

NRC Staff Comments

Steam Generator Technical Specifications

Public Meeting
June 27, 2019

Background

- The SGMP Steam Generator Task Force proposed modifying SG TS for Alloy 600TT and Alloy 690 units during the February 2019 public meeting.
- Suggested eliminating prescriptive inspection frequencies and replacing with frequencies based on operational assessments

Steam Generator TS History

- Original SG Technical Specifications
 - Prescriptive surveillance requirements
 - Alloy 600 MA degradation - inspections beyond TS requirements to maintain tube integrity
- TSTF 449 (2005)
 - Performance based TS framework
 - Changed regulatory focus to tube integrity
- TSTF 510 (2011)
 - Extended inspection periods and eliminated mid-point requirements

NRC Staff Perspective

- Good operating experience since SG TS upgrades indicates existing licensee SG programs and NRC regulatory framework are effective
- No cracking in Alloy 690 tubing
- Alloy 600 TT tubing performance shows improvement compared to Alloy 600 MA
 - Not clear to NRC staff if cracking susceptibility will be limited to a small percentage of tubes over time

NRC Staff Considerations

- Nuclear safety
- Regulatory Stability - long term view
- Appropriate extent and depth of NRC interactions concerning industry guidelines/procedures
- Potential to extend OA inspection frequency beyond what current consensus opinion would deem prudent

Historical Staff Perspective

- Generic Safety Evaluation Template for TSTF-449 (Federal Register Notice, March 2, 2005)
 - “The NRC staff also notes, however, that any assessment or projection of the future condition of the SG tubing based on the existing condition of the tubing and anticipated flaw growth rates can involve significant uncertainty that may be difficult to conservatively and reliably bound. For this reason, the proposed specification (TS 5.5.9) supplements the performance-based requirement concerning inspection frequencies with a set of prescriptive requirements that provide added assurance that tube integrity will be maintained.”

Status

- NRC staff considering multiple options related to TS modification request:
 - No changes
 - SG inspection frequency based on operational assessment
 - SG inspection frequency within existing regulatory framework but with a modified frequency