



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 14, 2022

Mr. Daniel G. Stoddard
Senior Vice President and
Chief Nuclear Officer
Dominion Nuclear
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: SURRY POWER STATION, UNITS 1 AND 2 – SURRY TECHNICAL
SPECIFICATION SECTION 3.4.A.4 CHANGE OF POST LOSS-OF-COOLANT
ACCIDENT CHEMICAL BUFFER AUDIT PLAN (EPID L-2021-LLA-0179)

Dear Mr. Stoddard:

By letters dated September 30, 2021, and November 29, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML21277A065 and ML21334A169, respectively), Virginia Electric and Power Company, the licensee (Dominion Energy Virginia) submitted a license amendment request (LAR) for the Surry Power Station, Units 1 and 2 (Surry). In its LAR, Dominion Energy Virginia proposed to revise the Surry technical specification to eliminate the Refueling Water Chemical Addition Tank and allow the use of sodium tetraborate decahydrate to replace sodium hydroxide as a chemical additive for containment sump pH control following a loss-of-coolant accident at Surry.

Subsequent to the LAR's acceptance, the U.S. Nuclear Regulatory Commission (NRC) staff identified several items that require further clarification and detailed explanations. Therefore, the NRC staff will conduct a regulatory audit to support the LAR's review in accordance with the enclosed audit plan. A regulatory audit is a planned activity that includes the examination and evaluation of primarily non-docketed information. The audit will be conducted to increase the NRC staff's understanding of the LAR and identify any information that may require docketing to support the NRC staff's regulatory finding.

The audit will be conducted using video conferencing on February 24, 2022 and an eDocs web portal (also known as an online portal, electronic portal, ePortal, electronic reading room) from February 1 to March 15, 2022. The outline for the logistics, schedule, and scope of this audit were initially discussed with your staff in December 2021. The audit plan is enclosed.

D. Stoddard

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If you have any questions, please contact me at (301) 415-5136, or via email at John.Klos@nrc.gov.

Sincerely,

/RA/

John Klos, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-280 and 50-281

Enclosure:
Audit Plan

cc: Listserv

AUDIT PLAN
FOR
SURRY TECHNICAL SPECIFICATION SECTION 3.4.A.4 CHANGE
OF POST LOSS-OF-COOLANT ACCIDENT CHEMICAL BUFFER
VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION, UNIT NOS. 1 AND 2
DOCKET NOS. 50-280 AND 50-281

1.0 BACKGROUND

By letters dated September 30, 2021, and November 29, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML21277A065, and ML21334A169, respectively), Virginia Electric and Power Company, the licensee (Dominion Energy Virginia) submitted a license amendment request (LAR) for the Surry Power Station, Units 1 and 2 (Surry). In its LAR, Dominion Energy Virginia proposed to revise the Surry Technical Specification to eliminate the Refueling Water Chemical Addition Tank and allow the use of sodium tetraborate decahydrate to replace sodium hydroxide as a chemical additive (buffer) for containment sump pH control following a loss-of-coolant accident at Surry.

2.0 REGULATORY AUDIT BASES

A regulatory audit is a planned license or regulation-related activity that includes the examination and evaluation of primarily non-docketed information. The audit is conducted with the intent to gain understanding, to verify information, and to identify information that may require docketing to support the basis of a licensing or regulatory decision. Performing a regulatory audit is expected to assist the U.S. Nuclear Regulatory Commission (NRC) staff in efficiently conducting its review and gaining insights to the licensee's processes, procedures, engineering documentation and calculations related to the LAR. Information that the NRC staff relies upon to make the safety determination must be submitted on the docket.

During the initial plant licensing of Surry, it was demonstrated that the Safety Injection, Containment Spray, and Recirculation Spray systems met the regulatory requirements in place at that time. The General Design Criteria (GDC) included in Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR) 50 did not become effective until May 21, 1971. The Construction Permits for Surry were issued prior to May 21, 1971; consequently, Surry was not subject to current GDC requirements (SECY-92-223, dated September 18, 1992). Section 1.4 of the Surry Updated Final Safety Analysis Report (UFSAR) discusses compliance with the GDC published in 1967 (Draft GDC), and the UFSAR discussion demonstrates that Surry meets the intent of these criteria.

This regulatory audit is based on the following regulatory requirements and guidance:

The regulations in 10 CFR 50.67, "Accident Source Term" and Regulatory Guide (RG) 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power

Reactors,” ADAMS Accession no. ML003716792, provides criteria for evaluating the consequences of applicable design basis accidents. RG 1.183 indicates that analyses should consider iodine re-evolution if the sump liquid pH is not maintained at 7 or greater.

Appendix A to Part 50, General Design Criterion (GDC) 2—Design bases for protection against natural phenomena states that Structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunamis, and seiches without loss of capability to perform their safety functions. The design bases for these structures, systems, and components shall reflect appropriate combinations of the effects of normal and accident conditions with the effects of the natural phenomena.

3.0 SCOPE

The audit team will view the documentation and calculations that provide the technical support for the LAR. The scope of the NRC staff’s audit will focus on the following subjects:

1. Alternate buffer pH calculations, including description of the key assumptions, methodology, and inputs.
2. The calculations that document and support the licensee’s statement in its November 29, 2021 letter which, in response to NRC request no. 11, stated that the basket members and connections are analyzed to meet Dominion Energy Nuclear Engineering Standard (DNES) DNES-STD-CE-0046, American Institute of Steel Construction 9th Edition, "Manual of Steel Construction." The documents and calculations provided by the licensee to support this audit item should fully describe, justify and document the licensee’s statement in response to NRC request above that also stated “When considering the 1/3 increase for earthquake loading, the maximum member interaction for members, connections, welds, wheels, bolts, and anchor bolts is less than the required 1.0.”

In addition, the audit team may request to discuss these topics with the licensee’s subject matter experts. The NRC staff will conduct this audit under the guidance provided in Office of Nuclear Reactor Regulation Office Instruction LIC-111, “Regulatory Audits,” Revision 1 (ADAMS Accession No. ML19226A274).

4.0 INFORMATION AND OTHER MATERIAL NECESSARY FOR THE REGULATORY AUDIT

The NRC staff requests that the documents, data, and calculations regarding the scope above be made available to the NRC staff via the licensee’s electronic reading room.

The NRC staff acknowledges and will observe appropriate handling and protection of proprietary information made available for the audit. The NRC staff will not remove non-docketed information from the audit site or eDocs web portal.

5.0 AUDIT TEAM

The following are the NRC audit team members:

- Greg Makar, Materials Engineer, Team Leader, Gregory.Makar@nrc.gov

- John Ma, Senior Civil Engineer (Structural), John.Ma@nrc.gov
- John Klos, Surry Licensing Project Manager, John.Klos@nrc.gov

6.0 LOGISTICS

The audit will be conducted using video conferencing and an eDocs web portal (also known as an online portal, electronic portal, ePortal, or electronic reading room) from February 1 to March 15, 2022. During the audit, information may be shared using video conference and telephone conference. The licensee's representatives are requested to be available for video or audio conferences on the audit's scheduled discussion days as they are determined by the NRC licensing project manager and the Surry licensing team. The NRC project manager will coordinate any changes to the audit schedule and locations with the licensee and the NRC staff. The NRC staff would like remote access to the available and related documents listed in Sections 3.0 and 4.0 by February 1, 2022. If this schedule needs to be adjusted please contact John Klos of the NRC at (301) 415-5136, or via email at John.Klos@nrc.gov.

Audit Schedule

Date	Time	Subject
February 1, 2022	12:00 pm	Audit start date
February 24, 2022	TBD	Scheduled discussion of portal items, and any review items of concern
March 15, 2022	12:00 pm	Audit completion date

7.0 SPECIAL REQUESTS

The following conditions associated with the eDocs web portal must be maintained throughout the duration that the NRC staff have access to the eDocs web portal:

- The eDocs web will be password-protected, and separate passwords will be assigned to the NRC staff who are participating in the audit.
- The eDocs web will be sufficiently secure to prevent the NRC staff from printing, saving, downloading, or collecting any information on the online portal.
- Conditions of use of the eDocs web will be displayed on the login screen and will require acknowledgment by each user.

Username and password information should be provided directly to the NRC staff. The NRC project manager will provide Exelon the names and contact information of the NRC staff who will be participating in the audit. All other communications should be coordinated with the NRC project manager. NRC staff access to the eDocs web portal needs to be terminated 30 days after the end of the regulatory audit.

8.0 DELIVERABLES

Upon completion of the audit, the regulatory audit summary report will be placed into ADAMS within 90 days of the completion of the audit or before the regulatory action that the audit supports is completed, whichever is shorter. If the NRC staff identifies information during the audit that is needed to support its regulatory decision, the NRC staff will issue requests for additional information to the licensee as soon as possible after the end date of the audit.

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 DATED JANUARY 14, 2022

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GMakar, NRR

JMa, NRR

ADAMS Accession No.: ML22004A287*** by email**

OFFICE	DORL/LPL2-1/PM	DORL/LPL2-1/LA*	NRR/DNRL/NCSG/BC*
NAME	JKlos	KEntz	SBloom
DATE	01/03/2022	1/7/2022	1/12/2022
OFFICE	NRR/DEX/ESEB/BC*	DORL/LPL2-1/A(BC)*	DORL/LPL2-1/PM
NAME	JColaccino	MMarkley (SWilliams for)	JKlos
DATE	1/13/2022	1/14/2022	1/14/2022

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