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

August 18, 2020

Ms. Mandy Halter
Vice President, Regulatory Assurance
Entergy Services, LLC
M-ECH-29
1340 Echelon Parkway
Jackson, MS 39213

SUBJECT: ARKANSAS NUCLEAR ONE, UNITS 1 AND 2; GRAND GULF NUCLEAR STATION, UNIT 1; INDIAN POINT NUCLEAR GENERATING UNIT NO. 3; PALISADES NUCLEAR PLANT; RIVER BEND STATION, UNIT 1; AND WATERFORD STEAM ELECTRIC STATION, UNIT 3 – 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-0108)

Dear Ms. Halter**:**

The U.S. Nuclear Regulatory Commission (NRC) has authorized your request to use a provision of a later edition of American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section XI, for Arkansas Nuclear One, Units 1 and 2 (ANO-1, ANO-2); Grand Gulf Nuclear Station, Unit 1 (Grand Gulf); Indian Point Nuclear Generating, Unit No. 3 (Indian Point Unit 3); Palisades Nuclear Plant (Palisades); River Bend Station, Unit 1 (River Bend); and Waterford Steam Electric Station, Unit 3 (Waterford 3). This action is in response to your request dated August 12, 2020 (Agencywide Documents Access and Management System Accession No. ML20225A180).

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(g)(4)(iv), Entergy Nuclear Operations, Inc. and Entergy Operations, Inc. (the licensee) proposed to use subparagraph IWA-4540(b) of the 2017 Edition of the ASME BPV Code, Section XI, in place of the of the corresponding subparagraph from the Code of Record.

The NRC staff authorizes the use of subparagraph IWA-4540(b) of the 2017 Edition of ASME BPV Code, Section XI, for the duration of the fifth ISI intervals for ANO-1, ANO-2, and Palisades and the fourth ISI intervals for Grand Gulf, Indian Point Unit 3, River Bend, and Waterford 3.

The fifth ISI interval for ANO-1 started on May 31, 2017, and ends on May 30, 2027. The fifth ISI interval for ANO-2 started on March 26, 2020, and ends on March 25, 2030. The fourth ISI interval for Grand Gulf started on December 1, 2017, and ends on November 30, 2027. The fourth ISI interval for Indian Point Unit 3 started on July 21, 2009, and ends on July 20, 2021. The fifth ISI interval for Palisades started on December 13, 2015, and ends on December 12, 2025. The fourth ISI intervals for River Bend and Waterford 3 started on December 1, 2017, and ends on November 30, 2027.

All other ASME BPV Code, Section XI, requirements which are not modified by the NRC staff's approval of the licensee's request remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

Enclosed is the NRC staff's safety evaluation.

If you have any questions, please contact the Project Manager, Siva P. Lingam, at 301-415-1564 or by e-mail to Siva.Lingam@nrc.gov.

Sincerely,

Jennifer L. Dixon-Herrity

Digitally signed by Jennifer L. Dixon-Herrity
Date: 2020.08.18 09:04:19 -04'00'

Jennifer L. Dixon-Herrity, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-313, 50-368, 50-416, 50-286, 50-255, 50-458, and 50-382

cc: Listserv

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REQUEST EN-RR-20-002 – REQUEST TO USE A PROVISION OF A LATER EDITION OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE

ENTERGY NUCLEAR OPERATIONS, INC. AND ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT 1; ARKANSAS NUCLEAR ONE, UNIT 2; GRAND GULF NUCLEAR STATION, UNIT 1; INDIAN POINT NUCLEAR GENERATING UNIT NO. 3; PALISADES NUCLEAR PLANT; RIVER BEND STATION, UNIT 1; AND WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NOS. 50-313, 50-368, 50-416, 50-286, 50-255, 50-458, AND 50-382

1.0 INTRODUCTION

By letter dated August 12, 2020 (Agencywide Documents Access and Management System Accession No. ML20225A180), Entergy Nuclear Operations, Inc. and Entergy Operations, Inc. (the licensee) submitted proposal EN-RR-2020-002 to use a portion of a later edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code for Arkansas Nuclear One, Units 1 and 2 (ANO-1, ANO-2); Grand Gulf Nuclear Station, Unit 1 (Grand Gulf); Indian Point Nuclear Generating, Unit No. 3 (Indian Point Unit 3); Palisades Nuclear Plant (Palisades); River Bend Station, Unit 1 (River Bend); and Waterford Steam Electric Station, Unit 3 (Waterford 3).

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(g)(4)(iv), "Applicable ISI [Inservice Inspection] Code: Use of subsequent Code editions and addenda," the licensee proposed to use subparagraph IWA-4540(b) of the 2017 Edition of the ASME BPV Code, Section XI, instead of the corresponding subparagraph from the current Code of Record. The time period applicable for the use of the requested subsequent ASME BPV Code edition and addenda are the fifth ISI intervals for ANO-1, ANO-2, and Palisades and the fourth ISI intervals for Grand Gulf, Indian Point Unit 3, River Bend, and Waterford 3. The licensee asserts that it meets all related requirements of the 2017 Edition of the ASME BPV Code, Section XI.

2.0 PROPOSED USE OF SUBSEQUENT CODE EDITION AND ADDENDA

2.1 Component(s) for Which the Subsequent Code Edition is Requested

All Class 1, 2, and 3 items located in the ASME BPV Code, Section XI, boundaries.

2.2 Current Code Requirement

Subparagraph IWA-4540(b) provides items that are exempt from pressure testing after repair/replacement activities.

2.3 Current Code Edition and Addenda of Record

The ISI Code of Record for the current 10-year ISI intervals at ANO-1, ANO-2, Grand Gulf, Palisades, River Bend and Waterford 3 is the 2007 Edition through 2008 Addenda. The ISI Code of Record for the current 10-year ISI interval at Indian Point Unit 3 is the 2001 Edition through 2003 Addenda,

2.4 Proposed Subsequent Code Edition and Addenda

The proposed subsequent Code edition and addenda to be used is subparagraph IWA-4540(b) of the 2017 Edition of the ASME BPV Code, Section XI.

2.5 Duration of the Use of the Later Code Edition and Addenda

The duration of this request is for the fifth ISI intervals for ANO-1, ANO-2, and Palisades, and for the fourth ISI intervals for Grand Gulf, Indian Point, Unit 3, River Bend and Waterford 3.

The fifth ISI interval for ANO-1 started on May 31, 2017, and ends on May 30, 2027. The fifth ISI interval for ANO-2 started on March 26, 2020, and ends on March 25, 2030. The fourth ISI interval for Grand Gulf started on December 1, 2017, and ends on November 30, 2027. The fourth ISI interval for Indian Point Unit 3 started on July 21, 2009, and ends on July 20, 2021. The fifth ISI interval for Palisades started on December 13, 2015, and ends on December 12, 2025. The fourth ISI intervals for River Bend and Waterford 3 started on December 1, 2017, and ends on November 30, 2027.

3.0 REGULATORY EVALUATION

The licensee is proposing to use a section of a later edition and addenda of the ASME BPV Code, Section XI, in accordance with 10 CFR 50.55a(g)(4)(iv), which 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 paragraph (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.

Given that 10 CFR 50.55(g)(4)(iv) permits the U.S. Nuclear Regulatory Commission (NRC) staff to approve the use of subsequent ASME BPV Code edition and addenda, the NRC staff finds that, subject to the following technical evaluation, the licensee may propose to use a section of

a later edition and addenda of the ASME BPV Code, Section XI, and the NRC staff has the regulatory authority to approve the later edition and addenda of the ASME BPV Code, Section XI.

4.0 NRC TECHNICAL EVALUATION

As previously stated in Section 3.0 of this safety evaluation, prior to approving the use of a subsequent edition and addenda of the ASME BPV Code under 10 CFR 50.55a(g)(4)(iv), the NRC staff must find that (1) the proposed subsequent edition and addenda are incorporated by reference in 10 CFR 50.55a(a), "Documents approved for incorporation by reference"; (2) the licensee has identified any conditions listed in 10 CFR 50.55a(b), "Use and conditions on the use of standards," appropriate to the request and will comply with those conditions; (3) the licensee has requested approval to use the subsequent edition and addenda; and (4) if only portions of edition or addenda are to be used, all related requirements of the respective edition or addenda are met. If these criteria are met, the NRC staff finds the use of the subsequent edition and addenda of the ASME BPV Code, Section XI, to be acceptable.

4.1 Incorporation by Reference

In evaluating the first criterion, 10 CFR 50.55a(a) incorporates by reference the ASME BPV Code, Section XI, from the 1970 Edition through the 1976 Winter Addenda, and the 1977 Edition through the 2017 Edition. The licensee proposed to use the 2017 Edition, which is included in the list of editions and addenda incorporated by reference in the current edition of 10 CFR 50.55a(a). Therefore, the NRC finds that the first criterion has been satisfied.

4.2 Subject to Conditions Listed in 10 CFR 50.55a(b)

In evaluating the second criterion, the NRC staff finds that 10 CFR 50.55a(b) contains no conditions relevant to this request. Therefore, the NRC staff finds that the second criterion has been satisfied.

4.3 Requesting Commission Approval

In evaluating the third criterion, the licensee's request dated August 12, 2020, constitutes a request to the Commission for approval to use a subsequent edition/addendum of the ASME BPV Code. Therefore, the NRC staff finds that the third criterion has been satisfied.

4.4 All Related Requirements

In evaluating the fourth criterion, the NRC staff finds that there are no related requirements relevant to this request. Therefore, the NRC staff finds that the fourth criterion has been satisfied.

4.5 Summary

Based on the review above, the NRC staff finds that the licensee has adequately addressed all regulatory requirements set forth in 10 CFR 50.55a(g)(4)(iv).

5.0 CONCLUSION

As set forth above, NRC staff finds that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(g)(4)(iv). Therefore, the NRC staff concludes that the use of subparagraph IWA-4540(b) the 2017 Edition of the ASME BPV Code, Section XI, is acceptable. The NRC staff authorizes the use of subparagraph IWA-4540(b) of the 2017 Edition of the ASME BPV Code, Section XI, for the duration of the fifth ISI intervals for ANO-1, ANO-2, and Palisades, and the fourth ISI intervals for Grand Gulf, Indian Point Unit 3, River Bend, and Waterford 3.

All other ASME BPV Code, Section XI, requirements which are not modified by the NRC staff's approval of the licensee's request remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor: Siva P. Lingam, NRR

Date: August 18, 2020

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