



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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August 18, 2020

MEMORANDUM TO: Omid Tabatabai, Acting Chief
License Renewal Projects Branch
Division of New and Renewed Licenses
Office of Nuclear Reactor Regulation

FROM: William F. Burton, Senior Project Manager */RA/*
License Renewal Projects Branch
Division of New and Renewed Licenses
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF JULY 16, 2020 TELECONFERENCE ON TOPICS
RELATED TO LESSONS LEARNED FROM THE REVIEW OF
THE FIRST THREE SUBSEQUENT LICENSE RENEWAL
APPLICATIONS

On July 16, 2020, the U.S. Nuclear Regulatory Commission (NRC staff) held its fifth Category 2 public meeting to discuss the NRC staff and industry experience in the reviews of the first three Subsequent License Renewal (SLR) applications: Turkey Point Nuclear Generating Units 3 and 4, Peach Bottom Atomic Power Station, Units 2 and 3, and Surry Power Station, Units 1 and 2. Prior meetings were held on March 28, 2019, December 12, 2019, February 20, 2020, and April 7, 2020.

The focus of this public meeting was to discuss the three SLR draft Interim Staff Guidance documents (ISGs) issued on July 2, 2020 which documented proposed changes to the electrical, structural, and mechanical portions of NUREG-2191 (the Generic Aging Lessons Learned Report for SLR (GALL-SLR)) and NUREG-2192 (the Standard Review Plan for SLR (SRP-SLR)). The proposed changes were requested by the representatives of the Nuclear Energy Institute (NEI) and reviewed by the NRC staff.

A summary of the discussion topics is provided below.

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SUBJECT: SUMMARY OF JULY 16, 2020 TELECONFERENCE ON TOPICS RELATED TO LESSONS LEARNED FROM THE REVIEW OF THE FIRST SUBSEQUENT LICENSE RENEWAL APPLICATIONS, DATED AUGUST 18, 2020

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***via email**

NRR-106

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Main Messages

- The NRC staff and the industry are in general agreement on the proposed changes.
- Any remaining areas of disagreement were raised during the meeting, will be submitted during the public comment period, and resolved in preparation for the final Interim Staff Guidance (ISG).

Summary of Discussions

SLR-ISG-ELECTRICAL-2020-XX

The NRC staff summarized the proposed changes contained in this draft electrical ISG. Following the staff's presentation, Nuclear Energy Institute (NEI) raised several issues for discussion:

Regarding Aging Management Program (AMP) XI.E7, "High-voltage Insulators," NEI:

1. suggested insertion of text to expand the "Scope of Program" section to include medium-voltage insulators.
2. recommended clarification for the voltage level to include "extra high-voltage" circuits per definition used in ANSI C84.1 (up to 765 kV) and suggested replacement of "power systems operating at voltages above 4 kV" with "nominal system voltages greater than 1 kV and equal to or less than 765 kV" in several sections of the ISG.
3. questioned the inclusion of the new aging effect/mechanism of "wind-driven particles impacting surfaces" to the AMP and associated GALL-SLR and SRP-SLR line items. These additions were created with no technical basis and are inconsistently assigned to metallic or insulating surfaces and across insulator types. NEI suggested that a technical justification be provided or that the language be removed from the ISG. If included, clarify which insulator (polymer, porcelain, or toughened glass) and material types this new aging effect/mechanism applies to.

The NRC staff asked that these issues be submitted during the public comment period for review and consideration.

SLR-ISG-STRUCTURES-2020-XX

The NRC staff summarized the proposed changes contained in this draft structures ISG. Following the staff's presentation, NEI raised several issues for discussion.

1. Regarding AMP XI.S8, "Protective Coating Monitoring and Maintenance," NEI noted that the "U.S. Nuclear Regulatory Commission Staff Review Guidance for In-Vessel Downstream Effects Supporting Review of Generic Letter 2004-02 Responses," dated September 4, 2019 (Agencywide Document Access Management System (ADAMS) Accession No. ML19228A011) indicates that in-vessel particulate debris limits are not necessary. Only in-vessel fiber limits are required and, consistent with the responses to comments on Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors (ADAMS Accession No. ML042360586), qualified, unqualified, and damaged

coatings (particulates) are one part of the total debris inventory. Because coatings are treated as particulates, no in-vessel debris limits are required. Therefore, NEI recommended deleting the proposed language in the AMP regarding in-vessel debris limits and margins.

2. NEI stated it will be submitting a public comment requesting that the phrase “enhanced as necessary” be removed from the revisions included in Appendices C, D, and E of the ISG. The phrase is unnecessary. The staff will consider the comment when formally submitted as a public comment.

The NRC staff asked that these issues be submitted during the public comment period for review and consideration.

SLR-ISG-MECHANICAL-2020-XX

The NRC staff summarized the proposed changes contained in this draft mechanical ISG. Following the staff’s presentation, NEI raised several issues for discussion.

1. Regarding AMP XI.M2, “Water Chemistry,” NEI:
 - a. noted that the correct Electric Power Research Institute (EPRI) document number is 30020005505 for “PWR Primary Water Chemistry Guidelines,” Rev 7, April 2017.
 - b. noted a correction in Table 2-29 of NUREG-2221 (the technical basis document for the GALL-SLR and SRP-SLR) on page 2-280.
 - c. noted a needed correction to the EPRI document date from 2014 to April 2017, and
 - d. noted needed updates to ISG Appendix B (Program Description, References, and 3.1.6 References).
2. Regarding AMP XI.M26, “Fire Protection,” NEI:
 - a. recommended that “change in material properties” be deleted as an aging effect.
 - b. recommended that delamination and separation are aging mechanisms that result in loss of material (LOM) and therefore should not be identified as separate aging effects. A similar discussion also applies to the line items for silicate and subliming fire proofing materials.
3. Regarding AMP XI.M42, “Internal Coatings/Linings for In-Scope Piping, Piping Components, Heat Exchangers, and Tanks,” NEI:
 - a. believes that the operating experience (OE) exclusion identified in the proposed paragraph at the end of Element 4 is unreasonable, is inconsistent with plants’ current licensing bases and license renewal guidance, and does not allow for opportunistic inspections internally-coated fire water system piping if plant-specific OE is unacceptable. System pressure is normally maintained using jockey pumps and monitored such that loss of system pressure is identified and corrective actions taken.
 - b. recommends deletion of the OE discussion in the “Basis for Revisions” section of the ISG. It implies that OE associated with different materials, environments, and aging effects could be used to demonstrate that OE is unacceptable.

4. Missing Information

Information was missing from the ISG. The staff acknowledged the error and discussed what information would be added and what information would not be added:

- a. Line items will be added/revised in the GALL-SLR and SRP-SLR to address management of loss of coating integrity in compressed air steel tanks with internal coatings in air, air-dry, and condensation environments.
- b. Line items will be added/revised in the GALL-SLR and SRP-SLR to address management of loss of material in compressed air steel tanks with internal coatings in air, air-dry, and condensation environments.
- c. Line items will be added/revised in the GALL-SLR and SRP-SLR to add line items to clarify that metallic components subject to loss of material due to recurring internal corrosion in raw water environments can be managed using AMP XI.M38, "Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components."
- d. The staff clarified that the GALL-SLR and SRP-SLR would not be revised to address aging management of loss of material due to general, pitting, and crevice corrosion in zinc exposed to a condensation environment since this is anticipated to be a very infrequent occurrence.
- e. With regard to cross-chapter Material-Environment-Aging-Program (MEAP) combinations, the staff decided not to add them to the GALL-SLR and SRP-SLR tables if they are already identified in other GALL-SLR and SRP-SLR tables. The staff prefers to continue the longstanding practice of allowing applicants to credit existing MEAPs across chapters where appropriate.
- f. Errata will be issued to add the missing information.

The NRC staff asked that these issues be submitted during the public comment period for review and consideration.

Other Issues

1. Industry- and staff-initiated changes to the Selective Leaching AMP might be discussed during the next Lessons Learned Meeting.
2. NEI noted that the GALL-SLR Report Master Table (spreadsheet) was very valuable and they would appreciate it being updated with the ISG changes and posted to the public site. The staff will update the table after the current questions are resolved.
3. NEI requested that the final ISGs only include the portions of the GALL-SLR and SRP-SLR that were revised.

Next Lessons Learned Meeting

The next quarterly Lessons Learned Meeting will be held on August 25, 2020. The notice for the next public meeting can be found in ADAMS with Accession No. ML20226A435.

Public Participation

Following the main discussions, members of the public were invited to provide comments or ask questions about the discussions. Only members of the industry participated in this portion of the meeting.

Action Items/Next Steps

The draft SLR-ISG-PWRVI-2020-XX will be issued in late July and will be the main topic for the next SLR Lessons Learned Meeting.

The staff will issue errata to provide the information that was not included in draft SLR-ISG-MECHANICAL-2020-XX. Additional time will be provided to submit comments on the additional information.

Handouts and Supplemental Information

- Staff slides: (ADAMS Accession No. ML20197A327)
- Industry slides: (ADAMS Accession No. ML20196L925)
- Draft SLR-ISG-MECHANICAL-2020-XX: (ADAMS Accession No. ML20156A330)
- Draft SLR-ISG-STRUCTURES-2020-XX: (ADAMS Accession No. ML20156A338)
- Draft SLR-ISG-ELECTRICAL-2020-XX: (ADAMS Accession No. ML20156A324)
- Industry list of proposed revisions to the F-J notes: (ADAMS Accession No. ML20093E405)