



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

April 14, 2022

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

SUBJECT: NORTH ANNA POWER STATION, UNITS 1 AND 2, SURRY POWER STATION, UNITS 1 AND 2, AND MILLSTONE POWER STATION, UNITS 2 AND 3 – REGULATORY AUDIT REPORT REGARDING REQUEST TO REVIEW APPENDIX E TO FLEET TOPICAL REPORT DOM-NAF-2 (EPID L-2021-LLT-0000)

Dear Mr. Stoddard:

By letter dated February 11, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21042B321), as supplemented by letters dated May 13, 2021 (ADAMS Accession No ML21133A285), September 15, 2021 (ADAMS Accession No. ML21259A079), and February 17, 2022 (ADAMS Accession No. ML22052A064), Dominion Energy requested approval of Appendix E of fleet report DOM-NAF-2, "Qualification of the Framatome BWU-I CHF Correlation in the Dominion Energy VIPRE-D Computer Code."

On November 30, 2021 (ADAMS Accession No. ML21334A192), the U.S. Nuclear Regulatory Commission (NRC) staff issued an audit plan that conveyed intent to conduct a regulatory audit to support its review of the subject license amendment. On January 26, February 1, and April 1, 2022, NRC staff conducted a regulatory audit in a virtual environment.

The purpose of the audit was to gain understanding, to verify information, and to identify information that will require docketing to support the proposed licensing action. Based on the audit, the NRC staff intends to modify its one of two proposed limitations and conditions associated with its review of the topical report. The enclosure to this letter provides a report of the NRC staff's audit.

D. Stoddard

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If you have any questions, please contact me by telephone at (301) 415-2481 or by e-mail at Ed.Miller@nrc.gov.

Sincerely,

/RA/

G. Edward Miller, Project Manager
Special Projects and Process Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-280, 50-281, 50-338,
50-339, 50-336, and 50-423

Enclosure:
Audit Report

cc: Listserv



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NUCLEAR REGULATORY COMMISSION
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REGULATORY AUDIT REPORT

DOMINION ENERGY (DOMINION)

NORTH ANNA POWER STATION

SURRY POWER STATION

MILLSTONE POWER STATION

APPENDIX E TO TOPICAL REPORT

DOM-NAF-2-A

REACTOR CORE THERMAL-HYDRAULICS USING THE VIPRE-D COMPUTER CODE

DOCKET NOS. 50-280, 50-281, 50-338, 50-339, 50-336, AND, 50-423

1.0 BACKGROUND

By letter dated February 11, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21042B321), as supplemented by letters dated May 13, 2021 (ADAMS Accession No. ML21133A285), September 15, 2021 (ADAMS Accession No. ML21259A079), and February 17, 2022 (ADAMS Accession No. ML22052A064), Dominion Energy requested approval of Appendix E of fleet report DOM-NAF-2, "Qualification of the Framatome BWU-I CHF Correlation in the Dominion Energy VIPRE-D Computer Code."

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The purpose of the audit was to gain understanding, to verify information, and to identify information that will require docketing to support the proposed licensing action. Based on the audit, the NRC staff intends to modify its one of two proposed limitations and conditions associated with its review of the topical report.

The NRC staff conducted the regulatory audit in accordance with the Office of Nuclear Reactor Regulation (NRR) Office Instruction LIC-111, Revision 1, "Regulatory Audits" (ADAMS Accession No. ML19226A274).

Enclosure

2.0 SCOPE AND PURPOSE

The audit was held on January 26, February 1, and April 1, 2022. The purpose of the audit was to help the NRC staff better understand the documentation and analysis results through interaction with the licensee's technical experts and to help focus the staff's potential limitations and conditions.

3.0 AUDIT TEAM

The following NRC staff members participated in the audit:

- Ed Miller – Project Manager
- Joshua Kaizer – Technical Reviewer

4.0 AUDIT REPORT

The purpose of this regulatory audit was to enhance the staff's technical understanding of the LAR, interact with the licensee technical staff supporting the LAR, and identify what information would need to be docketed to support completion of the review. The audit focus areas were to better understand the licensee's proposed methodology and intended application of the analysis. Table 1 identifies audit participants.

By the conclusion of the audit, the NRC staff indicated that it appeared that there was sufficient understanding of the applications and regions in which the code would be utilized. Further, the NRC staff has sufficient understanding to modify its one of two proposed limitations and conditions associated with its review of the topical report. The modification of the limitation and condition will continue to sufficiently proscribe usage of the topical report to address NRC staff concerns while not inappropriately limiting its usage otherwise.

5.0 DOCUMENTS REVIEWED

The following documents were reviewed during the audit:

SM-1780, Addendum B	Correction of Modeling Error in the WES162 Test Section
SM-1785, Addendum B, Attachment A	Behavior of the BWU-I CHF Correlation at Extremely Subcooled Qualities
SM-1785, Addendum B, Attachment B	Modeling of the Single Rod Tests by Campanile et. al. (1996)

6.0 CONCLUSION

The purpose of the audit was to gain understanding, to verify information, and to identify information that will require docketing to support the proposed licensing action. As a result of the audit, the NRC staff intends to modify its one of two proposed limitations and conditions associated with its review of the topical report.

Date: April 14, 2022

Table 1
NRC Audit - Attendees
January 26, February 1, and April 1, 2022

Attendee Name	Affiliation
Ed Miller	NRC - NRR
Joshua Kaizer	NRC - NRR
Gary Miller	Dominion – Nuclear Regulatory Affairs
Jonathan Ford	Dominion – Nuclear Engineering and Fuels
John Harrell	Dominion – Nuclear Engineering and Fuels
Matthew Lepcio	Dominion – Nuclear Engineering and Fuels
Brian Mount	Dominion – Nuclear Engineering and Fuels
Nawal Valliani	Dominion – Nuclear Engineering and Fuels

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JKaizer, NRR

ADAMS Accession No. ML22101A152

OFFICE	NRR/DORL/LPL2-1/PM	NRR/DORL/LPL2-1/LA	NRR/DSS/SFNB/BC
NAME	GEMiller	KGoldstein	RLukes
DATE	4/14/2022	04/11/2022	4/14/2022
OFFICE	NRR/DORL/LPL2-1/BC		
NAME	MMarkley (JLamb for)		
DATE	4/14/2022		

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