



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

December 28, 2022

MEMORANDUM TO: Jonathan E. Evans, Acting Chief  
Licensing Projects Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

FROM: Lois M. James, Senior Project Manager */RA/*  
Licensing Projects Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

SUBJECT: DECEMBER 2, 2022, SUMMARY OF MEETING BETWEEN U.S.  
NUCLEAR REGULATORY COMMISSION AND ELECTRIC  
POWER RESEARCH INSTITUTE TO DISCUSS  
LIMITATIONS/CONDITIONS ASSOCIATED WITH BWRVIP-315,  
REACTOR INTERNALS AGING MANAGEMENT EVALUATION  
FOR EXTENDED OPERATIONS (EPID L-2019-TOP-0050)

On December 2, 2022, the U.S. Nuclear Regulatory Commission (NRC) staff met with representatives of the Electric Power Research Institute (EPRI) to discuss of BWRVIP-315, Reactor Internals Aging Management Evaluation for Extended Operations. The meeting summary is Enclosure 1 and the list of attendees is Enclosure 2.

If you have any questions or comments, please contact me via e-mail at [Lois.James@nrc.gov](mailto:Lois.James@nrc.gov).

Docket No. 99902016

Enclosures:

1. Meeting Summary
2. List of Attendees

cc: See next page

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## U.S. Nuclear Regulatory Commission Public Meeting Summary

**Title:** Meeting between U.S. Nuclear Regulatory Commission (NRC) staff and representatives of the Electric Power Research Institute (EPRI) to Discuss Limitations/Conditions Associated with BWRVIP-315, Reactor Internals Aging Management Evaluation for Extended Operations

**Date of Meeting:** December 2, 2022, 10:00 – 11:00 AM EST

**Location:** Webinar

**Type of Meeting:** This was an Observation Meeting. This was a meeting in which attendees had an opportunity to observe the NRC performing its regulatory function or discussing regulatory issues. Attendees had an opportunity to ask questions of the NRC staff or make comments about the issues discussed following the business portion of the meeting; however, the NRC was not actively soliciting comments towards regulatory decisions at this meeting.

### **Purpose of the Meeting:**

To inform EPRI of the limitations/conditions associated with the draft safety evaluation (SE) for BWRVIP-315, Reactor Internals Aging Management Evaluation for Extended Operations.

### **General Details:**

The NRC staff held a public, observational meeting with EPRI representatives to inform EPRI of the limitations and conditions associated with the draft SE for BWRVIP-315, Reactor Internals Aging Management Evaluation for Extended Operations. The meeting began at 10:00 am and adjourned at 10:45 am. There were seven NRC staff members, three representatives of EPRI, two members of industry, and two members of the public or individuals who did not identify themselves. The meeting began with introductions of the NRC staff, EPRI representatives, and industry members.

### **Summary of Meeting:**

The NRC staff began by stating that the purpose of the meeting is to provide the status of the conditions and applicant action items. The NRC staff acknowledged that the presentation of the conditions and applicant actions may seem premature considering the SE has not been issued for proprietary review. The NRC staff explained that more communication is always better.

The NRC staff stated that the draft SE is still in the review process with a goal of issuing it in December 2022 and would support another discussion.

The NRC staff presented the current conditions and applicant action items:

Condition No. 1 - Applicants for renewed operating licenses extending beyond 60 years applying [American Society of Mechanical Engineer] Code Case N-889 to calculate IASCC [Irradiation Assisted Stress Corrosion Cracking] crack growth rate must comply with the conditions in the latest edition of Regulatory Guide 1.147 incorporated by reference in Title 10 of the *Code of Federal Regulation* (10 CFR) 50.55a.

Condition No. 2 - Applicants for renewed operating licenses extending beyond 60 years must justify applicability for non-RAMA [Radiation Analysis Modeling Application]-based, plant-specific fluence evaluations. Alternatively, the BWRVIP [Boiling Water Reactor Vessel and Internal Project] may address the generic qualification to evaluate RVI [reactor vessel internal] component fluence for each fluence methodology in use at operating BWRs.

Applicant Action Item No. 1 - Applicants for renewed operating licenses extending beyond 60 years must demonstrate that their application of BWRVIP RVI guidelines adequately manages aging degradation in accordance with 10 CFR 54.21(a)(3), which may include accounting for up-to-date operating experience, industry guidance, and NRC guidance available at the time of the application.

Applicant Action Item No. 2 - Applicants for renewed operating licenses extending beyond 60 years must describe whether the core plate holddown bolt analysis per BWRVIP-25, "BWR Vessel and Internals Project, BWR Core Plate Inspection and Flaw Evaluation Guidelines," Appendix I is a TLAA [time-limited aging analyses]. If so, the applicant must include the analysis as a TLAA in the licensing application.

Applicant Action Item No. 3 - Applicants for renewed operating licenses extending beyond 60 years must describe and justify plant-specific re-inspection plans for the lower plenum in the application.

Applicant Action Item No. 4 - Applicants for renewed operating licenses extending beyond 60 years must describe how they meet Limitation 3 in Section 4.5.1 of BWRVIP-315 in the application.

EPRI representatives asked the following questions.

1. **Question:** What is the difference between Conditions and Applicant Actions?

**Response:** The NRC staff agreed to review the definitions of terms in Office Instruction LIC-500, "Topical Reports," and use the appropriate terms.

2. **Question:** Regarding Applicant Action Item No. 1, it appears that the concern in this condition is what if new information arises after the NRC staff approval. This is the case with every approval the NRC staff issues. Is it possible to elaborate as to why BWRVIP-315 is unique?

**Response:** The NRC staff stated that BWRVIP-315 is the first proposed license renewal guidance that is not tied to a 20-year period. The Commission established the 20-year license renewal period to permit the reconsideration and re-evaluation of plant operating experience and the adequacy of the regulatory and technical frameworks and activities to address age-related degradation.

3. **Question:** If the concern is potential operation beyond 80 years, what is the rationale for having the applicant action stating beyond 60 years?

**Response:** The wording of this applicant action is based on how the BWRVIP was written. BWRVIP-315 uses the term extended operations meaning 60 years and beyond. The applicant action is written to be consistent with how the topical report is written.

4. **Question:** How would an applicant address this action item? It appears very broad because it needs to address a lot of areas. Is there a way to add additional specificity or clarity or what an applicant would need to include in an application?

**Response:** The NRC staff stated that this was a good comment and will consider what additional language could be provided.

**Public Participation Themes:**

No member of the public spoke on the webinar.

**Action Items/Next Steps:**

The NRC staff will prepare and issue a meeting summary.

**Attachments:**

Meeting description and agenda – ADAMS Accession No. ML22326A331  
NRC slide presentation – ADAMS Accession No. ML22336A097

**U.S. Nuclear Regulatory Commission Public Meeting – Attendees List  
December 2, 2022**

**Title:** Meeting between U.S. Nuclear Regulatory Commission and Electric Power Research Institute to Discuss Limitations/Conditions Associated with BWRVIP-315, Reactor Internals Aging Management Evaluation for Extended Operations

<b>Name</b>	<b>U.S. Nuclear Regulatory Commission (NRC) Participants</b>
Michael Benson	NRC
Lois James	NRC
Carol Moyer	NRC
David Rudland	NRC
Rudland David	NRC
Dan Widrevitz	NRC
John Wise	NRC

<b>Electric Power Research Institute (EPRI) Participants</b>	
<b>Name</b>	<b>Affiliation</b>
Wayne Lunceford	EPRI
Wynter McGruder	EPRI
Nathan Palm	EPRI

<b>Industry Participants</b>	
<b>Name</b>	<b>Affiliation</b>
Carl R Rosenwald	DTE Energy
Dick Mattson	Structural Integrity Associates, Inc.

<b>Public Participants</b>	
<b>Name</b>	<b>Affiliation</b>
Daisuke Nio	Member of the public
Christopher Tyree	Member of the public

SUBJECT: DECEMBER 2, 2022, SUMMARY OF MEETING BETWEEN U.S. NUCLEAR REGULATORY COMMISSION AND ELECTRIC POWER RESEARCH INSTITUTE TO DISCUSS LIMITATIONS/CONDITIONS ASSOCIATED WITH BWRVIP-315, REACTOR INTERNALS AGING MANAGEMENT EVALUATION FOR EXTENDED OPERATIONS (EPID L-2019-TOP-0050) DATED DECEMBER 28, 2022

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**ADAMS Accession Nos.: ML22336A067 (pkg); ML22326A331 (meeting notice); ML22336A068 (summary); ML22336A097 (NRC slides)**

**^concurrence via eConcurrence**

**\*via e-mail**

**NRR-106**

<b>OFFICE</b>	DORL/LLPB/PM	DORL/LLPB/LA	DNRL/NVIB/BC	DORL/LLPB/BC
<b>NAME</b>	LJames*	DHarrison^	DWidrevitz (A)^	JEvans (A)^
<b>DATE</b>	12/6/2022	12/15/2022	12/13/2022	12/16/2022
<b>OFFICE</b>	DORL/LLPB/PM			
<b>NAME</b>	LJames^			
<b>DATE</b>	12/28/2022			

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