#### Reporting Requirements Feedback and NUREG-2191 Update Schedule

Leslie Terry, NRR/DNRL/NCSG

NRC Meeting with Industry Steam Generator Task Force February 23, 2023



### Purpose

- Provide feedback on the reporting requirements in Section 5.6.7.c.2 of Revision 5 of the Standard Technical Specifications (STS)
- Provide a schedule update on revisions to subsequent license renewal (SLR) guidance documents



#### Reporting Requirements Feedback Background

- Technical specifications (TS) require a steam generator (SG) tube inspection report (SGTIR) be submitted to the NRC
- NRC receiving SGTIRs based on Revision 5 of the STS that incorporated Technical Specifications Task Force Traveler 577 (TSTF-577) changes
- STS Section 5.6.7.c.2, Revision 5, provides the reporting requirements for all service-induced indications detected during the inspection
  - Provides additional information on reporting tube wear at support structures

3



#### Reporting Requirements Feedback Discussion

- STS Section 5.6.7.c.2, Revision 5, states, "The location, orientation (if linear), measured size (if available), and voltage response for each indication. For tube wear at support structures less than 20 percent through-wall [TW], only the total number of indications needs to be reported"
- Recent SGTIR examples:
  - Plant A: Did not provide detailed reporting<sup>1</sup> for foreign object (FO) wear indications < 20 percent TW. Also, a re-characterization of a lattice grid wear indication to a FO wear indication was not described, resulting in a request for additional information from staff. Plant TS based on TSTF-577
  - Plant B: Did not provide detailed reporting<sup>1</sup> for volumetric indications
     < 20 percent TW. Plant TS based on TSTF-510</li>

4

<sup>1</sup> Location, orientation (if linear), measured size (if available), and voltage response



### Reporting Requirements Feedback Discussion Cont'd

- NRC staff feedback:
  - Consider including explanations that may clarify information being reported, for example, if indications were re-characterized

<ul> <li>&lt; 20 percent TW</li> <li>≥ 20 percent TW</li> <li>Total number of tube to support structure wear indications</li> <li>Detailed reporting<sup>2</sup> for all other indications (e.g., tube to FO wear</li> </ul>
<ul> <li>Total number of tube to support structure wear indications</li> <li>Detailed reporting<sup>2</sup> for all other indications (e.g., tube to FO wear</li> </ul>
<ul> <li>Detailed reporting<sup>2</sup> for all other indications (e.g., tube to FO wear</li> </ul>
(even if near a support structure))

<sup>1</sup> For plants that adopted TSTF-577 or converted to Revision 5 of STS <sup>2</sup>Location, orientation (if linear), measured size (if available), and voltage response

5

Protecting People and the Environment

### NUREG-2191 Update Schedule Background

- Volume 2 of NUREG-2191 currently states in the Steam Generators Aging Management Program (XI.M19) that visual inspections of divider plate assemblies, tube-to-tubesheet welds, heads (channel or lower/upper heads) and tubesheets are performed at least every 72 effective full power months (EFPMs) or every third refueling outage, whichever results in more frequent inspections
- Following TSTF-577 approval, industry identified a conflict between XI.M19 and TSTF-577
- TSTF-577 increased the maximum inspection interval for thermally-treated Alloy 690 SG tubing to 96 EFPM, which is longer than the 72 EFPM in XI.M19
- NRC staff agreed clarification could be made through interim staff guidance (ISG) during the October 7, 2021, public meeting with the Industry Steam Generator Task Force

6



## NUREG-2191 Update Schedule Discussion

- Rather than issuing an ISG, NRC currently revising SLR guidance documents
  - Revisions will clarify the visual inspection frequency of divider plate assemblies, tube-to-tubesheet welds, heads (channel or lower/upper heads) and tubesheets
- Current Schedule
  - August 2023 through December 2023 Staff issues draft guidance documents for 60-day public comment period and staff holds public meeting(s)
  - October 2024 Staff issues final guidance documents
- License renewal applicants may take an exception to the current guidance in XI.M19 until the final guidance documents are issued

7



# Summary

- Consider including explanations that may clarify information in SGTIR, for example, if indications were re-characterized
- Plants that adopted TSTF-577 or converted to Revision 5 of STS:
  - For service-induced indications < 20 percent TW report:</li>
    - Total number of tube to support structure wear
    - Detailed reporting<sup>1</sup> for all other indications ((e.g., tube to FO wear (even if near a support structure))
  - For service-induced indications ≥ 20 percent TW report detailed reporting<sup>1</sup> for all indications
- Final revisions to SLR guidance documents expected in October 2024

<sup>1</sup>Location, orientation (if linear), measured size (if available), and voltage response



### References

- NUREG-1430, Revision 5, "Standard Technical Specifications Babcock and Wilcox Plants," dated September 2021 (ML21272A363 (Volume 1) and ML21272A370 (Volume 2))
- NUREG-1431, Revision 5, "Standard Technical Specifications Westinghouse Plants," dated September 2021 (ML21259A155 (Volume 1) and ML21259A159 (Volume 2))
- NUREG-1432, Revision 5, "Standard Technical Specifications Combustion Engineering Plants," dated September 2021 (ML21258A421 (Volume 1) and ML21258A424 (Volume 2))
- TSTF Response to NRC Questions on TSTF-577, Revision 0, "Revised Frequencies for Steam Generator Tube Inspections," and Submittal of Revision 1, dated March 1, 2021 (ML21060B434)



# **References Cont'd**

- TSTF-577, Revision 1, Final Safety Evaluation Package (ML21099A086)
- October 7, 2021, Meeting Summary NRC Public Meeting with Industry Steam Generator Task Force (ML21293A119)
- NUREG-2191, "Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report," dated July 2017 (ML17187A031 (Volume 1) and ML17187A204 (Volume 2))
- Summary of June 1, 2022, Public Meeting with Industry on Subsequent License Renewal Guidance Document Updates (ML22160A291)



