRP. Following opening remarks, a presentation titled, “MRP-227-A Roadmap” was given by Mr. Randy Lott of Westinghouse Electric. The purpose of this presentation was to provide background information on the process used to develop MRP-227 inspection requirements and provide groundwork for ensuing discussion.

After the presentation, Mr. Tim Wells, MRP Integration Committee Chairman, presented a briefing entitled, “Generic Applicability of MRP-227-A, Industry Perspective.” The briefing presented industry’s viewpoint concerning MRP-227-A Action Item 1 and specifically that the reactor vessel internals (RVI) inspection requirements of MRP-227-A are robust and relatively insensitive to variations in design within a given manufacturer’s fleet, e.g., Westinghouse. Therefore, the industry position is that the three criteria in MRP-227-A, Section 2.4 are adequate for the verification of plan-specific applicability without the need for the plant-specific data requested by the NRC staff in recent RAI’s related to MRP-227-A, Action Item 1.

Following Mr. Wells presentation, the NRC staff presented a briefing in three parts; Part 1 titled, "Concerns Related to Licensee Responses to Action Item 1 for Westinghouse and CE Plants," Part 2 titled, "An Alternative Approach to Resolve MRP-227-A SE Action Item 1 for B&W Plants," and Part 3 titled, "Potential Issues Related to Responses to Other MRP-227-A SE Action Items." In Part 1 of the briefing, the staff presented its reasons that it does not consider the criteria of MRP-227-A, Section 2.4 to be sufficient for verification of plant-specific applicability. The NRC staff is concerned that since the MRP-227-A inspection recommendations are not based on a bounding model or assumptions, variations in parameters such as neutron fluence, temperature and stress for different designs could result in changes in inspection requirements for certain components. In Part 2 of the briefing, the NRC staff described a process that could be potentially used to verify plant-specific applicability for B&W design RVI, without significant plant-specific data or effort, which is possible because of the small number of units and fairly uniform design for the B&W fleet. In Part 3 of the briefing, the NRC staff presented concerns with licensee responses to Action Item 7, which requires a plant-specific evaluation of cast austenitic stainless steel (CASS) components. The NRC staff's concerns regarding CASS are related to the need for licensees to address the potential combined, or synergistic effect of thermal aging and neutron irradiation on the fracture toughness properties of the material, the neutron fluence threshold at which this effect becomes predominant, and the lack of available representative test data for the "synergistic effect."

In response to the NRC staff's presentations, industry representatives stated they would like to demonstrate applicability (Action Item 1) generically instead of on a plant-specific basis. It was decided that a follow-up phone call would be made to discuss potential changes to the approach, currently delineated by MRP-227-A, for verification of plant-specific applicability of MRP-227-A. Also, the industry representatives proposed a follow-up meeting during the week of January 21, 2013, at the Westinghouse offices in Rockville, Maryland. The NRC staff stated they will not issue any more RAIs until these issues are resolved. With regard to Part 3 of the NRC staff's briefing, the industry is confused about this action item because they believe screening for the relevant aging effects of CASS RVI components was already addressed during the development of MRP-227-A. Also, they understood the NRC staff had implicitly approved a higher threshold value for neutron irradiation embrittlement of CASS included in topical report MRP-175, "Materials Reliability Program: PWR Internals Material Aging Degradation Mechanism Screening and Threshold Values."

The follow-up teleconference was held on December 19, 2012. As a result, the NRC staff agreed to meet with EPRI/PWROG/Westinghouse at the Westinghouse Twinbrook offices January 22-24, 2013, at which time additional data will be presented by EPRI with the intent to show broad applicability of the MRP-227-A guidelines. It was agreed that the additional data will include detailed modeling for a 4-loop plant performed subsequent to the issuance of MRP-227-A (compared to the 3-loop plant that was previously modeled). The NRC staff also communicated that it would be helpful to the staff to go through the process for a sample of components considering the variation in the parameters for the different plant designs to see if the aging management recommendations would change. The meeting would be a closed proprietary meeting in which Westinghouse would need to submit an affidavit prior to the meeting.

With respect to plants with plant-specific fluence and stress data from extended power uprates (EPUs), Mr. Wells indicated that plants with EPU's since 2007 would not meet the third general assumption from MRP-227-A, Section 2.4, of "no design changes beyond those identified in general industry guidance or recommended by the original vendors," and should therefore follow a more detailed process to determine applicability of the MRP-227-A guidelines to their plant. Therefore, it would be appropriate to ask RAIs to such plants if it was not clear they had considered the EPU information.

In response to a question from the NRC staff about a PWR Owner's Group project to develop a template for MRP-227-A SE Action Items 1, 2, and 7, EPRI also agreed to forward to the NRC staff, an MRP report that contains a template for responding to the applicant/licensee action items from the safety evaluation of MRP-227-A. The report was published prior to the November 28, 2012 meeting. This report (MRP-342, ADAMS Accession No. ML13028A212) was e-mailed to the NRC staff by EPRI immediately following the teleconference.

Enclosure:
As stated

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S. Stuchell

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DATE	1/9/2013	1/18/2013	1/23/2013	1/24/2013	1/29/2013

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List of Attendees

Public Meeting with the U.S. Nuclear Regulatory Commission (NRC) Staff and Electric Power Research Institute and Industry Representatives Held on November 28, 2012

NAME	AFFILIATION/AGENCY
Edison Fernandez	APS
Matthew DeVan	AREVA
Sarah Davidsaver	AREVA
Kris Garg	Constellation Energy
Charles Tomes	Dominion
Glenn Gardner	Dominion Resources
David Whitaker	Duke Energy
Paul Deeds*	Entergy Nuclear
Ron Williams*	Entergy Nuclear
Stephen Davis*	Entergy Nuclear
Kyle Amberge	EPRI
Bob Nickell	EPRI Consultant
Gary Becknell	Exelon
Mark Joseph	FPL
Ray Kuyler	Morgan Lewis
Allen Hiser	U.S. Nuclear Regulatory Commission (NRC)
Dan Widrevitz	NRC
Ganesh Cheruvenki	NRC
James Medoff	NRC
Jeffrey Poehler	NRC
John Daily	NRC
Joseph Golla	NRC
Patrick Hiland	NRC
Patrick Purtscher	NRC
Simon Sheng	NRC
Stacey Rosenberg	NRC
Terry Beltz	NRC
Sam Speer	PSEG Nuclear
Mike McDevitt*	Southern California Edison
Tim Wells	Southern Nuclear
Eric Blocher	STARS License Renewal
Bud Auvil*	Structural Integrity Associates
Cheryl Boggess	Westinghouse
Eric Eggleston	Westinghouse
Randy Lott	Westinghouse Electric
Christopher Koehler	Xcel Energy

*Denotes individuals that participated via teleconference.

ENCLOSURE

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