Plant Name SLRA: Breakout Questions

SLRA Section 4.3.2, "Metal Fatigue of Non-Class 1 Components"

TRP: 143.2

Note: Breakout Questions are provided to the applicant and will be incorporated into the publicly-available audit report.

Technical Reviewer	Seung Min	11/29/2021
Technical Branch Chief	Matt Mitchell	12/21/2021
Breakout Session	*Date/Time*	*To be filled in by PM*

Applicant Staff	**NRC staff**
To be filled out by PM during breakout	

Question Number	**SLRA Section**	**SLRA Page**	**Background / Issue (As applicable/needed)**	**Discussion Question / Request**	**Outcome of Discussion**
1	4.3.2 (Table 4.3.2-2)	4.3-18	SLRA Table 4.3.3-2 indicates that the reactor coolant sampling line is subject to approximately 29200 cycles for 80 years of operation. Therefore, the relevant stress range reduction factor for the sampling lines is 0.7, which allows thermal cycles up to 45,000. However, the SLRA does not clearly discuss how the stress analysis for sampling lines with the stress reduction factor (0.7) meets a relevant acceptance criterion.	1. Clarify whether the thermal expansion stress (S_E) of the sampling lines meets the acceptance criterion (i.e., the stress does not exceed the allowable stress range (S_A), as modified by applying the stress reduction for the piping). As part of the clarification, provide the S_E and S_A values.	

Question Number	SLRA Section	SLRA Page	Background / Issue (As applicable/needed)	Discussion Question / Request	Outcome of Discussion
2	4.3.2	4.3-16	SLRA Section 4.3.2 indicates that the non-Class 1 mechanical systems or portions of systems with operating temperatures above 220 °F are conservatively evaluated for metal fatigue. This approach is based on the applicant's determination that the non-Class 1 piping at an operating temperature below 220 °F is not susceptible to thermal fatigue. The staff needs to clarify whether the approach for determining susceptibility to thermal fatigue for 80 years of operation is consistent with that used in the current licensing basis non-Class 1 fatigue analysis.	1. Clarify whether the approach for determining susceptibility to thermal fatigue for 80 years of operation is consistent with that used in the current licensing basis non-Class 1 fatigue analysis. If not, explain why a different approach is used.	