

From: Thomas, Vaughn
Sent: Monday, April 12, 2021 2:30 PM
To: gary.d.miller@dominionenergy.com
Subject: Surry, Units 1 & 2 - Final RAI for the LOCA AST LAR
Attachments: Final RAI for the Surry AST LAR Application.docx

Gary,

The attached file constitutes the staff's issuance of the final RAI concerning the Surry LOCA AST LAR. The staff expects the licensee's response to the RAI within 30 days from today's date, April 12, 2021 (**due date May 10, 2021**).

Thanks

Vaughn Thomas, Project Manager

Plant Licensing Branch II-1

Division of Operating Reactor Licensing

Office of Nuclear Reactor Regulation

Vaughn.Thomas@nrc.gov

301-415-5897

Hearing Identifier: NRR_DRMA
Email Number: 1115

Mail Envelope Properties (BLAPR09MB7409760DAC2295A483E1B198F4709)

Subject: Surry, Units 1 & 2 - Final RAI for the LOCA AST LAR
Sent Date: 4/12/2021 2:29:50 PM
Received Date: 4/12/2021 2:29:50 PM
From: Thomas, Vaughn

Created By: Vaughn.Thomas@nrc.gov

Recipients:
"gary.d.miller@dominionenergy.com" <gary.d.miller@dominionenergy.com>
Tracking Status: None

Post Office: BLAPR09MB7409.namprd09.prod.outlook.com

Files	Size	Date & Time
MESSAGE	472	4/12/2021 2:29:50 PM
Final RAI for the Surry AST LAR Application.docx		35321

Options
Priority: Normal
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:

REQUEST FOR ADDITIONAL INFORMATION
LICENSE AMENDMENT REQUEST TO UPDATE THE LOSS OF COOLANT ACCIDENT
ALTERNATIVE SOURCE TERM DOSE ANALYSIS
VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
DOCKET NOS. 50-280 AND 50-281
EPID: L-2020-LLA-0258

Regulatory Basis

For Surry Units 1 and 2, the Nuclear Regulatory Commission (NRC) issued the construction permits before May 21, 1971; consequently, Surry Units 1 and 2 were not subject to the requirements in Title 10 of the Code of Federal Regulations (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," Appendix A, "General Design Criteria [GDC] for Nuclear Power Plants" (see SECY-92-223, "Resolution of Deviations Identified during the Systematic Evaluation Program," dated September 18, 1992 (Reference 13). Surry Units 1 and 2 meet the intent of the GDC published in 1967 (draft GDC).

The NRC staff considered the following regulatory requirements and guidance during its review of the proposed changes the Surry application: 10 CFR 50.49, "Environmental qualification of electric equipment important to safety for nuclear power plants," and the regulatory guidance provided in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition."

10 CFR 50.49 requires, in part, licensees to establish a program for qualifying the electric equipment important to safety. The equipment should remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, The capability to shut down the reactor and maintain it in a safe shutdown condition, or the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures. 10 CFR 50.49(e)(1), "Temperature and pressure" requires that, "The time-dependent temperature and pressure at the location of the electric equipment important to safety must be established for the most severe design basis accident during or following which this equipment is required to remain functional."

Request

In Section 2, "Proposed Licensing Basis Changes," of the license amendment request (LAR), the licensee stated:

The proposed changes for a LOCA radiological event are: 1) an increase of the containment depressurization profile, and 2) a reduction of the RWST back leakage limit.

Furthermore, in Section 2.1, "Increased Containment Depressurization Profile," of the LAR, the licensee stated:

The current licensing basis states that the containment will depressurize to 1.0 psig within 1 hour and less than 0.0 psig within 4 hours. The proposed change would require the containment to depressurize to 2.0 psig within 1 hour and less than 0.0 psig within 6 hours. This change will be reflected in the LOCA dose consequence analysis through an increased containment leak rate as presented in Table 2-1 and Section 3.5.1.

The proposed amendment would increase the containment depressurization profile as described in section 2.1. However, the proposed LAR does not discuss the impact to the environmental qualification of electrical equipment subject to the requirements of 10 CFR 50.49. Therefore, the NRC staff requests the licensee to discuss the impact of the proposed change on the environmental qualification of electrical equipment.