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Changes to Subsequent License Renewal Guidance Documents

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Comment on FR Doc # 2020-14323

Submitter Information

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General Comment

See attached file(s)

Attachments

08-10-20_NRC_Industry Comments on draft ISGs for SLR + Attachments

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NUCLEAR ENERGY INSTITUTE

Submitted via Regulations.gov

August 10, 2020

Ms. Jennifer Borges
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, DC 20555–0001

Subject: Comments on the proposed changes to subsequent license renewal documents (electrical, mechanical, and structural ISGs). [85 FR 39938 & 46192; Docket ID NRC-2020-0160]

Dear Ms. Borges:

The Nuclear Energy Institute (NEI)[1], on behalf of its members, submits the following comments to the Interim Staff Guidance (ISG) documents related to subsequent license renewal (SLR). We are supportive of the effort to update subsequent license renewal guidance based on lessons learned and appreciate the opportunity to comment on the following four draft ISG documents:

- SLR-ISG-ELECTRICAL-2020-XX, "Updated Aging Management Criteria for Electrical Portions of Subsequent License Renewal Guidance," June 2020
- SLR-ISG-MECHANICAL-2020-XX, "Updated Aging Management Criteria for Mechanical Portions of Subsequent License Renewal Guidance," June 2020
- SLR-ISG-MECHANICAL-2020-XX ERRATA
- SLR-ISG-STRUCTURES-2020-XX, "Updated Aging Management Criteria for Structures Portions of Subsequent License Renewal Guidance," June 2020

In our review, we noted that the draft ISGs generally offer improvements by incorporating lessons learned from subsequent license renewal activities to date. Specific comments to the electrical, mechanical and structural ISGs are contained in attachments to this letter. The following are a few examples of the more significant comments:

- Structural, Appendix B, AMP XI.S8, Protective Coating Monitoring and Maintenance Program: The requirement to manage in-vessel debris limit for Service Level 1 coatings conflicts with existing NRC guidance (e.g., Section 2.1.2 of Staff Review Guidance for In-Vessel Downstream Effects Supporting

[1] The Nuclear Energy Institute (NEI) is responsible for establishing unified policy on behalf of its members relating to matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect and engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations involved in the nuclear energy industry.

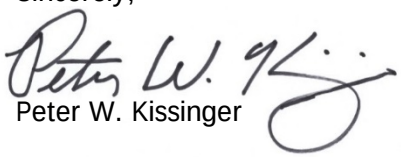
Review of Generic Letter 2004-02 Responses) and closure documents for potential issues related to Emergency Core Cooling System strainer performance.

- Mechanical, Appendix H, AMP XI.M42, Internal Coatings/Linings for In-Scope Piping, Piping Components, Heat Exchangers, and Tanks Program: Guidance on the use of operating experience (OE) does not allow the consideration of other acceptable ways to manage aging that results in leakage from the fire water piping. It is also not consistent with NUREG-2192 Appendix A guidance on consideration of past failures, use of corrective actions and preventive actions. In addition, the ISG Appendix H basis of revision section implies that operating experience associated with different materials, environments and aging effects could be used to demonstrate that the OE is unacceptable. Past failures would not necessarily invalidate an AMP since Station OE and Corrective Action programs are in place to resolve these issues.

- Mechanical, Appendix E, Cementitious Coatings AMR: Change in material properties is identified as a new aging effect requiring management for fire barrier coatings and is not consistent with NUREG-2191 guidance, aging management for loss of material and cracking of cementitious materials, or prior SLR Safety Evaluation Reports. There is no basis (technical or operating experience) provided in Appendix E for the new aging effect of change in material properties.

Detailed comments are provided in the attachments to this letter. If you have questions in this matter, please contact me at pwk@nei.org or (612) 419-3602.

Sincerely,



Peter W. Kissinger

Attachments (4)

c: William (Butch) Burton, NRC/NRR
Robert Caldwell, NRC/NRR
Omid Tabatabai, NRC/NRR

SLR-ISG-ELECTRICAL-2020-XX

Comment #	ISG Section/Page	Comment	Justification	Proposed Resolution
1.	Appendix D AMP XI.E7, Element 4, Pages 4 and 5 of 61	Typographical errors in the following sentence: "Visual inspection is used to detect the following two aging degradations: (a) loss of material in the metallic parts due to corrosions and/or frequent movement, and insulation surfaces that might be subject to wind driven dust particles impacting surfaces. (b) reduced insulation resistance."	Editorial	Change the sentence to read: "Visual inspection is used to detect the following two aging degradations: (a) loss of material in the metallic parts due to corrosion and/or frequent movement, and insulation surfaces that might be subject to wind driven dust particles impacting surfaces, and (b) reduced insulation resistance."
2.	Appendix D AMP XI.E7, Element 6, Page 5 of 61	Added text of ISG places peeling of silicone rubber sleeves under metallic parts in the following sentence: "Metallic parts must be free from significant loss of materials due to pitting, fatigue, crevice, and general corrosion, and peeling of silicone rubber sleeves (for polymer high-voltage insulators only)." Silicone rubber sleeves are not metallic parts.	Editorial	Move this effect to a new sentence for polymer insulating materials.
3.	Appendix D AMP XI.E7, Program Description, Page 2 of 61	Text inserted into the Program Description to expand the scope of the AMP to insulators used in medium voltage applications reads as follows: "Although the term "high-voltage" is used throughout AMP XI.E7, this program includes all insulators used in power systems operating at voltages above 4 kV and installed on in-scope portions of switchyards, transmission lines, and power systems if the insulators, for practical purposes, have similar design, application, material, construction, and are exposed to the same environmental stressors." The limit applied in the text, "power systems operating at voltages above 4 kV," does not conform to standard usage for power system voltage classes and may create confusion for some applicants. Since the intent of the ISG is	ANSI C84.1-1989	Change the voltage limit from "voltages above 4kV" to "nominal system voltages greater than 1 kV and equal to or less than 765 kV." The corrected text would appear as follows: "Although the term "high-voltage" is used throughout AMP XI.E7, this program includes all insulators used in power systems operating at nominal system voltages greater than 1 kV and equal to or less than 765 kV, and installed on in-scope portions of switchyards, transmission lines, and power systems if the insulators, for practical purposes, have similar design, application, material, construction, and are exposed to the same environmental stressors."

Comment #	ISG Section/Page	Comment	Justification	Proposed Resolution
		to expand the scope to include insulators used in medium voltage applications, it is recommended to use industry standard voltage classifications. ANSI C84.1-1989 identifies the Medium Voltage class as "a class of nominal system voltages greater than 1000 volts and less than 100,000 volts." The AMP currently includes the High Voltage class which is defined as "a class of nominal system voltages equal to or greater than 100,000 volts and equal to or less than 230,000 volts." Electrical systems operating at a system nominal voltage of greater than 230,000 volts and equal to or less than 765,000 volts would be Extra-High Voltage insulators. It is expected that the AMP may apply to insulators used in systems operating in the Medium Voltage, High Voltage, and Extra-High Voltage ranges.		
4.	Appendix D AMP XI.E7, Element 1, Page 4 of 61	Same issue as item 3 above for voltage range specified in Element 1.	ANSI C84.1-1989	Change the voltage limit from voltages above 4kV to "nominal system voltages greater than 1 kV and equal to or less than 765 kV." The corrected text would appear as follows: "This AMP manages the age-related degradation effects of high-voltage insulators (nominal system voltages greater than 1 kV and equal to or less than 765 kV) within the scope of subsequent license renewal, susceptible to wind and airborne contaminants including dust, salt, fog, cooling tower plume, industrial effluent or loss of material."
5.	Appendix D Table XI.01 FSAR Supplement Summary for XI.E7, Page 12 of 61	Same issue as Item 3 above for voltage range specified in the FSAR Supplement Summary.	ANSI C84.1-1989	Change the voltage limit from voltages above 4kV to "nominal system voltages greater than 1 kV and equal to or less than 765 kV." The corrected text would appear as follows: The program was developed specifically to address aging management of

Comment #	ISG Section/Page	Comment	Justification	Proposed Resolution
				in-scope high-voltage insulators (used on systems with nominal system voltages greater than 1 kV and equal to or less than 765 kV for the purpose of this AMP) aging mechanisms and effects."
6.	Appendix D AMP XI.E7, Program Description, Page 4; Element 3, Page 4; Element 4, Page 5; Summary Table on Page 44; Chapter VI, Table A on Page 59	The ISG introduces a new Aging Effect/Mechanism of loss of material due to "wind-driven particles impacting surfaces." Physical wear due to wind driven particles has not been identified as a significant aging effect in technical literature associated with insulators. Also, although SRP-SLR Table 3.6-1 and GALL-SLR Table VI apply this aging effect/mechanism to both the mechanical portions and insulating materials of all types of insulators (porcelain, polymer, and toughened glass), the Program Description revised text applies this to only the insulating surfaces of polymer and toughened glass insulators. Element 3, Parameters Monitored or Inspected, applies this new aging effect/mechanism to all types of insulators, but only the metallic parts of the insulators. Element 4, Detection of Aging Effects, applies this aging effect/mechanism to all types of insulators, but only the insulation surfaces of the insulators. It is unclear if this new aging effect/mechanism is a valid aging effect/mechanism, and, if so, how the regulator intends to apply this new aging effect/mechanism.	Proposed requirements are confusing and do not have a stated technical basis.	Identify the sources in technical literature that confirm "wind driven particles impacting surfaces" as a significant aging effect/mechanism to demonstrate that this is an aging effect requiring management or eliminate "wind-driven particles impacting surfaces" as a valid aging effect/mechanism. If "wind driven particles impacting surfaces" is to be included as a valid aging effect/mechanism, then it should be clearly stated which types of insulators are susceptible to the new Aging Effect/Mechanism of "wind driven particles impacting surfaces" and whether this applies to metallic components, insulating surfaces, or both in the Program Description, Element 3, Element 4, the Summary Table, and Chapter VI, Table A.

SLR-ISG-ELECTRICAL-2020-XX

Comment #	ISG Section/Page	Comment	Justification	Proposed Resolution
7.	App. D AMP XI.E7 Element 4 Page 5 of 61	Recommend removing the word "dust" from the first sentence on top of page 5.	The phrase "subject to wind driven dust particles impacting surfaces" is used only once in the HVI ISG. All other phrases in the HVI ISG state "wind-driven particles." Removing the word dust will align this phrase with the other phrases used in the HVI ISG.	Change "subject to wind driven dust particles impacting surfaces" to "subject to wind-driven particles impacting surfaces."
8.	App. A AMP XI.E3A App. B AMP XI.E3B App. C AMP XI.E3C For each AMP: Program Desc. Page 2 Element 2 Page 4	The additions of "potentially" before "exposed to significant moisture" within the Scope Elements (1) of AMPs XI.E3A and E3B but not in E3C. While the same insertion was not made in the program description summary, we should ask about these additions in that they could create tangible effect(s) on implementing scope (for example, in E3A, cables elevated on supports might be "potentially" exposed but not actually exposed). Why were these added beyond the main approved Peach Bottom Exception item of longer periods between inspections if automated water level monitoring successfully prevents water accumulation and cable submersion?	The use of "potentially" could drive unnecessary inspections.	Remove "potentially" to avoid unnecessary inspections.

SLR-ISG-MECHANICAL-2020-XX

AMP

Comment #	ISG Section/Page	Comment	Justification	Proposed Resolution
1.	Appendix B AMP XI.M2 Page 1, 4, 8 of 10	AMP XI.M2, Water Chemistry The correct EPRI document number for EPRI "PWR Primary Water Chemistry Guidelines" Rev 7, April 2014 is EPRI 3002000505. The following ISG sections for AMP XI.M2 require update of the EPRI document number: - Program Description (pg 1) - References (pg 4) - 3.1.6 References (pg 8)	See EPRI 30020005505, Rev 7 and NUREG-2221 Table 2-29 XI.M2 (pg 2-280)	Correct the following ISG sections for AMP XI.M2 to update the EPRI document number from EPRI 1014986 to EPRI 3002000505: - Program Description (pg 1) - References (pg 4) - 3.1.6 References (pg 8)
2.	Appendix B, XI.M2, "Water Chemistry," Page 1 of 10	Proposed Revisions to Aging Management Program XI.M2, "Water Chemistry," incorrectly state that the EPRI Secondary Water Chemistry Guidelines Rev 8 was published in 2014. EPRI Report 3002010645 Revision 8 was published in 2017.	EPRI Report 3002010645 Revision 8 was published in 2017.	Revise Basis for Revisions section to note: EPRI issued 3002010645, "Pressurized Water Reactor Secondary Water Chemistry Guidelines," Revision 8, in ~~2014~~ 2017 from the previous version (1016555).
3.	Appendix E VII.G.A-806 Page 1, 17, 77	Cementitious Coatings AMP XI.M26 manages cracking and loss of materials for cementitious coatings. ISG proposed aging effects are not consistent with aging effects managed for cementitious coatings identified in NUREG-2191 AMP XI.M42 element 3 and Peach Bottom SER (ML# 19317E013), Section 3.3.2.3.5. Based on the intended function, delamination and separation are aging mechanisms that potentially result in a loss of material. Change in material properties is not an aging effect that results in a loss of intended function in cementitious coatings. No reference is provided in the Basis for Revision section of the ISG for change in material properties of cementitious materials.	NUREG-2191 AMP XI.M42 element 3 identifies aging effects managed for cementitious coatings as follows: Loss of material and cracking is managed for cementitious materials. See the term "Cracking due to chemical reaction, weathering, settlement, or corrosion of reinforcement (reinforced concrete only); loss of material due to delamination, exfoliation, spalling, popout, scaling, or cavitation," in the GALL-SLR Report Chapter IX.F. In addition, Peach Bottom SER (ML# 19317E013), Section 3.3.2.3.5 also identifies loss of material and cracking as aging effects requiring management for cementitious fireproofing coating.	Revise aging effects managed for cementitious coatings to specify: Cracking due to chemical reaction or settlement; or loss of material due to exfoliation, delamination, separation, spalling. Note separation was proposed to be added as an aging mechanism rather than an aging effect.

SLR-ISG-MECHANICAL-2020-XX

Comment #	ISG Section/Page	Comment	Justification	Proposed Resolution
4.	Appendix E VII.G.A-805 Page 1, 16 and 77	Subliming Compounds Subliming compounds are fire-resistant coating materials. Based on the fire proofing application, loss of material and cracking are the appropriate aging effects to be managed by the Fire Protection program based upon the intended function of enclosing the material to be protected. Based on the intended function, delamination and separation are aging mechanisms that potentially result in a loss of material. Change in material properties is not an aging effect that results in a loss of intended function in subliming compounds. No reference is provided in the Basis for Revision section of the ISG for change in material properties of subliming materials.	Peach Bottom SER (ML# 19317E013), Section 3.3.2.3.5 identifies loss of material and cracking as aging effects requiring management for subliming fireproofing coating. Based on the intended function, delamination and separation are aging mechanism that could result in a loss of material. Change in material properties is not an aging effect that results in a loss of intended function in subliming compounds.	Revise aging effects managed for subliming compounds to specify: Cracking due to chemical reaction or settlement; or loss of material due to vibration, delamination, separation, flaking. Note delamination and separation were proposed to be added as aging mechanisms rather than aging effects.
5.	Appendix E VII.G.A-807 Page 1, 17 and 77	Silicates Silicates are fire-resistant insulation or barrier materials. Based on the fire proofing application, loss of material and cracking are the appropriate aging effects to be managed by the Fire Protection program based upon the intended function of enclosing or acting as a barrier for the material to be protected. Based on the intended function, delamination or separation are aging mechanisms that potentially result in a loss of material. Change in material properties is not an aging effect that results in a loss of intended function in silicates. No reference is provided in the Basis for Revision section of the ISG for change in material properties of silicates	Peach Bottom SER (ML# 19317E013), Section 3.3.2.3.5 identifies loss of material and cracking as aging effects requiring management for silicate fireproofing materials. Based on the intended function, delamination and separation are aging mechanism that could result in a loss of material. Change in material properties is not an aging effect that results in a loss of intended function in silicate materials.	Revise aging effects managed for silicate materials to specify: Cracking due to settlement; or Loss of material due to flaking, delamination, separation. Note delamination and separation were proposed to be added as aging mechanisms rather than aging effects.

SLR-ISG-MECHANICAL-2020-XX

Comment #	ISG Section/Page	Comment	Justification	Proposed Resolution
6.	Appendix E Page 76 and Appendix F, Page 12	NUREG-2192 Table 3.3-1 item 265 & 266 NUREG-2191 VII.H2.A-790 and VII.H2.A-800: Don't limit the component type to "radiator tubes". Recommend using a component type of heat exchanger tubes.	This is too narrow of a definition.	Use the component type of "Heat Exchanger Tubes."
7.	Appendix H Page 7 of 12	AMP XI.M42 Internal Coatings: Delete item (c) in the last paragraph of AMP element 4 that permits opportunistic inspections of internally coated fire water system piping if plant-specific OE is acceptable (i.e., no leaks due to aging). This sets an unreasonable standard that is not consistent with plant CLB and License Renewal guidance. One age related leak allowed by the CLB anytime during plant lifetime that was corrected with no recurrence at a dual unit site (fire water is typically a common system) could be considered unacceptable OE for both units. This is also inconsistent with NUREG-2191/2192 guidance on the use of operating experience that permits corrective actions to prevent recurrence and augmenting AMPs beyond GALL-SLR to effectively manage aging.	NUREG-2192 Appendix A indicates past failures would not necessarily invalidate an AMP because the feedback from OE should result in appropriate corrective action and/or program enhancements or new programs. Corrective actions, including causal evaluations, root cause determination, and prevention of recurrence, should be timely. Preventive actions should prevent recurrence. Recurring internal corrosion can result in the need to augment AMPs beyond the recommendations in the GALL-SLR Report. From a plant CLB perspective, fire water system leakage is allowed and monitored. Fire water system is normally maintained at required operating pressure by the jockey pump and is maintained such that loss of system pressure id detected and corrective actions initiated before there is a loss of intended function.	Delete item (c) in the last paragraph of element 4 that permits opportunistic inspections of internally coated fire water system coatings only if plant-specific OE is acceptable (i.e., no leaks due to aging).
8.	Appendix H Page 1 of 12 Basis for Revision Section	AMP XI.M42 Internal Coatings: Delete Operating Experience discussion in the Basis for Revision Section. It implies that OE associated with different materials, environments and aging effects (buried externally fire water piping vs Internally coated fire water piping with different coatings) could be used to demonstrate OE is unacceptable.	Fire water system coatings Operating Experience should be compared on a basis of same coating, environment, and aging effect. Different coating materials in different environments will age differently.	Delete Operating Experience discussion in the Basis for Revision Section.

SLR-ISG-MECHANICAL-2020-XX

Comment #	ISG Section/Page	Comment	Justification	Proposed Resolution
9.	TBD (missing AMRs)	The following AMRs were discussed with the Industry during prior ISG meetings are missing from the Draft Mechanical ISG: - Loss of coating integrity in compressed air steel tanks (#2) - LOM in compressed air steel tanks (#3) - LOM/etc. in Zn in condensation environment (#4) - LOM/etc. in carbon steel, SS, and copper alloy in treated water (#12) - Use of XI.M20 or XI.M38 for AMR items VII.C1.A-400 & VII.C3.A-400 (#16)	Provide information for missing AMRs.	Issue errata letter.

SLR-ISG-MECHANICAL-2020-XX - ERRATA

Comment #	ISG Section/Page	Comment	Justification	Proposed Resolution
1.	Mechanical ISG, Appendix H, pages 5 to 15 of 15, Revised AMRs Table VII.E1	Changes to add NUREG-2191 Chapter VII AMR lines for stainless steel in a treated water environment were discussed during the lessons learned meetings but not provided in the ISGs. Revise existing AMR lines to provide PWR stainless steel in a treated water environment AMR lines in NUREG-2191 Chapter VII consistent with those in NUREG-2191 Chapter VIII. *(See Comment 1 details on the next page).*	The proposed NUREG-2191 AMR Line revisions noted *(See Comment 1 details on the next page)* for AMR lines VII.E1.AP-79 and VII.E1.A-103 would simplify Staff SLRA review by eliminating the need for Applicants to provide cross-Chapter annotations in SLRA Chapter 3 Table 1s. Nickel alloy components should also be added to be consistent with NUREG-2192 item 124. No changes are required to NUREG-2192.	Revise AMR lines VII.E1.AP-79 and VII.E1.A-103 as noted by red underline text *(See Comment 1 details on the next page)* to add a treated water environment and nickel alloy components. As an alternative, separate AMR lines could be created for the changes related to stainless steel in a treated water environment. This would also require a NUREG-2192 change to incorporate the new AMR lines.
2.	Mechanical ISG, Appendix H, pages 5 to 15 of 15, Revised AMRs Table VII.E1	As discussed in the GALL Lesson learned meeting, a NUREG 2191 Chapter VII AMR line and an associated NUREG-2192 Table 1 line are requested for carbon steel in a treated water environment consistent with NUREG-2192 Table 3.4-1 item 14.	The proposed NUREG-2191 and NUREG-292 changes would simplify Staff SLRA review by eliminating the need for Applicants to provide cross-Chapter annotations in SLRA Chapter 3 Table 1s.	Add a NUREG 2191 Chapter VII AMR line and an associated NUREG-2192 Table 1 line for carbon steel in a treated water environment consistent with NUREG-2192 Table 3.4-1 item 14.
3.	Mechanical ISG, Appendix H, page 15 of 15	On NUREG-2192 Table 3.3-1 item 138 and item 139, add air-dry, air, and condensation environments in the component column to be consistent with the proposed changes for AMR lines VII.D.A-416 and VII.V.A-414.	Addition of the noted environments on NUREG-2192 Table 3.3-1 item 138 and item 139 is required to be consistent with the proposed changes for the referenced AMR lines VII.D.A-416 and VII.V.A-414.	Add air-dry, air, and condensation environments in the component column of NUREG-2192 Table 3.3-1 item 138 and item 139.

SLR-ISG-MECHANICAL-2020-XX - ERRATA

Comment 1 Details
Management of Loss of Material and Cracking in Stainless Steel and Nickel Alloys with Treated Water Environments
for NUREG-2191 Chapter VII Systems

1. Management of loss of material due to pitting, crevice corrosion, and MIC and cracking due to SCC in stainless steel, and nickel alloy exposed to a treated water environment by Water Chemistry (XI.M2) and One-Time Inspection Program (XI.M32) for GALL-SLR Chapter VII PWR Systems (e.g., CVCS). Management of cracking due to SCC in stainless steel, and nickel alloy exposed to a treated water environment >60°C (>140° F) by Water Chemistry (XI.M2) and One-Time Inspection Program (XI.M32) is also recommended.

   Justification: Provides a PWR treated water environment AMR line in NUREG-2191 Chapter VII consistent with those in NUREG-2191 Chapter VIII.

VII **Auxiliary Systems**
Table E1 **Chemical and Volume Control System (PWR)**

Item	SRP Item (Table ID)	Structure and/or Component	Material	Environment	Aging Effect/Mechanism	Aging Management Program	Further Evaluation
VII.E1.AP-79	3.3-1,125	Piping, piping components, tanks	Stainless Steel; steel with stainless steel cladding, nickel alloy	Treated water, treated borated water	Loss of material due to pitting, crevice corrosion, MIC	AMP XI.M2, "Water Chemistry," and AMP XI.M32, “One-Time Inspection”	No
VII.E1.A-103	3.3-1,124	Piping, piping components, tanks	Stainless Steel, nickel alloy	Treated water >60°C (>140° F), treated borated water >60°C	Cracking due to SCC	AMP XI.M2, "Water Chemistry," and AMP XI.M32, “One-Time Inspection”	No

SLR-ISG-STRUCTURES-2020-XX

Comment #	ISG Section/Page	Comment	Justification	Proposed Resolution
1.	Appendix B AMP XI.S8 Page 2, 3, and 4 of 7	Aging management of in-vessel debris limits is not required. Consistent with GSI-191 evaluations and closure documentation, aging management of coating integrity and the contribution of qualified, unqualified, and damaged coatings to the ECCS suction strainer total debris term/inventory will provide reasonable assurance of ECCS sump strainer functions including associated downstream effects and in-vessel effects.	Qualified, unqualified, and damaged coatings are one part of the total debris inventory for GSI-191 evaluations of ECCS suction strainers. Existing aging management programs for coatings address degradation of qualified coatings and changes to unqualified coatings. In GSI-191 evaluations, coating debris is treated as particulates and insulation debris is treated as fibers. **For PWRs**, Section 2.1.2 the 2019 Staff Review Guidance for In-Vessel Downstream Effects Supporting Review of Generic Letter 2004-02 Responses (ML19228A011), indicates in-vessel particulate debris limits are not necessary. Only in-vessel fiber limits are required. Staff previously concluded in a Technical Evaluation Report that post-LOCA debris limits inside the reactor vessel has low safety significance (ML19073A044). **For BWRs**, the June 2018 letter for Closure of Potential Issues Related to ECCS Strainer Performance at BWRs (ML18078A061) also concluded that the BWROG Phase IV and V ECCS strainer evaluation demonstrated that debris impacts on ECCS sump strainer performance and associated ECCS downstream and in-vessel effects had low risk significance. The BWROG evaluations addressed coating assessment as one of 12 general issues and noted that fiber debris was the only criterion for strainer failure caused by large loadings of particulates that may include debris captured in coating assessments. Existing plant programs were assessed for management of qualified and unqualified coatings.	Recommend deleting Element 5 text inserted at the end of first paragraph to ensure in-vessel debris limits are not exceeded. Also delete other references to “in-vessel” debris margin in Element 5 and other portions of the AMP XI.S8 as well as the Basis for Revision section of the ISG.

SLR-ISG-STRUCTURES-2020-XX

Comment #	ISG Section/Page	Comment	Justification	Proposed Resolution
2.	Appendix B, AMP XI.S8, Protective Coating Page 1 of 7 Item #1 in Basis of Revision	The trending of the total amount of degraded coatings, which is allowed, is generally completed by someone else in the engineering organization that is knowledgeable of the ECCS Strainer debris loading analysis and is not typically performed by the qualified coating inspector.	The total amount of potential debris is the overall concern, not just coatings, which are only a portion of the potential debris. As a result, overall trending of debris is generally completed by someone else in the engineering organization that is knowledgeable of the ECCS Strainer debris loading analysis, instead of a qualified coating inspector, that may be a contractor.	Generalize the last sentence to require trending of the allowable amount of debris, including coatings, and delete the reference to the coating inspector trending the allowable amount of degraded coatings. This would be consistent with the AMP markup.
3.	Appendix B, AMP XI.S8, Protective Coating Page 2 of 7 Item #5 in Basis of Revision	"Any coating degradation mechanisms" noted in item #5 second paragraph in the Basis For Revision section is not consistent with guidance in NUREG-2191 AMP XI.S8. Clarify the second paragraph to identify aging effects monitored or inspected (e.g., blistering, cracking, flaking, peeling, rusting, and physical damage) to be consistent with element #3 of NUREG-2191 AMP XI.S8.	NUREG-2191 AMP XI.S8 element 3 identifies the following parameters monitored or inspected: blistering, cracking, flaking, peeling, rusting, and physical damage. Aging management programs manage aging effects not age-related degradation mechanisms.	Revise the second paragraph of item #5 to read as follows: For an applicant to demonstrate that an inspection interval of longer than every refueling outage is appropriate, it is necessary to identify ~~any coating degradation mechanisms present~~ aging effects such as blistering, cracking, flaking, peeling, rusting, and physical damage and to demonstrate acceptable historical coating performance. This is because coating degradation mechanisms can cause large amount of coatings….
4.	Appendices C, D, and E NUREG-2192 Table 3.5-1, NUREG-2191 Chapters II & III Tables Page - various	The use of the term "enhanced as necessary" in the AMP column of NUREG-2192 Table 3.5-1 and NUREG-2191 Chapter II and Chapter III AMR Tables are not necessary and should be deleted.	The applicant's response to the Further Evaluations will indicate if a plant specific AMP is required or if the existing GALL-SLR requires enhancement based on the information presented in the Further Evaluation.	Delete "enhanced as necessary" in the AMP column of NUREG-2192 Table 3.5-1 and NUREG-2191 Chapter II and III AMR Tables.