EPRI | ELECTRIC POWER RESEARCH INSTITUTE

2020-054_____BWR Vessel & Internals Project (BWRVIP)

(via e-mail)

July 9, 2020

Document Control Desk
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Attention: Joseph Holonich

Subject: BWRVIP Docket No. 99902016 – Revised BWRVIP Response for RAI-10 to the NRC Request for Additional Information on BWRVIP-321

References: 1. Email from Joseph J. Holonich (NRC) to Wynter McGruder (EPRI BWRVIP), "BWRVIP-321 Requests for Additional Information" dated October 23, 2019 (NRC ADAMS Accession No. ML19288A052)

2. BWRVIP Letter 2020-046: "BWRVIP Docket No. 99902016 – BWRVIP Response to BWRVIP-321 Request for Additional Information (RAIs)," June 8, 2020

Enclosed is one (1) copy of a revision to the BWRVIP response for RAI-10 previously submitted via Reference 2.

If you have any questions regarding this subject, please contact Wynter McGruder at EPRI by telephone at 704-595-2205 or by e-mail at wmcgruder@epri.com.

Sincerely,

Nathan Palm, EPRI, BWRVIP Program Manager

Request for Additional Information on "Boiling Water Reactor Vessel and Internals Project: Plan for Extension of the BWR Integrated Surveillance Program (ISP) Through the Second License Renewal (BWRVIP-321)"

The following is a revised response to RAI #10.

RAI #10 – Associated with Section 10

Section 10.3.2, "Test Plan and Reporting on Test Results," states, in part, "[e]ach material test report will be distributed to the NRC before the affected plant(s) enter the SLR period, or within two years of capsule withdrawal in the event the plant enters SLR before capsule withdrawal."

The staff noted that once a SLR application that references BWRVIP-321 is accepted, the surveillance data obtained from materials in the SSLR capsules are credited for demonstrating adequate aging management. It is the staff's understanding that EPRI's proposed timeline for submitting the material test reports may be inconsistent with the reporting requirements in Section IV of Appendix H to 10 CFR Part 50. Specifically, in certain circumstances the timeline for submitting the material test reports can exceed the amount of time permitted by Appendix H and would require a licensee to request a plant-specific extension or exemption.

If the staff's understanding of EPRI's proposal is accurate, a condition on the use of BWRVIP-321 will be necessary. Based on plant-specific circumstance, this condition may cause a licensee to request an extension for submitting material test reports in accordance with Section IV of Appendix H to 10 CFR Part 50 during the licensing action that proposes the use of BWRVIP-321.

If the staff's understanding is not accurate – justify that the proposal in BWRVIP-321 for submitting material test reports aligns with the timeframe established in Section IV of Appendix H to 10 CFR Part 50.

Revised BWRVIP Response to RAI #10

Regarding the timeline for submittal of material test reports, the BWRVIP proposes to revise pages 8-1 and 8-2 and Section 10.3.2 as follows

1. Section 8, page 8-1

   "The specific materials to be reconstituted and tested will be determined at a later date based on the needs of plants pursuing SLR, as discussed in Section 9. The sequence of events that will trigger testing of SSLR capsule materials is described as follows. A licensee will submit an application for SLR indicating the plant intends to take credit for the ISP for SLR program and providing the projected SLR end-of-license fluence. Based on the projected SLR fluence of the target materials at that plant, the BWRVIP will evaluate whether the existing or projected ISP(E) fluence bounds the SLR fluence or whether the representative materials from the SSLR capsules need to be tested. If existing ISP or ISP(E) capsules are bounding, then the representative material would not be tested at that time. When an SLR application is submitted by a target plant whose SLR fluence is not bounded by existing ISP or ISP(E) capsules (those in bold text in Table 4-3, Table 4-4, Table 4-6, and Table 4-7), the BWRVIP

will develop a schedule for testing and reporting of results for the representative materials for those plants (see Section 10.3.2)."

2. Section 8, page 8-2

"~~The test results will be submitted to the NRC before the target plant enters SLR, or within two years of capsule withdrawal in the event the plant enters SLR before the capsule is withdrawn~~."

3. Section 10.3.2, page 10-5

"Because the selection of materials to be reconstituted and tested will depend on which BWRs pursue SLR and need additional surveillance data, the BWRVIP will notify the NRC of test plans and timeline for reporting test results at a later date. The proposed process is described below.

Upon NRC approval of an application for SLR which ~~takes~~ credits ~~for~~ the ISP for SLR program and identifies the need for additional surveillance data from the program, the BWRVIP will submit a test report for the applicable representative materials to the NRC in accordance with Section IV of Appendix H.~~a schedule for reconstituting and testing the relevant representative SSLR materials for that plant.~~ There are two scenarios that apply; 1) Appendix H reporting requirements commence at the time of SLR application approval for capsules withdrawn prior to the approval and 2) Appendix H reporting requirements commence immediately following withdrawal of the capsule when the SLR application has already been approved.

~~The BWRVIP will publish a test report for materials tested for the ISP for SLR program.~~ The report will include the results of all fracture toughness tests conducted on the surveillance material in the irradiated and unirradiated conditions and all data required by ASTM E185-82. In general, this includes mechanical test results, analyses of the test data (e.g. index temperature determinations), and evaluation of dosimetry.

~~Each material test report will be distributed to the NRC before the affected plant(s) enter the SLR period, or within two years of capsule withdrawal in the event the plant enters SLR before capsule withdrawal.~~"