

From: Ed Miller
Sent: Monday, September 19, 2022 10:39 AM
To: Yan.Gao@dominionenergy.com
Subject: Draft RAI for RR-4-26
Attachments: Draft RAI for Summer RR-4-26.docx

Yan,

Attached is the NRC staff's draft RAI for the subject request. The questions are being transmitted to you to determine 1) If the questions clearly convey the NRC information needs, 2) Whether the regulatory basis for the questions are clear, and 3) If the information has already been provided in existing docketed correspondence. Additionally, review of the draft question will allow you to determine what response time you can support. After you've had a chance to review, please let me know if you would like to have a clarification call to discuss. Thank you.

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Hearing Identifier: NRR_DRMA
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DRAFT REQUEST FOR ADDITIONAL INFORMATION
BY THE OFFICE OF NUCLEAR REACTOR REGULATION
FOR PROPOSED ALTERNATIVE REQUEST RR-4-26
EXTENSION OF STEAM GENERATOR PRIMARY INLET NOZZLE
DISSIMILAR METAL WELD INSPECTION INTERVAL
DOMINION ENERGY SOUTH CAROLINA, INC.
VIRGIL C. SUMMER NUCLEAR STATION UNIT 1
DOCKET NO. 50-395

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated March 10, 2022 (Agencywide Documents Access and Management System Accession No. ML22069B117), Dominion Energy South Carolina Inc. (the licensee) proposed an alternative to certain requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Case N-770-5, "Alternative Examination Requirements and Acceptance Standards for Class 1 PWR Piping and Vessel Nozzle Butt Welds Fabricated With UNS N06082 or UNS W86182 Weld Filler Material With or Without Application of Listed Mitigation Activities." The licensee submitted Proposed alternative RR-4-26, for an extension of the steam generator primary inlet nozzle dissimilar metal weld inspection interval from 5 years to 9 years for the volumetric examination.

The proposed alternative uses a Factor of Improvement (FOI) for the crack growth rate of alloy 52/152, as compared to alloy 82/182 weld metals. To date, the NRC has approved the use of an FOI of 10 for alloy 152 weld materials. The NRC is currently working with the Primary Water Stress Corrosion Cracking (PWSCC) Crack Growth Rate Expert Panel, which is evaluating the crack growth PWSCC data for Alloys 52 and 152, including several data sets not included in the letter dated March 10, 2022. The NRC does not yet have sufficient information to support the use of a FOI of 29. The NRC expects, however, new information on the appropriate FOI will likely be published in 2023. The NRC has determined that the following additional information is necessary to complete its review and make a regulatory decision on RR-4-26:

- 1) Beyond the FOI approach, what additional defense-in-depth measures would be taken by the licensee to support a limited extension of examination interval until the expert panel completes its activities.
- 2) Please provide additional justification to support an FOI of 29 or provide an alternative duration for the proposed alternative that would not not require an FOI of 29.