

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

October 30, 2024

| MEMORANDUM TO: | Gerond A. George, Chief Licensing Projects Branch Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation | |
|----------------|--|------|
| FROM: | Demetrius R. Murray, Project Manager Licensing Projects Branch Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation | /RA/ |
| SUBJECT: | SUMMARY PRE-SUBMITTAL MEETING FOR ELECTRICAL POWER RESEARCH INSTITUTE TECHNICAL REPORT 3002028939, "RISK-INFORMED HIGH ENERGY LINE BREAK EVALUATION REQUIREMENTS" (EPID NO. L-2024-TOP-0003) | |

On March 18, 2024, the U.S. Nuclear Commission (NRC) staff met with the Power Electric Research Institute (EPRI) to discuss of Report 3002028939, "Risk-Informed High Energy Line Break Evaluation Requirements." 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 email at <u>Demetrius.Murray@nrc.gov</u>.

Docket No. 99902021

Enclosures: 1. Meeting Summary

2. List of Attendees

CONTACT: Demetrius R. Murray, NRR/DORL 301-415-7646

U.S. Nuclear Regulatory Commission Public Meeting Summary

| Title: | Pre-Submittal Meeting for Electric Power Research Institute Technical Report 3002028939, "Risk-informed High Energy Line Break Evaluatio Requirements" | |
|------------------|--|--|
| Date of Meeting: | March 18, 2023, 2:00 pm – 4:00 pm | |
| Location: | Hybrid | |

Type of Meeting:

This was an Observation Meeting in which attendees will have an opportunity to observe the U.S. Nuclear Regulatory Commission (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 toward regulatory decisions at this meeting.

Purpose of the Meeting:

To introduce the NRC staff to the Electric Power Research Institute (EPRI) Technical Report 3002028939, "Risk-informed High Energy Line Break Evaluation Requirements"

General Details:

The NRC staff held a public, observational meeting with EPRI to introduce the NRC staff to EPRI Technical Report 3002028939, "Risk-informed High Energy Line Break Evaluation Requirements." The meeting began at 2:00 pm and ended approximately 4:00 pm. There were fifteen NRC staff members, eight EPRI members, one Nuclear Energy Institute (NEI) staff, nine industry members, and one member of the public or individual who did not identify an affiliation. The meeting began with introductions of the NRC staff and EPRI members.

Summary of Meeting:

EPRI representatives began the presentation by providing the on current requirements for identifying high energy line break (HELB) locations. EPRI stated that, as a result of industry ongoing activities (e.g., power uprates, license renewal, subsequent license renewal), a number of deterministic requirements are being challenged as to their efficiency in maintaining and improving plant safety while providing flexibility in plant operations and resource allocation. Further, maintaining the current deterministic HELB requirements and new nuclear power plant (NPP) fleet entails significant plant reanalysis and substantial plant modification for current NPP fleet and capital cost and engineering difficulties for new NPP fleet.

To address the challenges with deterministic HELB requirements, EPRI explained that ranking components based on previous risk-informed (RI)-inservice inspection (ISI) activities could be used to determine if portions of piping would need to be analyzed for HELB.

EPRI representatives further explained the 6-step RI- ISI methodology to be used to risk inform HELB requirements.

Step 1 – Determine RI-ISI Program Scope

Step 2 - Failure Mode and Effects Analysis (FMEA) of pipe segments

- a. Assess Consequences of Pipe Failures Step
- b. Assess Failure Potential
- Step 3 Determine and Characterize Risk Segments
- Step 4 Select Elements and Inspections
- Step 5 Perform Risk Impact Assessment
- Step 6 Document RI-ISI Program

The NRC staff and EPRI representatives discussed RI-ISI risk ranking and inspection population. The NRC staff was very interested in understanding which inspection population specific pipe segments would fall and how pipe segments would move from one to another inspection population category. Understanding the risk ranking and inspection population portion will be very significant for the NRC's review of this technical report.

Public Participation Themes:

No member of the public spoke during the hybrid meeting.

Action Items/Next Steps:

The NRC staff recommended another public meeting to discuss the technical report prior to submittal. The NRC staff will prepare and issue a meeting summary.

Attachments:

Meeting description and agenda – ADAMS Accession No. ML24066A066 EPRI slide presentation – ADAMS Accession No. ML24078A378

U.S. Nuclear Regulatory Commission Public Meeting – Attendees List March 18, 2024

Title: Pre-Submittal Meeting for Electric Power Research Institute Technical Report 3002028939, "Risk-informed High Energy Line Break Evaluation Requirements"

| U.S. Nuclear Regulatory Commission (NRC) Participants | | |
|---|-------------|--|
| Name | Affiliation | |
| Stewart Bailey | NRC | |
| Chakrapani Basavaraju | NRC | |
| John Bozga | NRC | |
| David Gennardo | NRC | |
| Gerond George | NRC | |
| Kaihwa Hsu | NRC | |
| Kamal Manoly | NRC | |
| Demetrius Murray | NRC | |
| Ching Ng | NRC | |
| Bob Pascarelli | NRC | |
| Jeff Poehler | NRC | |
| David Rudland | NRC | |
| Robert Tregoning | NRC | |
| lan Tseng | NRC | |
| Sunil Weerakkody | NRC | |

| Electric Power Research Institute (EPRI) Participants | | |
|---|-------------|--|
| Name | Affiliation | |
| Fernando Ferrante | EPRI | |
| Nathan Glunt | EPRI | |
| Rick Fougerousse | EPRI | |
| Doug Kull | EPRI | |
| Carl Latiolais | EPRI | |
| Ashley Lindeman | EPRI | |
| Patrick O'Regan | EPRI | |
| John Richards | EPRI | |

| Nuclear Energy Institute (NEI) | | |
|--------------------------------|-------------|--|
| Name | Affiliation | |
| Thomas Basso | NEI | |

| Industry Participants | | |
|-----------------------|--|--|
| Name | Affiliation | |
| Matthew Chouinard | Constellation Nuclear | |
| Fawad Durrani | Constellation Nuclear | |
| Roy Linthicum | Constellation Nuclear | |
| Brian Madderom | Constellation Nuclear | |
| Bradley Dolan | Tennessee Valley Authority | |
| Alyssa Ferianc | Westinghouse Electric Company (Westinghouse) | |
| Matthew Hozdic | Westinghouse | |
| Erik Nelson | Xcel Energy Inc. | |
| Brian Slack | Xcel Energy Inc. | |

| Public Participants | | | |
|---------------------|----------------------|--|--|
| Name | Affiliation | | |
| J H Moody | Member of the public | | |

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| ADAMS A | Accession No.: ML24081 | A008 ^via eConcurre | ence NRR-106 |
|---------|------------------------|---------------------|------------------|
| OFFICE | NRR/DORL/LLPB/PM^ | NRR/DORL/LLPB/LA^ | NRR/DEX/EMIB/BC^ |
| NAME | DMurray | DHarrison | SBailey |
| DATE | 3/25/2024 | 3/28/2024 | 4/1/2024 |
| OFFICE | NRR/DORL/LLPB/BC^ | NRR/DORL/LLPB/PM^ | |
| NAME | GGeorge | DMurray | |
| DATE | 4/2/2024 | 10/30/2024 | |

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