

October 12, 2017

MEMORANDUM TO: Dennis C. Morey, Chief
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Division of Licensing Projects
Office of Nuclear Reactor Regulation

FROM: Joseph J. Holonich, Senior Project Manager /RA/
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SUBJECT: SUMMARY OF THE SEPTEMBER 21, 2017, CLOSED MEETING
BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION STAFF
AND THE ELECTRIC POWER RESEARCH INSTITUTE TO DISCUSS
ONLINE NOBLE CHEMISTRY IN BOILING WATER REACTORS

On September 21, 2017, U. S. Nuclear Regulatory Commission (NRC) staff met with representatives from the Electric Power Research Institute (EPRI). The purpose of the meeting was to have EPRI provide an update on the adequacy of online noble chemistry. Information related to the meeting including presentations and the attendees list can be found in the Agencywide Document Access and Management System (ADAMS) package ML17179A389.

Over the course of the meeting, EPRI provided information on online noble chemistry in a number of presentations. Nonproprietary copies of all the presentations can be found in the reference ADAMS package. Throughout the presentations, the NRC staff engaged EPRI with clarification questions.

In the EPRI introductory presentation (ADAMS Accession No.: ML17240A174), there was a reference to the paper "Effect of ppb [parts per billion] Levels of Chloride on SCC [stress corrosion cracking] of Low Alloy Steel," presented at the 17th International Conference on Environmental Degradation of Materials in Nuclear Power Systems. EPRI agreed to email the staff the paper and the NRC staff committed to place it into ADAMS and the ADAMS package for this meeting.

A second action that EPRI took was to provide the number of data that were used to develop the range presented in Slide 26 of the second presentation, "Adequacy of Online NobleChem™ Deposition Measurements" (ADAMS Accession No.: ML17240A175).

EPRI identified that the data shown on Slide 15 of presentation 5, "Adequacy of Online NobleChem™ Plant Crack Growth Rate Monitoring," (ADAMS Accession No.: ML17240A179) did not match the slide title (i.e., plots for crack deepening rates when the slide title said lengthening). EPRI committed to provide a revised file, both proprietary and nonproprietary, with slide 15 corrected. This was an action from the meeting.

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Once the presentations were complete the NRC staff and EPRI discussed the August 24, 2017, NRC staff letter (ADAMS Accession No.: ML17123A068) on this topic. EPRI noted that this meeting was scheduled before the letter was sent. Although the meeting provides information relevant to the letter, the meeting was not planned as a direct response to the letter.

EPRI reported that a total of 14 plants were taking inspection credit for using online noble chemistry. In addition, EPRI explained that, based on its reading of the NRC staff evaluation of BWRVIP-62NP-A, "BWR Vessel and Internals Project, 'Technical Basis for Inspection Relief for BWR Internal Components with Hydrogen Injection,' Final Report," plants using online noble chemistry were meeting BWRVIP-62NP-A. A copy of BWRVIP-62NP-A can be found in the referenced meeting package.

The NRC staff stated that the meeting provided a great deal of technical information which was useful to understanding the topic of online noble chemistry. However, the NRC staff further stated that there was a second part to this topic and that was the regulatory implications.

EPRI responded that it would ask the NRC staff to look at BWRVIP-62NP-A to see if the NRC staff could agree that the application of on line noble chemistry is included in the scope of BWRVIP-62NP-A. The NRC staff indicated that it had not considered the perspective that BWRVIP-62NP-A and the NRC staff safety evaluation could be read as not to preclude the use of online noble chemistry.

To help clarify the use of topical reports, the NRC staff provided some background information on the overall application of topical reports. The NRC staff explained that when a safety evaluation is issued, it accepts for use a method proposed in a topical report. Continuing, the NRC staff stated that reading a report to not preclude something because it was not prohibited in the topical report and safety evaluation may be too expansive an application.

The NRC staff noted that the safety evaluation documented the NRC staff basis for accepting a topical report for use. The NRC staff emphasized that the safety evaluation was not a reason to use a topical report in a manner different than documented in the topical report. Rather, it was the objective information or methodology documented in the topical report that needed to be referenced by a plant. Thus, it was the information documented in the topical report that was the NRC staff basis for determining whether a regulatory issue existed.

In closing, the NRC staff acknowledged that based on the available information and the presentations at the meeting, it did not see a safety concern. However, the NRC staff said that it had to determine what the scope, if any, was of a regulatory issue. An action from the closing was an agreement that EPRI would provide a response to the August 24, 2017, NRC staff letter. EPRI stated that its plans always included a response to the August 24, 2017, letter.

The action items from the meeting were that EPRI will provide:

- 1) the paper presented at 17th International Conference on Environmental Degradation of Materials in Nuclear Power Systems;
- 2) the number of data that were used to produce the range in the figure on Slide 26 of the second presentation;
- 3) a corrected proprietary and nonproprietary file of presentation 5; and
- 4) the planned response to the August 24, 2017, NRC staff letter.

D. Morey

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ADAMS Accession Nos.: Pkg. (ML17179A389); Summary (ML17206A399); *via e-mail NRC-001

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