Lois James

From: Lois James
Sent: Wednesday, May 22, 2024 7:59 AM
To: Long, Elliot; McGill, Robert
Cc: Gerond George; Demetrius Murray
Subject: Transmittal of NRC Draft Slides in Support of May 30, 2024, Public Meeting on Purpose of MRP-484, MRP-484, Timing for TS Rev Post Surv Cap Testing
Attachments: 24-05-23 - MRP-484-NRC slides - DRAFT TO SHARE WITH EPRI on 24-05-22.pdf

Elliot,

Thank you for EPRI's slides in Support of May 30, 2024, Public Meeting on Purpose of MRP-484, MRP-484, Timing for TS Rev Post Surv Cap Testing. Attach are NRC's draft slides for the meeting.

See you on the webinar.

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U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Purpose of MRP-484, Guidance on Timing for Technical Specifications Revision Following Surveillance Capsule Testing, and EPRI's Desired Outcome of the NRC Staff's Review

May 23, 2024

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Agenda

- Purpose
- Background
- NRR Office Instruction LIC-500, “Topical Report Process”
  - TR Question - Subject with Generic Applicability
  - TR Question - Potential for Subsequent Referencing in Multiple Licensing Actions
- Examples
  - Plant #1– Immediate TS (less than 12 months)
  - Plant #2– Routine TS (between 12 and 60 months)
  - Plant #3 Example – Long Term TS (greater than 60 months)
- Inappropriate Pressure to Submit TS Change Early
- Key Questions
- Public Comments or Questions

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Purpose

- For the NRC staff to gain an understanding of the purpose of MRP-484, “Guidance on Timing for Technical Specifications Revision Following Surveillance Capsule Testing,” and EPRI's desired outcome of the NRC staff's review

Background

- February 23, 2024 – EPRI transmitted MRP-484 (ADAMS Accession No. ML24068A055)
- April 3, 2024 – EPRI transmitted revised non-proprietary version of MRP-484 (ADAMS Accession No. ML24096A175)
- May 8, 2024 – NRC sent examples and questions to EPRI for meeting preparation (ADAMS Accession No. ML24142A522)

NRR Office Instruction LIC-500
DRAFT "Topical Report Process"

- A topical report (TR) is a report containing generic technical or regulatory information on a topic relevant to nuclear power plant safety or licensing.
- The TR process adds value by improving the efficiency of other licensing processes by allowing the staff to review proposed methodologies, designs, operational requirements, or other safety subjects on a generic basis so that they may be implemented by reference by multiple U.S. licensees, once acceptable for use and verified by the NRC staff.

TR Question - Subject with Generic Applicability

- MRP-484 states that its objective is to provide clear guidance on how soon P-T limits should be updated and to identify the materials that are scheduled for future surveillance testing whose ΔT41J measurements are most likely to deviate significantly from the predictions of the Regulatory Guide (RG) 1.99, Revision 2, “Radiation Embrittlement of Reactor Vessel Materials,” embrittlement trend curve (ETC).
- RG 1.99, Revision 2, describes general procedures acceptable to the NRC staff for calculating the effects of neutron radiation embrittlement of the low-alloy steels currently used for light-water-cooled reactor vessels as required by General Design Criterion (GDC) 31, "Fracture Prevention of Reactor Coolant Pressure Boundary,'' of Appendix A, ''General Design Criteria for Nuclear Power Plants," to Title 10 of the Code of Federal Regulation (CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities." GDC 31 requires, in part, that the reactor coolant pressure boundary design reflect the uncertainties in determining the effects of irradiation on material properties. Appendix G, "Fracture Toughness Requirements," and Appendix H, "Reactor Vessel Material Surveillance Program Requirements," which implement, in part, Criterion 31, necessitate the calculation of changes in fracture toughness of reactor vessel materials caused by neutron radiation throughout the service life.
- **Since MRP-484 is related to implementation of 10 CFR Part 50, Appendix G and Appendix H it has the potential to be generic applicability**

DRAFT Question - Potential for Subsequent Referencing in Multiple Licensing Actions

- MRP-484 provides a technical basis supporting generic and conservative guidance, relevant to the entire US PWR fleet, for when Technical Specifications revisions must be reported:

  As part of surveillance capsule withdrawal and reporting to the NRC, plants assess the need to update their Technical Specifications in compliance with Section IV.C of Appendix H to 10 CFR Part 50. If a need to update the Technical Specifications is identified, then plants must submit that update to the NRC for review within 5 years of the date they submitted the surveillance capsule report. This 5-year reporting timeframe is constrained by the expiration of current P-T limits as well as by compliance with the reporting requirements of 10 CFR 50.61 if either is more limiting. The 5-year reporting timeframe may be extended based on plant-specific justifications making use of the information in this report, subject to the review and approval of the NRC.

- MRP-484 does not appear to support submittal of future licensing actions. Therefore, MRP-484 does not appear to meet the definition of a topical report.

Plant #1 Example – Immediate TS (less than 12 months)

Plant #1 had capsule results that would require them to submit an immediate TS change in order to stay in compliance with TS and Appendix G/ (<12 months). It seems that you are proposing in MRP-484 that Plant #1 would not need to submit the TS change until year 5 or 60 months. This could be seen as allowing Plant #1 to operate with nonconservative TSs and not in compliance with Appendix G/H for 48 months when using the CLB methods for addressing surveillance data.

- *Operating with nonconservative TS* would essentially be a Notice of Enforcement Discretion (NOED) and the NRC staff does not approve generic NOEDs in topical report (TR) safety evaluations (SEs).

- *Operating not in compliance Appendix G/H* would essentially be an Exemption in accordance with 10 CFR 50.12, Specific exemptions, and the NRC staff does not approve generic exemptions in TR SEs. Normally in TR SEs, the NRC staff approves a method for licensees to use in future licensing actions. The NRC staff does not approve generic licensing actions to be implemented without prior NRC review and approval.

- *Potential rulemaking* - If a desired result of MRP-484 is for the NRC approval that plants do not need to meet Appendix G/H for a specific period of time, then MRP-484 is proposing a rule change and the TR process is not the correct regulatory process.

Plant #2 Example – Routine TS (between 12 and 60 months)

Plant #2 had capsule results that would require them to submit a routine TS change in order to stay in compliance with TS and Appendix G (between 12 and 60 months). It seems that you are proposing in MRP-484 that Plant #2 would not need to submit the TS change until year 5 or 60 months. This could be seen as allowing Plant #2 to operate with nonconservative TSs and not in compliance with Appendix G/H for 12-48 months when using the CLB methods for addressing surveillance data.

- *Operating with nonconservative TS* would essentially be a Notice of Enforcement Discretion (NOED) and the NRC staff does not approve generic NOEDs in TR SEs.

- *Operating not in compliance Appendix G/H* would essentially be an Exemption in accordance with 10 CFR 50.12, Specific exemptions, and the NRC staff does not approve generic exemptions in TR SEs. Normally in TR SEs, the NRC staff approves a method for licensees to use in future licensing actions. The NRC staff does not approve generic licensing actions to be implemented without prior NRC review and approval.

- *Potential rulemaking* - if a desired result of MRP-484 is for the NRC approval that plants do not need to meet Appendix G/H for a specific period of time, then MRP-484 is proposing a rule change and the TR process is not the correct regulatory process

Plant #3 Example – Long Term TS **DRAFT** (greater than 60 months)

Plant #3 had capsule results that would require them to submit a long-term TS change in order to stay in compliance with TS and Appendix G/H (greater than 60 months). It seems that you are proposing in MRP-484 that Plant #3 would be required to submit a schedule change request to the NRC for review and approval if the plant would like to use their time greater than 5 years.

- This "new" MRP-484 requirement is more restrictive and beyond the current requirements of 10 CFR 50 Appendices G/H.

- Industry can develop and impose industry guidance that is more restrictive than regulation and NRC does not need to review and approve. The NRC staff would not approve more restrictive requirements in a TR SE. The process for requiring more restrictive regulation would require rulemaking and is beyond the TR process.

Inappropriate Pressure to Submit TS Change Early

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- Who is pressuring licensees to submit TS changes early?
- If NRC staff, then the appropriate regulatory process could be to develop and issue a Regulation Issues Summary (RIS).

Key Questions

- Does MRP-484 meet the definition of a topical report?
- What is the future licensing actions that would reference MRP-484 where the NRC staff could realize efficiencies?
- Is the topical report review process the appropriate regulatory process?

Public Comments or Questions

Closing Remarks