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

August 23, 2018

Mr. Joseph W. Shea
Vice President, Nuclear Regulatory Affairs
and Support Services
Tennessee Valley Authority
Watts Bar Nuclear Plant
1101 Market Street, LP 4A
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 2 – REQUEST TO USE A LATER EDITION OF THE ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI FOR CONTAINMENT INSERVICE INSPECTION ACTIVITIES (EPID L-2018-LLR-0006)

Dear Mr. Shea:

By letter dated February 20, 2018 (Agencywide Documents and Access Management System Accession No. ML18052A087), Tennessee Valley Authority (TVA or the licensee) requested approval to use a later edition of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME BPV Code) for the Containment Inservice Inspection (CISI) IWE program for the Watts Bar Nuclear Plant (WBN), Unit 2, for the remainder of the first CISI Interval. Specifically, TVA proposes to use the 2013 Edition of Section XI of the ASME B&PV Code for the IWE program, in its entirety, for WBN Unit 2, in lieu of the requirements of ASME Section XI 2007 Edition, 2008 Addenda (i.e., the current Code of Record for WBN Unit 2) for the inspection of the primary containment structure.

Specifically, pursuant to 10 CFR 50.55a(g)(4)(iv), the licensee requested to use later code editions and addenda for inservice inspection items subject to the conditions listed in 10 CFR 50.55a(b) and Commission approval.

The NRC staff has reviewed the subject request and concludes, as set forth in the enclosed safety evaluation, that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(g)(4)(iv) and is in compliance with the requirements of the ASME Code, Section XI. Therefore, the NRC staff approves the use of Article IWE-5000 in the 2013 Edition of the ASME Code, Section XI, for the activities for the remainder of the first CISI interval at WBN Unit 2, which is scheduled to end on June 29, 2026.

If you have any questions, please contact the Project Manager, Natreon Jordan, at 301-415-7410 or by email to Natreon.Jordan@nrc.gov.

Sincerely,

/RA/

Booma Venkataraman, Acting Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-391

Enclosure:
Safety Evaluation

cc: Listserv

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REQUEST TO USE A LATER EDITION OF THE ASME CODE

FOR CONTAINMENT INSERVICE INSPECTION ACTIVITIES

WATTS BAR NUCLEAR PLANT, UNIT 2

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-391

1.0 INTRODUCTION

By letter dated February 20, 2018 (Reference 5.1), Tennessee Valley Authority (TVA, or the licensee) submitted a request to use a later edition of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, "Rules for Inservice Inspection [ISI] of Nuclear Power Plant Components," for the inspection of Primary Containment Structures. As noted in Nuclear Regulatory Commission (NRC) Regulatory Issue Summary (RIS) 2004-12 (Reference 5.2), licensees seeking to use later editions of the ASME Code, Section XI, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(g)(4)(iv), are not required to request an alternative pursuant to 10 CFR 50.55a(z), or to request relief pursuant to 10 CFR 50.55a(f)(5)(iv) or 10 CFR 50.55a(g)(5)(iv).

Specifically, pursuant to 10 CFR 50.55a(g)(4)(iv), TVA requested to use the 2013 Edition of the ASME Code, Section XI, for the first 10-year Containment Inservice Inspection (CISI) interval at Watts Bar Nuclear Plant, Unit 2 (WBN Unit 2). The current applicable Code of Record for the CISI interval is the ASME Code, Section XI, 2007 Edition with the 2008 Addenda. The first CISI interval for WBN Unit 2, began on June 30, 2016, and is currently scheduled to end on June 29, 2026.

2.0 REGULATORY EVALUATION

Pursuant to 10 CFR 50.55a(g)(4)(iv), 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 10 CFR 50.55a, subject to the conditions listed in paragraph (b) of 10 CFR 50.55a, 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.

Based on the above, and subject to the following technical evaluation, the NRC Staff finds that regulatory authority exists for the licensee to request and the NRC to approve the use of subsequent editions and addenda of the ASME Code as requested by the licensee.

3.0 TECHNICAL EVALUATION

3.1 TVA's Request

In Reference 5.1, the licensee states that during the first refueling outage at WBN Unit 2, VT-1 visual examinations were performed on disassembled containment bolted connections, per Category E-G, Item No. E8.10, with no recordable indications. The General Visual examinations of Category E-A containment surfaces and moisture barriers were not performed, but are scheduled to be completed during the Cycle 2 refueling outage at WBN Unit 2, in spring 2019. There are currently no Category E-C areas of containment identified as requiring augmented examination.

TVA requests approval of the proposed request by September 8, 2018, to support consolidation of the WBN Unit 1 and Unit 2, IWE procedures prior to the start of the third IWE interval for WBN Unit 1. At the start of the third IWE interval for WBN Unit 1, the 2013 Edition of the ASME Code, Section XI, will be used for the IWE program. TVA plans to implement the use of the 2013 Edition of ASME, Section XI, for the IWE program for WBN Unit 2, during the second refueling outage. The requested NRC approval date also supports planning for that outage.

3.2 NRC STAFF EVALUATION

Based on the requirements in 10 CFR 50.55a(g)(4)(iv), the NRC staff considered the following criteria in their review of the licensee's application:

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, the NRC staff notes that 10 CFR 50.55a(a) incorporates by reference the 2013 Edition of the ASME Code, Section XI, as published in the *Federal Register* on July 18, 2017 (82 FR 32934), and became effective August 17, 2017. Therefore, the NRC finds that the first criterion has been satisfied.

In evaluating the second criterion, the NRC staff notes that 10 CFR 50.55a(b)(2) sets a condition on ASME Code, Section XI, in lieu of the requirements of ASME Code, Section XI, 2007 Edition with the 2008 Addenda. TVA plans to use the proposed later ASME Code edition for the remainder of the second 10-year CISI interval for WBN Unit 2. TVA has acknowledged that it will meet the requirements referenced in Article IWE-5000 of the 2013 Edition of the ASME Code, Section XI, and comply with all applicable provisions of 10 CFR 50.55a(b). Therefore, the NRC staff finds that the second criterion has been satisfied.

In evaluating the third criterion, the NRC staff notes that TVA's February 20, 2018, submittal 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, TVA acknowledges that it will comply with all related requirements of the ASME Code, Section XI, 2013 Edition. The NRC Staff is satisfied that TVA will meet the requirements in Subparagraph IWE-2200(c) and Article IWE-5000 of the ASME Code, Section XI, 2013 Edition. Therefore, the NRC staff finds that the fourth criterion has been satisfied.

Based on the above, the NRC staff finds that TVA has satisfied each of the four criteria of 10 CFR 50.55a(g)(4)(iv) and approves the use of the 2013 Edition of the ASME Code, Section XI, for the IWE program, in lieu of the 2007 with 2008 addenda for the CISI activities.

4.0 CONCLUSION

As set forth above, the NRC staff determined that the use of the 2013 Edition of the ASME Code, Section XI, for the CISI activities, is acceptable because TVA has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(g)(4)(iv) and is in compliance with the requirements of the ASME Code, Section XI. Therefore, the NRC staff approves the use of Article IWE-5000 in the 2013 Edition of the ASME Code, Section XI, for the activities for the remainder of the first CISI interval at WBN Unit 2, which is scheduled to end on June 29, 2026.

5.0 REFERENCE

5.1 TVA letter dated February 20, 2018, from J. W. Shea, Vice President Nuclear Regulatory Affairs and Support Services to the U.S. Nuclear Regulatory Commission (Agencywide Documents and Access Management System (ADAMS) Accession No. ML18052A087).

5.2 NRC Regulatory Issue Summary (RIS) 2004-12, Clarification on use of later editions and addenda to the ASME OM Code and Section XI, July 28, 2004 (ADAMS Accession No. ML042090436).