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

November 20, 2020

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

SUBJECT: SURRY NUCLEAR POWER STATION, UNITS 1 AND 2 – REQUEST TO USE A PROVISION OF A LATER EDITION OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE, SECTION XI (EPID L-2020-LLR-0047)

Dear Mr. Stoddard:

By letter dated March 26, 2020, Virginia Electric and Power Company (Dominion Energy Virginia) submitted a request to the U.S. Nuclear Regulatory Commission (NRC) to use a provision of a later edition of American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section XI, for performing IWC-3510, "Standards for Examination Category C-A, Pressure Retaining Welds in Pressure Vessels," examinations during the fifth inservice inspection (ISI) interval for Surry Power Station, Units 1 and 2.

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(g)(4)(iv), Dominion Energy Virginia requested to use portion of the ASME Section 2013 Code Edition and addenda governing IWC-3510 for ISI items subject to the conditions specified in 10 CFR 50.55a(b).

The NRC staff has reviewed the subject request and concludes, as set forth in the enclosed safety evaluation, that Dominion Energy Virginia has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(g)(4)(iv). All other ASME Code, Sections XI, requirements for which the request was not specified remains applicable, including a third-party review by the Authorized Nuclear Inservice Inspector.

Enclosed is the NRC staff's safety evaluation.

Sincerely,

Michael T. Markley

Digitally signed by Michael T. Markley
Date: 2020.11.20 16:08:28 -05'00'

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

Docket Nos. 50-280 and 50-281

cc: Listserv

UNITED STATES
NUCLEAR REGULATORY COMMISSION
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO REQUEST TO USE A LATER EDITION OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE, SECTION XI

VIRGINIA POWER AND ELECTRIC COMPANY

DOMINION ENERGY VIRGINIA

SURRY POWER STATION, UNITS 1 AND 2

DOCKET NUMBERS 50-280 AND 50-281

(EPID: L-2020-LLR-0047)

1.0 INTRODUCTION

By letter dated March 26, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20087N186), Virginia Electric and Power Company (Dominion, the licensee) requested U.S. Nuclear Regulatory Commission (NRC or Commission) approval to use a subsequent edition of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, for inservice examinations of certain components at Surry Power Station (Surry), Units 1 and 2.

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(g)(4)(iv), the licensee requested approval to use IWC-3510 of the 2013 Edition of the ASME Code, Section XI, with addenda, for examinations of Examination Category C-A components, for the remainder of the current Fifth 10-year inservice inspection (ISI) interval for Surry Units 1 and 2.

2.0 REGULATORY EVALUATION

In its request, the licensee proposed the use of a later edition of the ASME Code, Section XI in accordance with 10 CFR 50.55a(g)(4)(iv). Specifically, 10 CFR 50.55a(g)(4)(iv) states:

> Inservice examination of components and system pressure tests may meet the requirements set forth in subsequent editions and addenda that are incorporated by reference in paragraph (a) of this section, subject to the conditions listed in section (b) of this section, and subject to Commission approval. Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met.

The regulations in 10 CFR 50.55a(g)(4)(iv) permit the use of later editions of the ASME Code subject to section (b), therefore, the NRC staff finds that regulatory authority exists for the licensee to request and the NRC to authorize the use of a subsequent editions of the ASME Code, subject to the conditions stated above.

3.0 TECHNICAL EVALUATION

3.1 Proposed Subsequent Code Edition and Addenda

In its submittal, the licensee identified the affected components as ASME Code Class 2 ferritic and austenitic steel pressure vessels subject to ASME Code, Section XI, Examination C-A. The Code of Record (COR) for the current ISI interval at Surry Units 1 and 2, is the 2004 Edition of ASME Code, Section XI. In lieu of using the COR, the licensee proposed to use the 2013 Edition and addenda of the ASME Code, Section XI, IWC-3510 for the subject components. The licensee noted that the 2013 edition of the ASME Code included flaw limitations specific to austenitic steels in addition to acceptable flaw limitations for ferritic steels. The provision to use the later edition of the ASME Code in the proposed request will be used for the remainder of the current Fifth ISI interval at Surry, Units 1 and 2.

The duration of the Fifth ISI interval for Surry, Units 1 and 2, began on December 14, 2013, and May 10, 2014, respectively, and is currently scheduled to end on October 13, 2023, and May 9, 2024, respectively.

3.2 NRC Staff Evaluation

Section 50.55a(g)(4)(iv) of 10 CFR contains four criteria which must be met prior to use of a subsequent edition of the ASME Code these criteria are:

1. The proposed edition/addendum of the ASME Code is incorporated by reference in 10 CFR 50.55a(a)

2. The proposed edition/addendum of the ASME Code is subject to the conditions listed in 10 CFR 50.55a(b)

3. The licensee shall request Commission approval to use the proposed edition/addendum of the ASME Code

4. If only portions of editions or addenda are to be used all related requirements of the respective editions or addenda must be met.

In evaluating the first criterion, i.e., the proposed edition/addendum of the ASME Code has been incorporated by reference in 10 CFR 50.55a(a). The NRC staff notes that Section 10 CFR 50.55a(a)(ii) incorporates by reference the ASME Code, Section XI, from the 1970 Edition through the 1976 Winter Addenda, and the 1977 Edition through the 2013 Edition, which the licensee has proposed to use. Therefore, the NRC finds that the first criterion has been satisfied.

In evaluating the second criterion, i.e., the conditions listed in 10 CFR 50.55a(b) are satisfied for the specific proposed subsequent edition and addenda of the ASME Code, Section XI. The NRC staff notes that 10 CFR 50.55a(b) sets no conditions on IWC-3510 of 2013 Edition of the

ASME Code, Section XI. Therefore, the NRC staff finds that the second criterion has been satisfied.

In evaluating the third criterion, i.e., the licensee shall request Commission approval to use the proposed edition/addendum of the ASME Code. The NRC staff notes that the licensee's proposal constitutes a request to the Commission for approval to use a subsequent edition/addendum of the ASME Code. Therefore, the NRC staff finds that the third criterion has been satisfied.

In evaluating the fourth criterion, i.e., if portions of subsequent editions or addenda of the ASME Code, Section XI, are used, all related requirements of the respective editions or addenda must be met. The NRC staff is satisfied that by incorporating IWC-3510 in its entirety, the applicant leaves no related requirements, modifications, or limitations unincorporated that should be incorporated. As the subject section of the ASME Code provides guidance concerning potential acceptability of identified flaws, additional portions of the 2013 Edition of the ASME Code are not required to be implemented simultaneously. Because all the related requirements will be met by the licensee, the NRC staff finds that the fourth criterion has been satisfied.

Based on the above, the NRC staff finds that the criteria contained in 10 CFR 50.55a(g)(4)(iv) are satisfied and that the licensee's request to use IWC-3510 of the 2013 Edition of the ASME Code, Section XI, for Examination Categories C-A is acceptable.

4.0 CONCLUSION

As set forth above, the NRC staff determined that the proposed use of the requirements of a subsequent Edition of the ASME Code, Section XI, is acceptable. Accordingly, the NRC staff concludes that the licensee adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(g)(4)(iv). Therefore, the NRC staff approves the use of IWC-3510 of the 2013 Edition and addenda of the ASME Code, Section XI, for Examination Category C-A at Surry Units 1 and 2, for the remainder of the current Fifth 10-year ISI interval, which began on December 14, 2013, and May 10, 2014, respectively, and is currently scheduled to end on October 13, 2023, and May 9, 2024, respectively

All other ASME Code, Sections XI, requirements for which the request was not specified remains applicable, including a third-party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor: Dan Widrevitz, NRR

Date: November 20, 2020

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