



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

September 15, 2023

Mr. Eric S. Carr
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, AND VIRGIL C. SUMMER
NUCLEAR STATION UNIT 1 – REQUEST TO USE A PROVISION OF A
PREVIOUS EDITION OF THE ASME BOILER AND PRESSURE VESSEL
CODE, SECTION XI, FOR NONDESTRUCTIVE EXAMINATIONS (EPID L-2023-
LLR-0013)

Dear Mr. Carr:

By letter dated April 6, 2023 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML23096A237), Dominion Energy (Dominion, the licensee) submitted an Alternative Request to the Nuclear Regulatory Commission (NRC) in accordance with paragraph 50.55a (z)(1) of Title 10 of the *Code of Federal Regulations* (10 CFR) to use a previous edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code (ASME Code) at Surry Power Station (SPS), Units 1 and 2, and Virgil C. Summer Nuclear Station (VCSNS), Unit 1, for its upcoming sixth and fifth 10-year inservice inspection (ISI) intervals, respectively. Specifically, Dominion requested approval to use the provisions in the 2013 Edition of the ASME Code, Section XI, for nondestructive examination (NDE) activities associated with examinations at the facilities in lieu of the 2019 Edition of the ASME Code, Section XI.

The NRC staff has reviewed the subject request and concludes, as set forth in the enclosed safety evaluation, that Dominion has adequately addressed the regulatory requirements set forth in 10 CFR 50.55a(a)(1) and that the proposed alternative provides an acceptable level of quality and safety. Therefore, the NRC staff authorizes the use of the NDE-related provisions in the 2013 Edition of the ASME Code, Section XI, identified in the application, subject to the conditions and limitations outlined in 10 CFR 50.55a(b) for SPS, Units 1 and 2, sixth 10-year ISI interval and VCSNS fifth 10-year ISI interval. All other ASME Code, Section XI, requirements for which relief was not specifically requested and approved remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

E. Carr

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If you have any questions, please contact Ed Miller at (301) 415-2481, or via email at Ed.Miller@nrc.gov.

Sincerely,

Michael T. Markley, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No(s). 50-280, 50-281, and 50-395

Enclosure:
Safety Evaluation

cc: ListServ



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
PROPOSED ALTERNATIVE TO USE CERTAIN PROVISIONS OF THE AMERICAN SOCIETY
OF MECHANICAL ENGINEERS
BOILER AND PRESSURE VESSEL CODE SECTION XI 2013 EDITION
NONDESTRUCTIVE ENGINEERING REQUIREMENTS
DOMINION ENERGY
SURRY POWER STATION, UNITS 1 AND 2
VIRGIL C. SUMMER NUCLEAR STATION, UNIT 1
DOCKET NOS. 50-280, 50-281, AND 50-395

1.0 INTRODUCTION

By letter dated April 6, 2023 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML23096A237), Dominion Energy (Dominion, the licensee) submitted an Alternative Request to the Nuclear Regulatory Commission (NRC) in accordance with paragraph 50.55a(z)(1) of Title 10 of the *Code of Federal Regulations* (10 CFR) to use a previous edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code (ASME Code) at Surry Power Station (SPS), Units 1 and 2, and Virgil C. Summer Nuclear Station (VCSNS), Unit 1, for their upcoming sixth and fifth 10-year inservice inspection (ISI) intervals, respectively. Specifically, Dominion requested approval to use the provisions in the 2013 Edition of the ASME Code, Section XI, for nondestructive examination (NDE) activities associated with examinations at the facilities in lieu of the 2019 Edition of the ASME Code, Section XI.

Dominion is requesting to use portions of the ASME Code, Section XI, 2013 Edition applicable to NDE in lieu of the 2019 Edition during SPS, Units 1 and 2, sixth 10-year ISI interval and VCSNS, Unit 1, fifth 10-year ISI intervals to provide commonality of the same ASME Code Edition and common corporate procedures that are implemented across the entire Dominion nuclear fleet.

2.0 REGULATORY EVALUATION

The ISI of ASME Code Class 1, 2, and 3 components is to be performed in accordance with Section XI of the ASME Code and applicable edition and addenda as described by 10 CFR 50.55a(g), except where specific relief has been granted.

Pursuant to 10 CFR 50.55a(g)(4), states, in part, that ASME Code Class 1, 2, and 3 components (including supports) must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI of editions and addenda of the ASME BPV Code to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations state that inservice examination of components and system pressure tests conducted during the initial and subsequent 120-month (hereby referred to as 10-year) intervals must comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(a) of this section 18 months before the start of the 10-year interval, subject to any applicable conditions listed in 10 CFR 50.55a(b)(2). In accordance with 10 CFR 50.55a(a)(1)(ii)(C), the latest edition of the ASME Code is the 2019 Edition.

The NRC regulations in 10 CFR 50.55a(z), "Alternatives to codes and standards requirements," states, in part, that alternatives to the requirements of 10 CFR 50.55a(b) through (h) of this section or portions thereof may be used when authorized by the NRC, if the licensee demonstrates that (1) the proposed alternative would provide an acceptable level of quality and safety; or (2) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Dominion has submitted this request on the basis that a proposed alternative would provide an acceptable level of quality and safety.

3.0 TECHNICAL EVALUATION

3.1 Dominion's Alternative Request

3.1.1 ASME Code Components Affected

The applicable ASME code components affected is identified in Table 1.

Table 1: ASME Code Components Affected

Code Class	Class 1, 2, and 3
Reference	ASME Section XI, 2013 Edition and ASME Section XI, 2019 Edition
Components	Class 1, 2, and 3 Examinations
Examination Categories	All, as related to NDE Methods and Requirements
Items Numbers	All, as related to NDE Methods and Requirements

3.1.2 Applicable Code Edition

In its letter dated April 6, 2023, the licensee stated, in part, that the sixth 10-year interval of the SPS, Units 1 and 2, ISI Program and the fifth 10-year interval of the VCSNS, Unit 1, ISI Program will be based on the ASME Code, Section XI, 2019 Edition. The remaining Dominion

Energy nuclear fleet plants (i.e., North Anna and Millstone Power Stations) are currently standardized on the 2013 Edition of the ASME Code for performance of NDE activities.

The SPS Units 1 sixth 10-year ISI interval begins on October 14, 2023, and ends on October 13, 2033. The SPS Unit 2 sixth 10-year ISI interval begins on May 10, 2024, and ends on May 9, 2034. The VCSNS fifth 10-year ISI interval begins on January 1 2024, and ends on December 31, 2033.

SPS and VCSNS are requesting approval to use the 2013 Edition of the ASME Code, Section XI for NDE activities associated with ISI for the SPS Units 1 and 2 sixth and VCSNS Unit 1 fifth 10-year ISI intervals.

3.1.3 Proposed Alternative and Basis for Use

As stated in its letter dated April 6, 2023, the proposed alternative would allow SPS Units 1 and 2 and VCSNS Unit 1 to utilize provisions of the 2013 Edition instead of the 2019 Edition of ASME Code, Section XI for NDE activities related to performing ISI during the sixth 10-year ISI intervals for SPS Units 1 and 2 and the fifth 10-year ISI interval for VCSNS Unit 1.

Specifically, SPS and VCSNS are requesting the use of the provisions in the 2013 Edition of ASME Code, Section XI for NDE activities associated with inservice inspections. These NDE activities are driven by the ASME Code, Section XI, Subsection IWA, Articles IWA-1000 and IWA-2000, and Mandatory Appendices I, III, IV, VI, VII, and VIII.

The proposed alternative does not apply to the balance of the ISI Programs including the selection, planning, and scheduling of ISI examinations and tests as defined in IWB-, IWC-, IWD-, and IWF-2500 or NRC approved ISI alternatives. Therefore, ISI examinations and tests will be selected, planned, and scheduled in accordance with the 2019 Edition of ASME Code, Section XI, which is the Code of Record for the SPS Units 1 and 2 sixth, and VCSNS Unit 1 fifth, 10-year ISI intervals. Further, this proposed alternative request will have no effect on any prior relief or alternative requests previously approved by the NRC.

In implementing this proposed alternative, SPS Units 1 and 2 and VCSNS Unit 1 will comply with all applicable NRC conditions and limitations related to the NDE requirements of the 2013 Edition of the ASME Code, Section XI specified in 10 CFR 50.55a(b)(2).

This alternative is requested for the sixth 10-year ISI interval for SPS Units 1 and 2, and for the fifth 10-year ISI interval for VCSNS Unit 1. The SPS Unit 1 sixth 10-year ISI interval begins on October 14, 2023, and ends on October 13, 2033. The SPS Unit 2 sixth 10-year ISI interval begins on May 10, 2024, and ends on May 9, 2034. The VCSNS fifth 10-year ISI interval begins on January 1, 2024, and ends on December 31, 2033.

3.2 NRC Staff Evaluation

The NRC staff evaluated Dominion's alternative request, pursuant to 10 CFR 50.55a(z)(1). The NRC staff's evaluation focused on (1) whether there exists major difference between the requested provisions of licensee's proposed edition (which is the 2013 Edition) and (2) the latest approved edition (which is the 2019 Edition) of the ASME Code, Section XI incorporated by reference in 50.55a(a), and whether applicable conditions in 50.55a will be met. The NRC staff

finds that if these two criteria are met, the proposed alternative provides an acceptable level of quality and safety.

The licensee is requesting to use the provisions in the 2013 Edition of the ASME Code, Section XI, for NDE activities associated with ISI at SPS Units 1 and 2 and VCSNS Unit 1. The 2013 Edition of the ASME Code, Section XI is incorporated by reference into 10 CFR 50.55a(a)(1)(ii), except for Item Nos. B5.11 and B5.71 in Table IWB-2500-1 (B-F), subparagraph IWB-3112(a)(3), and subparagraph IWC-3112(a)(3). The licensee has not requested to use any of the excluded provisions. Additionally, the licensee stated in the application that it will comply with all applicable conditions and limitations specified in 10 CFR 50.55a(b) for the applicable provisions of the 2013 Edition of ASME Code, Section XI. Therefore, the first criterion has been satisfied.

The proposed alternative that Dominion submitted describes the major differences between the 2013 and 2019 edition of ASME Code, Section XI in Table 2 of the letter dated April 6, 2023. The differences between the 2013 edition and 2019 edition of ASME Code, Section XI are minor and the changes in the 2019 Edition of ASME Code, Section XI are often relaxations in rigor, not increases in rigor. Therefore, the second criterion has been satisfied.

Based on the above, the NRC staff concludes that the criteria contained in 10 CFR 50.55a(z)(1) are satisfied and that the Dominion's request to use provisions of the 2013 Edition of the ASME Code, Section XI for the NDE activities relating to the ISI examinations is acceptable.

4.0 CONCLUSION

As set forth above, the NRC staff concludes that Dominion's proposed request to use the provisions in the 2013 Edition of the ASME Code, Section XI, for NDE activities associated with ISI examinations in lieu of the 2019 Edition, as described in their submittal, provides an acceptable level of quality and safety and is acceptable because the requirements in 10 CFR 50.55a(z)(1) are satisfied. Therefore, the NRC staff authorizes the use of the NDE-related provisions in the 2013 Edition of the ASME Code, Section XI, identified in the application, subject to the conditions and limitations in 10 CFR 50.55a(b) for the sixth 10-year ISI interval at SPS Units 1 and 2 and the fifth 10-year ISI interval at VCSNS Unit 1, as specified in the application.

All other ASME Code, Section XI, requirements for which the alternative was not specifically requested and approved remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor(s): Stephen Cumblidge, NRR
Matt Burton, NRR

Date: September 15, 2023

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