

Oconee SLRA – TRP 16 (PWR Vessel Internals) – Feedback for Response to RAI B2.1.7-4a

[NOTE: The page numbers in the draft response of 8/5/2022 are non-consecutive and do not start with 1; thus the references below are to the PDF page number.]

Sufficient Examination Coverage for “100% Coverage”

- The following inspection coverage terminology is unclear to the staff:
 - (a) Page 7: *“the term 100% as used herein is to be consistent with ASME Section XI, 2017 Edition, Subarticle S-2300 . . . during performance of a preservice or inservice examination essentially 100% coverage is required of the examination surface for surface or visual examination or of the examination volume for volumetric examination”*
 - (b) Page 8: *“Consistent with the Oconee ASME Section Inservice Inspection, Subsections IWB, IWC, and IWD AMP, which requires essentially 100% coverage, any reduction in coverage during the SPEO shall be addressed through 10 CFR 50.12.”*
- A quantitative meaning of the term “essentially 100% coverage” is not provided in either the RAI response, the cited AMP or ASME Section XI, 2017 Edition, Subarticle S-2300.
- The staff notes that ASME Section XI, 2017 Edition, Paragraph IWA-2200(c), states, *“Essentially 100% coverage is achieved when the applicable examination coverage is greater than 90%.”*

Corrective Actions for < 100% Weld Inspection Coverage

- The inspection coverage basis (page 7): *“For the proposed core barrel cylinder weld inspections during the SPEO, any limitations to the examination coverage shall be addressed through the exemption process in accordance with 10 CFR 50.12 consistent with the ASME Section XI requirements for the Oconee Nuclear Station.”*
 - Since 10 CFR 50.12 regulatory exemption criteria do not appear to apply (e.g., there is no regulation that would require this inspection for which exemption would be necessary), what regulatory process would be used for Duke to submit an alternative weld coverage criterion for staff approval if (upon completion of the CB Primary weld inspections) the applicable “essentially 100%” weld coverage criterion is not met for the Primary weld type?
 - Should the weld coverage criterion (and the examination schedule) be addressed as an enhancement to the program?

Core Barrel Weld Examination Schedule

- Clarification on inspection schedule terminology “no later than two refueling outages from the beginning of the license renewal period.” [e.g., PDF pages 7, 24, 25.]
 - Is this to be interpreted as meaning *at least two refueling outage prior to entering into the subsequent period of extended operation* or *within two refueling outages from the date of entering into the subsequent period of extended operation*?
 - The staff notes:
 - If the core barrel circumferential welds had been appropriately identified as “accessible” in MRP-227-A (instead of “inaccessible”), these welds would have been inspected at ONS at least one time already and 2X prior to SPEO.
 - The lack of inspection data for these Primary category welds at ONS (or any other B&W design plant) increases the uncertainty regarding the condition of the core barrel welds prior to entering the SPEO.

Under Consideration:

- The staff is considering an additional license condition regarding the inspection of essentially 100% of the Primary category core barrel circumferential welds at ONS Unit 2 prior to entry to the SPEO.