



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

WBL-22-057

September 26, 2022

10 CFR 50.55a

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Watts Bar Nuclear Plant, Unit 2
Facility Operating License No. NPF-96
NRC Docket No. 50-391

Subject: **American Society of Mechanical Engineers, Section XI, First 10-Year Inservice Inspection Interval, Inservice Inspection Owner's Activity Report For Cycle 4 Operation**

The Tennessee Valley Authority is submitting the Watts Bar Nuclear Plant, Unit 2, American Society of Mechanical Engineers (ASME), Section XI, Owner's Activity Report for Unit 2 Cycle 4 operation as required by Article IWA-6000, Section XI, Division 1. The report is contained in the enclosure to this letter and is in accordance with the requirements of ASME Code Case N-532-5, "Repair/Replacement Activity Documentation Requirements and Inservice Inspection Summary Report Preparation and Submission."

The report is an overview of the results from inservice examinations that were performed on components within the ASME Section XI boundary, up to and including the Unit 2 Cycle 4 refueling outage, during the second period of the first inspection interval. The applicable provisions of the ASME Code require that this report be submitted 90 days from the end of the applicable outage, i.e., by September 29, 2022.

There are no new regulatory commitments associated with this submittal. If you have questions regarding this letter, please contact Jonathan Johnson, Watts Bar Nuclear Plant, Site Licensing Manager, at jtjohnson0@tva.gov.

Respectfully,

A handwritten signature in black ink, appearing to read 'Anthony L. Williams IV', is written over a large, stylized, looping signature line.

Anthony L. Williams IV
Site Vice President
Watts Bar Nuclear Plant

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Enclosure:

American Society of Mechanical Engineers, Section XI, First 10-Year Inservice Inspection Interval, Inservice Inspection Owner's Activity Report For Cycle 4 Operation

cc: (w/o enclosure):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector – Watts Bar Nuclear Plant
NRC Project Manager – Watts Bar Nuclear Plant

ENCLOSURE

American Society of Mechanical Engineers, Section XI, First 10-Year Inservice Inspection Interval, Inservice Inspection Owner's Activity Report For Cycle 4 Operation

FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number U2R4

Plant Watts Bar Nuclear Plant, P.O. Box 2000, Spring City, TN 37381-2000

Unit No. 2 (if applicable) Commercial Service Date October 19, 2016 Refueling Outage No. U2R4

Current Inspection Interval 1st
(1st, 2nd, 3rd, 4th, other)

Current Inspection Period 2nd
(1st, 2nd, 3rd)

Edition and Addenda of Section XI applicable to the Inspection Plans ISI/SPT - 2007 Edition, 2008 Addenda
IWE - 2013 Edition

Date / Revision of Inspection Plans ISI - January 20, 2022 / 2-TRI-0-10.1, Revision 007
IWE - September 15, 2021 / 0-TI-100.012, Revision 001
SPT - August 24, 2020 / 0-TI-100.009 Revision 003

Edition and Addenda of Section XI applicable to repair/replacement activities, if different than the inspection plans 2007 Edition, 2008 Addenda

Code Cases used: N-532-5, N-716-1, N-722-1, N-729-6, N-747, N-770-5

CERTIFICATE OF CONFORMANCE

I certify that (a) the statements made in this report are correct; (b) the examinations and tests, meet the Inspection Plan as required by the ASME Code, Section XI; and (c) the repair/replacement activities and evaluations supporting the completion of U2R4 conform to the requirements of Section XI (refueling outage number)

Signed  John Norman, Repair/Replacement program owner Date 9/20/22
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors
The Hartford Steam Boiler of
Inspection and Insurance
and employed by Company Hartford, Connecticut
have inspected the items described in this Owner's Activity Report, and state that, to the best of my knowledge and belief, the Owner has performed all activities represented by this report in accordance with the requirements of Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the repair/ replacement activities and evaluation described in this report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection

 Commissions 15440 I, N, R
Inspector's Signature (National Board Number and Endorsement)

Date 20Sep22

TABLE 1
ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRED EVALUATION FOR CONTINUED SERVICE

Examination Category and Item Number	Item Description	Evaluation Description
None	None	None

TABLE 2
Abstract of Repairs/replacement Activities for Continued Service

Code Class	Item Description	Description of Work	Date Completed	Repair/Replacement Plan Number
1	Original Steam Generator #1 (66 tubes)	Tube plugging per Tech Spec requirements	8/23/22	121926582
1	Original Steam Generator #2 (44 tubes)	Tube plugging per Tech Spec requirements	8/23/22	121926573
1	Original Steam Generator #3 (162 tubes)	Tube plugging per Tech Spec requirements	8/23/22	121926557
1	Original Steam Generator #4 (112 tubes)	Tube plugging per Tech Spec requirements	8/23/22	121926479
3	Relief Valve welded piping	Repair pinhole leak by replacing pipe	9/17/21	122409059
MC	Steel Containment Vessel	Buffed to remove linear indication that did not exceed min wall thickness	7/19/22	120191175
MC	Steel Containment Vessel	Grind out linear indication and re-weld	7/19/22	120927518
MC	Steel Containment Vessel	Grind out indications to remove that did not exceed min wall thickness	7/19/22	120927518
MC	Steel Containment Vessel	Grind out linear indications and re-weld	7/19/22	120927518
MC	Steel Containment Vessel	Grind out arc strike and re-weld	7/22/22	120927526
2	Auxiliary Feedwater Piping	Buffed to remove arc strike that did not exceed min wall thickness	7/19/22	120926249

REPORTING REQUIRED BY 10 CFR 50.55a(b)(2)(ix)
ASME Section XI, Subsection IWE
Steel Containment Vessel Inspection Program

10 CFR 50.55a(b)(2)(ix) requires the reporting of inaccessible areas and additional examinations identified during the performance of ASME Section XI, Subsection IWE Steel Containment Vessel Inspection Program when conditions exist in accessible areas that could indicate the presence of or result in degradation to such inaccessible areas.

The thermal flashing on the outer wall of the raceway on elevation 702 is inspected as a moisture barrier (E-A, E1.31). Various Dents, gouges, and cuts were observed. In all occurrences the damage was indicative of damage related to outage activities within the raceway. The damage was not indicative of service induced flaws nor was there any indication of moisture intrusion.

ASME Section XI Code Non-Compliances

The following CR's were generated due to code non-compliances identified in vendor work plans identified during closure reviews of the steam generator replacement work orders. Resolution of each of these items are being handled inside the TVA corrective action program.

CR 1791966 - Material traceability has not been maintained for non-structural welded attachments installed in WO's 120927541, 120927544, 120927550, and 120927558.

CR 1791969 - Material traceability not maintained for temporary welded attachments installed in WO's 120926204, 120926205, 120926210, and 120926219.

CR 1787447 - Missed ASME Section XI Preservice Examination on Class 2 Main Steam Support 2-01A-307.

CR 1787258 - Missed ASME Section XI Preservice Examination on Class 1 Safety Injection Support 2-63-328.