September 9, 2010

MEMORANDUM TO: Joseph Colaccino, Chief
EPR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

FROM: Jason B. Carneal, Project Manager ***/RA/***
EPR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

PARTICIPANTS: AREVA NP, INC., NRC STAFF, MEMBERS OF THE PUBLIC

SUBJECT: SUMMARY OF THE APRIL 29, 2010, PUBLIC MEETING TO DISCUSS U.S. EPR ISSUES RELATING TO GENERIC SAFETY ISSUE-191

On April 29, 2010, the U.S. Nuclear Regulatory Commission (NRC) held a public meeting at its headquarters, Room O-11B2, 11545 Rockville Pike, Rockville, MD, with representatives of AREVA NP, Inc. (AREVA). The purpose of the meeting was to discuss the path forward on strainer head loss testing, in-vessel downstream effects, and the schedule for submission of information on these issues in subsequent revisions to ANP-10293, "U.S. EPR Design Features to Address GSI-191," Revision 0, which is available through the Agencywide Documents Access and Management System (ADAMS) as a document with Accession No. ML080420149. The meeting followed several audits and public meetings regarding sump performance, in-vessel downstream effects, and chemical effects. Previous audits were held on August 18, 2009, October 7, 2009, October 27–29, 2009, November 17, 2009, November 30 to December 4, 2009, February 22–27, 2010, and April 28, 2010. Public meetings regarding sump performance and downstream effects were held on July 8, 2009, and January 27, 2010. The meeting agenda is provided as Enclosure 1 and attendees are identified in Enclosure 2.

This meeting summary is available in ADAMS Accession No. ML101800420. The presentation materials distributed at the meeting are contained in ADAMS Accession No. ML101230665. The original meeting notice is contained in ADAMS Accession No. ML101050228. Documents in ADAMS are available electronically at the NRC's Electronic Reading Room at http://www.nrc.gov/reading-rm/adams.html. If you do not have access to ADAMS or have problems accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) staff at 1-800-397-4209, 301-415-4737, or pdr@nrc.gov.

The meeting was a Category 1 public meeting during which members of the public were invited to provide comment at specific times identified in the agenda. The purpose of the meeting was specifically for NRC staff and AREVA personnel to discuss the path forward on strainer head loss testing, in-vessel downstream effects, and chemical effects. The public session of the meeting lasted from 1:00 P.M. to 4:00 P.M. The proprietary session in the original meeting notice was left open to the public since no information presented during the meeting was identified as proprietary. The information presented and discussed in the closed session of the meeting was determined to be proprietary in nature by NRC staff. A summary of the public meeting is provided below.

NRC staff began the meeting with a summary of the interactions performed to date, including multiple audits on test protocols. In addition, NRC staff witnessed strainer head loss testing, downstream effects testing, and chemical effects testing. After providing a short overview on the status of the review of the U.S. EPR design in relation to Generic Safety Issue (GSI)-191, the staff identified the future interactions with the applicant, including the submission of Revision 1 to Topical Report (TR) ANP-10293 and the associated request for additional information (RAI) responses, witnessing of potential additional testing, and further audits on additional strainer head loss and downstream effects testing protocols.

After the conclusion of the NRC presentation, AREVA personnel discussed the status of strainer head loss testing. The testing was completed in February 2010. AREVA personnel provided an overview of the testing conditions, debris preparation, and test results. The bypass testing to measure the fraction of fiber that bypasses the strainer was also discussed. NRC staff asked several clarifying questions on the preparation of debris and the calculation of the ultimate bypass fraction. AREVA personnel responded that the full calculation could be audited at the local AREVA Twinbrook office, and NRC staff took action to review this documentation at a later date.

AREVA personnel provided a presentation on the U.S. EPR deposition model, which was developed to determine the deposition amount of debris and chemical precipitates on the fuel in the case of a large break loss of coolant accident (LBLOCA). The deposition model represented the only portion of the downstream effects documentation that was complete to date. AREVA personnel discussed the methodology used to calculate deposition for each type of debris, including fiber, particulate, and chemical precipitates. NRC staff performed an audit of the U.S. EPR deposition model on April 28, 2010, and took action to provide a list of talking points for a teleconference on any remaining concerns.

After a short break, AREVA personnel provided an overview of the remaining work regarding sump performance, downstream effects, and chemical effects for the U.S. EPR design. AREVA indicated that TR ANP-10293, Revision 1, would be submitted on May 20, 2010. In addition, responses to RAI 111, RAI 233, RAI 297, and RAI 363 would also be submitted on May 20, 2010. AREVA specified that additional strainer head loss testing would be performed to address outstanding NRC staff concerns. Additional downstream effects testing were identified as necessary to complete the downstream effects submittal for the U.S. EPR design. The performance of additional testing would require a subsequent revision to TR ANP-10293.

A discussion of the path forward and necessary interactions to reduce risk was held. AREVA personnel expressed a desire for NRC staff to review test protocols in advance of testing to identify any technical or regulatory issues with the proposed testing prior to performance of the test. NRC staff took action to review the test protocols as they became available, and issue any necessary RAIs to obtain information or identify potential concerns. The following list of action items was discussed:

1. NRC staff will audit the proposed strainer head loss testing at the local AREVA Twinbrook office.
2. NRC staff will audit the downstream effects documentation when available at the local AREVA Twinbrook office.
3. NRC staff and AREVA will hold a subsequent public meeting to discuss potential concerns with the proposed testing protocols and documentation.

4. NRC staff will audit revisions to the testing protocols as a result of the public meeting feedback prior to testing.

At the conclusion of the public meeting, members of the public were provided an opportunity to comment on the conductance and content of the meeting. No comments were received during the public portion of this meeting.

Members of the public were in attendance. No public feedback forms were received. Please direct any inquires concerning this meeting to Jason Carneal at 301-415-3813 or Jason.Carneal@nrc.gov.

Docket No. 52-020

Enclosures:
(1) Meeting Agenda and (2) Attendee List

4. NRC staff will audit revisions to the testing protocols as a result of the public meeting feedback prior to testing.

At the conclusion of the public meeting, members of the public were provided an opportunity to comment on the conductance and content of the meeting. No comments were received during the public portion of this meeting.

Members of the public were in attendance. No public feedback forms were received. Please direct any inquires concerning this meeting to Jason Carneal at 301-415-3813 or Jason.Carneal@nrc.gov.

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(1) Meeting Agenda and (2) Attendee List

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OFFICE	DNRL/NARP: PM	DNRL/NARP: LA	DSRA/SPCV: BC	DSRA/SRSB: BC
NAME	JCarneal	JMcLellan	JMcKirgan	JDonoghue
DATE	06/29/10	07/28/10	07/28/10	08/5/10
OFFICE	DNRL/NARP: PM	DNRL/NARP: PM		
NAME	GTesfaye	JCarneal (signed)		
DATE	08/19/10	9/9/2010		

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AGENDA

PUBLIC MEETING TO DISCUSS THE REVIEW OF THE U.S. EPR DESIGN CERTIFICATION RELATING TO GENERIC SAFETY ISSUE-191 AND DOWNSTREAM EFFECTS

April 29, 2010

Time	Topic	Led by
1:00 P.M.	Introductory remarks	NRC/AREVA
1:15 P.M.	Baseline Evaluation of GSI-191 Related Topics	NRC
1:30 P.M.	Results of Strainer Head Loss Testing	AREVA
2:00 P.M.	Discussion of In-Vessel Downstream Effects	AREVA
2:30 P.M.	Discussion of Remaining Activities	AREVA
3:00 P.M.	Opportunity for Public Comment*	NRC
3:15 P.M.	Adjourn Public Session*	
	GSI-191: U.S. EPR Design Certification Proprietary Session	
3:15 P.M.	Discussion of Proprietary Issues and Content	NRC/AREVA
4:00 P.M.	Adjourn Closed Session	

** The public will be given opportunities to comment at these points in the meeting.*

Attendance List
AREVA NP, INC. Public Meeting
April 29, 2010

Name	Affiliation
Sandra M. Sloan	AREVA
Brian McIntyre	AREVA
Gordon Wissinger	AREVA
Fariba Gartland	AREVA
Bob Salm	AREVA
Brian Danneker	AREVA
Fred Maass	AREVA
Len Gucwa	AREVA
Robert Salm	AREVA
Ludwig Habor	Alden
Christian Clement	UniStar
William Slagle	Westinghouse
Jason Carneal	NRC
Getachew Tesfaye	NRC
Clinton Ashley	NRC
Fred Forsaty	NRC
Florian Jansen	NRC
Chris VanWert	NRC
Joseph Donoghue	NRC
Joseph Colaccino	NRC
Shanlai Lu	NRC
Diego Saenz	NRC
Greg Makar	NRC
Derek Widmayer	NRC/ACRS