

NRR-PMDAPEm Resource

From: Sreenivas, V
Sent: Wednesday, January 14, 2015 2:04 PM
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Subject: NAPS 1&2: RAI-CLARIFICATION OF REACTOR COOLANT SYSTEM HEATUP AND COOLDOWN TECHNICAL SPECIFICATION FIGURES (TAC. NOS. MF4707 AND MF4708)

REQUEST FOR ADDITIONAL INFORMATION
PROPOSED CHANGES TO NORTH ANNA POWER STATION UNITS 1 AND 2 REGARDING
CLARIFICATION OF REACTOR COOLANT SYSTEM
HEATUP AND COOLDOWN TECHNICAL SPECIFICATION FIGURES
NORTH ANNA POWER STATION, UNITS 1 AND 2

By letter dated August 27, 2014, Virginia Electric Power Company (Dominion, the licensee) provided a proposed license amendment request, "Clarification of Reactor Coolant System Heatup and Cooldown Technical Specification Figures" (Agencywide Documents Access and Management System (ADAMS) Accession Number ML14246A190). The licensee submitted a request for changes to the North Anna Power Station (North Anna) Units 1 and 2 Technical Specifications pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.90. The proposed amendment would revise Figures 3.4.3-1, "Reactor Coolant System Heatup Limitations" and 3.4.3-2, "Reactor Coolant System Cooldown Limitations," to address vacuum fill operations.

RAI 1

BACKGROUND

10 CFR Part 50, Appendix G requires that pressure-temperature (P-T) limits be developed to bound all ferritic materials in the reactor vessel (RV). Further, Sections I and IV.A of 10 CFR, Part 50, Appendix G specify that all ferritic reactor coolant pressure boundary (RCPB) components outside of the RV must meet the applicable requirements of American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section III, "Rules for Construction of Nuclear Facility Components."

ISSUE

As clarified in Regulatory Information Summary (RIS) 2014-11, "Information on Licensing Applications for Fracture Toughness Requirements for Ferritic Reactor Coolant Pressure Boundary Components" (ADAMS Accession No. ML14149A165), P-T limit calculations for ferritic RV components other than those materials with the highest reference temperature, may define curves that are more limiting than those calculated for the RV beltline shell materials because the consideration of stress levels from structural discontinuities (such as nozzles) may produce a lower allowable pressure.

REQUEST

Describe how the P-T limit curves for North Anna Units 1 and 2 consider all ferritic pressure boundary components of the reactor vessel that are predicted to experience a neutron fluence exposure greater than 1×10^{17} n/cm² (E > 1 MeV) at the end of the licensed operating period.

If the current P-T limit curves do not consider all ferritic pressure boundary components of the reactor vessel that are predicted to experience a neutron fluence exposure greater than 1×10^{17} n/cm² (E > 1 MeV) at the end of the licensed operating period, provide appropriately revised P-T limit curves to the NRC for review.

Please submit the response to these RAIs by February 15, 2015. If you have any questions please contact me at your earliest.

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