May 22, 2013

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

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

SUBJECT: SUMMARY OF THE MARCH 28, 2013, MEETING WITH THE BOILING WATER REACTOR (BWR) VESSEL AND INTERNALS PROJECT (BWRVIP) ON THE STAFF REVIEW OF BWRVIP-62, "BWR VESSEL AND INTERNALS PROJECT, TECHNICAL BASIS FORINSPECTION RELIEF FOR BWR INTERNAL COMPONENTS WITH HYDROGEN INJECTION"

On March 28, 2013, the U.S. Nuclear Regulatory Commission (NRC) staff met with representatives from the BWRVIP. The purpose of the meeting was to discuss the NRC staff's approach to reviewing BWRVIP-62, Rev. 1, "BWR Vessel and Internals Project, Technical Basis For Inspection Relief For BWR Internal Components With Hydrogen Injection."

Proprietary information was discussed at the meeting; therefore, it was closed to members of the public. Prior to the meeting, the NRC staff received a written comment from a member of the public on the subject of the meeting. The NRC staff ensured that the comment was read at the meeting. Enclosure 1 is a copy of the email. Enclosure 2 is a list of the meeting attendees.

The meeting began with short introductory remarks from the NRC staff and BWRVIP representatives. Next, began the technical discussion with a presentation that covered 1) platinum introduction, transport, and deposition; 2) the measurement of electrochemical corrosion potential (ECP); and 3) the measurement of dissolved oxygen. A copy of the nonproprietary version of the presentation is in the Agencywide Documents Access and Management System at Accession No. ML13092A051.

In the part on platinum introduction, transportation, and deposition, the presentation discussed the mechanisms for deposition and adhesion. It was noted that the noble metal chemical addition (NMCA) was started at the Duane Arnold Energy Center in 1996 and used through 2009. Eventually two thirds of plants were using this as their initial process at the end of cycle.

In 2005, the online noble chemical (OLNC) process was begun. The advantage of OLNC over NMCA cited by the BWRVIP representatives was that the OLNC process could be done when the plant was at full power. In addition, the presentation reported that the use of OLNC promoted more uniform platinum deposition than the NMCA. Also, since it was performed more frequently, it could mitigate crack flanking.

The next part of the platinum deposition presentation covered the basis for deposition on vessel internals at high flow rates. In the discussion on the slide relating to platinum deposition in the injection line, the BWRVIP representatives informed the NRC staff that higher and lower platinum injection rates were tried, but there was no change in deposition.

Moving to the second major topic of ECP, the presentation provided some background information on the intergranular stress corrosion cracking (IGSCC) and the relationship of ECP to IGSCC. A discussion of the relationship of ECP to crack initiation and propagation followed. A detailed discussion on the ECP measurement, probe and electrode design, monitoring locations, and data acquisition covered the majority of this topic.

The final presentation started with some background on dissolved oxygen. It then provided information on the purpose of measuring dissolved oxygen followed by an extensive discussion on oxygen measurement including probes, sensors, analyzers, measurement frequency, and recording.

After the presentations were complete, the NRC staff and BWRVIP representatives discussed the schedule for completing the review. The NRC staff informed the BWRVIP representatives that it would expect to get the request for additional information (RAI) questions out in the summer of 2013. It was agreed that some of the questions raised during the meeting and provided in advance of the meeting would be formally documented in the RAI questions.

In addition, the NRC staff requested that the BWRVIP submit several topical reports that were referenced in BWRVIP-62 as background information. The NRC staff had looked at two reports in the Electric Power Research Institute offices in Washington, D.C., but it was an inefficient process. The best way for the NRC staff to understand what was in the referenced reports is to have them provided. The BWRVIP representatives agreed to look into submitting the reports.

The action items from the meeting were:

1) The NRC staff will document its questions related to the meeting in formal RAI questions.
2) The BWRVIP will look into submitting the referenced reports in BWRVIP-62.

Project 704

Enclosures:
As stated

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As stated

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ADAMS Accession Nos.: ML13052A155 (Notice) ML13092A381 (Letter); ML13092A051 (Meeting Presentation); ML13093A010; (Pkg.) **NRC-001**

OFFICE	PLPB/PM	PLPB/LA	DE/EVIB/BC	PLPB/BC	PLPB/PM
NAME	JHolonich	DBaxley	SRosenberg	AMendiola	JHolonich
DATE	05/01/2013	04/25/2013	05/03/2013	05/22/2013	05/22/2013

OFFICIAL RECORD COPY

I am disappointed.

I have been very concerned with the use of OLNC on BWRs. I trust your committee will ask probing questions and will insist on honest answers, and demand documentation.

It is my fear that OLNC will continue to be used, claiming authority to take inspection credits--something that I believe is unconservative.

Please advise me if any further meetings are open to the public. Even if the answers to questions are proprietary, the public should have the right to ask questions in a public setting, and on the record, when matters of such significance are involved.

[name]

On Mon, Mar 25, 2013 at 7:51 AM, Holonich, Joseph <Joseph.Holonich@nrc.gov> wrote:

Althought the meeting is publicly noticed, it is a closed meeting. The reason for closing it is that the information being discussed is proprietary. Nonproprietary copies of any presentations will be made available in our ADAMS public site as will a set of nonproprietary meeting minutes.

I will make sure that I provide you the links needed to access those files once they are issued.

Please do not hesitate to contact me if you have any questions or require any other information.

Joe Holonich, Sr. Project Manager
U.S. NRC
3014157297

From: [name] [email address]
Sent: Friday, March 22, 2013 6:07 PM
To: Holonich, Joseph
Subject: member of the public request

I would like to participate in this meeting. I live in Illinois.
My telephone number is [Telephone]. How can I participate in this meeting?

Thank you.

[name]

http://pbadupws.nrc.gov/docs/ML1305/ML13052A155.pdf

SUBJECT: FORTHCOMING CLOSED MEETING WITH THE ELECTRIC POWER RESEARCH INSTITUTE ON BOILING WATER RECTOR VESSEL AND INTERNALS PROJECT TOPICAL REPORT 62 (BWRVIP-62) "BWR VESSEL AND INTERNALS PROJECT, TECHNICAL BASIS FOR INSPECTION RELIEF FOR BWR INTERNAL COMPONENTS WITH HYDROGEN INJECTION"

DATE & TIME: Thursday, March 28, 2013

9:00 a.m. - 3:00 p.m.

Attendees At The March 27, 2013, Meeting With The Boiling Water Reactor (BWR) Vessel And Internals Project On The Staff Review Of BWRVIP-62, "BWR Vessel And Internals Project, Technical Basis For Inspection Relief For BWR Internal Components With Hydrogen Injection"	
Name	**Organization**
Joe Holonich	U.S. Nuclear Regulatory Commission (NRC)
Stacey Rosenberg	NRC
Jay Wallace	NRC
Greg Makar	NRC
David Alley	NRC
Ganesh Cheruvenla	NRC
Jeff Poehler	NRC
Gary Stevens	NRC
Dan Widrevitz	NRC
Joe Giannelli	Finetech
Drew Odell	Exelon
Raj Pathania	Electric Power Research Institute (EPRI)
Larry Steinert	EPRI
Andy McGehee	EPRI
Robin Dyle	EPRI
Chuck Wertz	EPRI
Juan A. Varetla	General Electric Hitachi (GEH)
Tom Caine	GEH
George Depta	GEH

ENCLOSURE 2