



Southern
Nuclear

Inspection Interval Extension for Vogtle Steam Generator Feedwater and Main Steam Nozzle-to-Shell Welds and Nozzle Inside Radius Areas

NRC Pre-submittal Meeting
August 29, 2019

Why Are We Here?

Vogtle will be requesting approval of an Alternative to ...

Extend the Inspection Interval for Steam Generator Feedwater and Main Steam Nozzle-to-Shell Welds and Nozzle Inside Radius Areas

Key Goals for This Meeting:

- ✓ Brief NRC on Alternative, Supplemental Information Scope, and Proposed Timeline
- ✓ Ensure Common Understanding of Vogtle Request, Technical Scope and Regulatory Expectations
- ✓ Obtain Feedback Prior to Formal Submittal

We appreciate your participation and feedback

Vogtle Steam Generator Nozzle/Inner Radius Interval Extension Request

Background:

- Affected components: Vogtle Unit 1 and 2 Class 2 Steam Generator (SG) Nozzle-to-shell welds and inside radius sections
- ASME Section XI, Table IWC-2500-1, Exam Category C-B, Items C2.21 and C2.22 require surface and volumetric exams once during each Section XI interval for all nozzles at terminal ends of piping runs, with exam volumes as shown in Figures IWC-2500-4(a), (b), and (d).

Proposed Alternative:

- Revise the inspection interval for these exam items to once every 30 years (vs. the current ASME Code Section XI 10 year requirement) to allow inspections through Vogtle's 6th interval, which is scheduled to end 5/30/2047
- 12 Month Review Requested
(4th Quarter 2019 Target Submittal)



Vogtle Steam Generator Nozzle/Inner Radius Interval Extension Request

Basis for Request:

- EPRI Report 3002014590, *Technical Basis for Inspection Requirements for PWR Steam Generator Feedwater and Main Steam Nozzle-to-Shell Welds and Nozzle Inside Radius Sections*, April 2019 (publicly available)
 - Industry examination history and previous industry initiatives to optimize examination requirements for similar components
 - Degradation Mechanism Evaluation, Probabilistic and Deterministic Fracture Mechanics evaluations for these nozzles and sections
 - Plant specific criteria for application of the report
 - Inspection recommendations based on prior inspection history
 - Concludes ASME Section XI inspection schedules can be optimized (to at least 30 years) without compromising safety
 - Vogtle SG nozzle and inner radius configurations and operating conditions are bounded by EPRI report criteria for use
- NRC staff informal comments received on EPRI Report during the May 2019 NRC/Industry Technical Exchange (ML19134A249)
 - Report compiled to be compatible with the NRC's Probabilistic Fracture Mechanics Regulatory Guide efforts to-date

What Feedback Do You Have?



Scope of Submittal



Regulatory
Expectations



LAR Content



Basis Report



Vogtle-specific
applicability