

April 30, 2013

MEMORANDUM TO: Anthony J. Mendiola, Chief
Licensing Processes Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

FROM: Jonathan G. Rowley, Project Manager /RA/
Licensing Processes Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF NOVEMBER 29, 2012, PUBLIC MEETING WITH THE
PRESSURIZED WATER REACTOR OWNERS GROUP REGARDING
ONGOING GENERIC SAFETY ISSUE 191 ISSUES

On November 29, 2012, a Category 2 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff and representatives of the Pressurized Water Reactor Owners Group (PWROG). The purpose of this meeting was for the PWROG representatives to discuss with the NRC staff the protocols for benchtop fibrous debris characterization and water chemistry testing as well as to review the plan for thermal-hydraulic analysis. This work is being undertaken by the PWROG as part of its comprehensive Generic Safety Issue 191(GSI-191), "Assessment of Debris Accumulation on PWR Sump Performance," testing and analysis program.

The NRC staff and PWROG representatives discussed how the proposed water chemistry and chemical debris tests fit into the overall chemical effects resolution strategy and how the test results would be used. The PWROG representatives indicated that the proposed tests were designed to run for a maximum of approximately one day in order to evaluate the period immediately following a postulated accident (e.g., up until the time the emergency core cooling system (ECCS) flow is switched to hot leg injection). The industry representatives also stated that the overall strategy to address chemical effects is still under development.

The NRC staff asked if the PWROG had considered a potential path to address in-vessel chemical effects that would combine the proposed short term tests to evaluate chemical effects until hot leg switchover with the previous fuel assembly tests run at 45 gallons per minute (gpm) that used pre-mixed WCAP-16530 precipitate (Agencywide Documents Access and Management System (ADAMS) Accession No. ML081150379). The NRC staff noted that previous tests using pre-mixed precipitate with flow conditions of approximately 15 gpm had acceptable results with significantly more fiber than the 45 gpm tests. The NRC staff also noted that from a regulatory perspective, credit for short-term delayed precipitation has a much greater probability of success compared to credit for no precipitation over an ECCS mission time. The PWROG representatives indicated that the longer term chemical effects evaluation strategy is currently under development but that the use of WCAP-16530 precipitate is being considered.

The NRC staff and PWROG representatives discussed the types of materials that may be placed into the proposed chemical tests. The PWROG representatives indicated that the material selection will rely on the responses to plant material surveys that have been sent to the licensees. The NRC staff indicated that it is important that integrated tests reflect the full range of potential contributors to post loss-of-coolant accident chemical effects. For example, the NRC staff does not consider tests with one metal and one insulating material to be an integrated test. The NRC staff also noted that the key contributors to precipitation at high temperatures may be completely different than those that have been shown to be most important for precipitation at lower temperatures.

The NRC staff and PWROG representatives discussed whether the additional procedures that will be developed before any testing begins (e.g., Corrosion Material Preparation Procedure) will be provided to the NRC staff for information. The PWROG representatives indicated that they would be interested in receiving NRC feedback before testing begins.

The NRC staff asked for and the PWROG representatives provided clarification of several items in the document "Path Forward for Addressing the Effects of Water Chemistry and Chemical Debris on Fibrous Bed Head Loss." In addition, the NRC staff questioned some of the assumptions in the document. The PWROG representatives stated that they understood the NRC staff concerns and would consider the comments before moving forward with the test program.

The NRC staff requested clarification on the document "Test Protocol for Fibrous Debris Characterization Test Program" and the associated presentation titled "Fibrous Debris Characterization Bench-Top Test Program." The PWROG representatives clarified that the program does not intend to measure the quantity of fiber that may pass through a strainer, but only to quantify the size distribution of such fiber. The NRC staff indicated that the protocol provided guidance for testing that would likely result in adequate size distribution quantification.

The NRC staff and PWROG participants discussed the "High Level Analysis Plan for GSI-191 Thermal Hydraulic System Analysis" and the presentation titled "GSI-191 Thermal Hydraulic Analysis Plan."

A list of attendees is enclosed. The slide presentations presented by the PWROG representatives can be found in the ADAMS at Accession Numbers ML12341A343, ML12341A344, and ML12341A345.

Project No. 694

Enclosure:
List of Attendees

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ADAMS Accession Nos.: ML13101A353 (Summary); ML13101A350 (Pkg.); ML12320A599 (Notice);
ML12341A343, ML12341A344, and ML12341A345 (Presentations)

NRC-001

OFFICE	PLPB/PM	PLPB/LA	SSIB/BC	PLPB/BC	PLPB/PM
NAME	JRowley	DBaxley	SBailey	(SStuchell for) AMendiola	JRowley
DATE	04/26/2013	04/25/2013	04/26/2013	04/29/2013	04/30/2013

OFFICIAL RECORD COPY

List of Attendees

**Public Meeting with the Pressurized Water Reactor Owners Group
to Discuss Ongoing Generic Safety Issue-191 Issues**

November 29, 2012

Name	Organization
Roger Andreassen*	AmerenUE
Fariba Gartland	AREVA NP Inc. (AREVA)
Brian Dannaker	AREVA
Liliane Schor	AREVA
Bob Schomaker	AREVA
John Klingenfus*	AREVA
Jeffrey Brown	Arizona Public Service Company
Paul Leonard*	Consultant
Dana Knee*	Dominion Generation
Gilbert Zigler*	Enercon Services, Inc.
Jeff Weyhmiller*	Entergy Nuclear Operations, Inc.
Bradley Tyers*	Exelon Corporation
Charles Feist*	Luminant Energy
Jonathan Rowley	NRC (U.S. Nuclear Regulatory Commission)
Anthony Mendiola	NRC
Stewart Bailey	NRC
Steve Smith	NRC
Ervin Geiger	NRC
Greg Makar	NRC
Mike Cheok	NRC
John Burke	NRC
Paul Klein	NRC
William Ruland	NRC
Matt Yoder	NRC
Len Ward	NRC
John Lehning	NRC
Mark Richter	Nuclear Energy Institute
Joseph Gasper*	Omaha Public Power District
Pete Wilkens*	Southern California Edison Company
Karen Ngai*	Southern California Edison Company
Phillip Grissom	Southern Nuclear Operating Company
Timothy Andreychek	Westinghouse Electric Company (Westinghouse)
John Maruschak	Westinghouse
James Spring	Westinghouse
Matt Swartz	Westinghouse
Anthony Nowinowski*	Westinghouse
Ron Holloway*	Wolf Creek Nuclear Operating Company
Jason Loeffler*	Xcel Energy Operating Company

*Participated via webinar or telephone conferencing

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