



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

January 3, 2017

10 CFR 50.4  
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: **WATTS BAR NUCLEAR PLANT, UNIT 2 - AMERICAN SOCIETY OF  
MECHANICAL ENGINEERS, SECTION XI, INITIAL INSERVICE  
INSPECTION REPORT**

References: TVA letter to NRC, "Watts Bar Nuclear Plant, Unit 2 - American Society of  
Mechanical Engineers Boiler and Pressure Vessel Code Section XI, Initial  
Inservice Inspection Report - Revised Commitment," dated August 24, 2016  
(ML16237A400)

In the referenced letter, the Tennessee Valley Authority (TVA) committed to the following  
action:

"The initial inservice inspection report shall be submitted to the NRC within 90 days  
following Unit 2 commercial operation for those repairs or replacements, if any, which  
were performed under Section XI on Unit 2 between the initial code stamp up to  
commercial operations."

In accordance with the above commitment, TVA is submitting to the Nuclear Regulatory  
Commission (NRC) the Watts Bar Nuclear Plant (WBN) Unit 2, Initial Inservice Inspection  
(ISI) Report. The enclosed report provides a summary of the results from  
repair/replacement activities within the American Society of Mechanical Engineers (ASME)  
Section XI boundary for WBN Unit 2 that occurred after ASME Code Section III N-stamping  
of systems, and prior to the start of commercial operation that occurred on  
October 19, 2016. Therefore, the due date for this submittal is January 17, 2017  
(i.e., 90 days following commercial operations for WBN Unit 2).

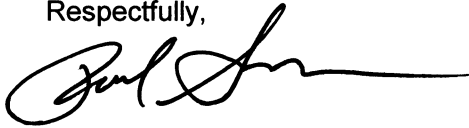
As noted in the referenced letter, the format of the enclosed report is in accordance with  
ASME B&PV Code Section XI, Division 1, Subsub Article IWA-6210 and ASME Code  
Case N-532-5, "Repair/Replacement Activity Documentation Requirements and Inservice

U. S. Nuclear Regulatory Commission  
Page 2  
January 3, 2017

Inspection Summary Report Preparation and Submission Section XI, Division 1." Code Case N-532-5 has been unconditionally approved for use by the NRC in Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1," Revision 17.

There are no new regulatory commitments associated with this submittal. Please address any questions regarding this submittal to Gordon Arent at (423) 365-2004.

Respectfully,

A handwritten signature in black ink, appearing to read 'Paul Simmons', with a long horizontal flourish extending to the right.

Paul Simmons  
Site Vice President  
Watts Bar Nuclear Plant

Enclosure:

Watts Bar Nuclear Plant Unit 2 - American Society of Mechanical Engineers,  
Section XI, Initial Inservice Inspection Report

cc (Enclosure):

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

**ENCLOSURE**

**WATTS BAR NUCLEAR PLANT**

**UNIT 2**

**AMERICAN SOCIETY OF MECHANICAL ENGINEERS, SECTION XI, INITIAL INSERVICE  
INSPECTION REPORT**

# **FORM OAR-1 OWNER'S ACTIVITY REPORT**

Report Number U2C00

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

Unit No. 2 Commercial Service Date October 19, 2016 Refueling Outage No. U2R00  
(if applicable)

Current Inspection Interval Initial Inservice Inspection  
(1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, other)

Current Inspection Period N/A  
(1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)

Edition and Addenda of Section XI applicable to the Inspection Plans 2001 Edition with 2003 Addenda

Date / Revision of Inspection Plans June 30, 2016 / WBN-2 PSI, Revision 11

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

Code Cases used for inspection and evaluation: N-460, N-532-5, N-566-2, N-686-1, N-695, N-722-1, N-729-1, N-770-1

(If applicable, including cases modified by Case N-532 and later revisions)

## **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 U2R00 conform to the requirements of Section XI.  
(refueling outage number)

Signed PAUL W. HOFFMAN Date 12/21/2016  
Owner or Owner's designee, Title R+R PROGRAM ENGINEER  
Shane Hobbs 12/21/2016

## **CERTIFICATE OF INSERVICE INSPECTION**

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and employed by The Hartford Steam Boiler Inspection and Insurance Company of Connecticut of 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.

[Signature] Commissions NB 14057AIN, TN 4132  
Inspector's Signature (National Board Number and Endorsements)

Date 12-21-16

**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, REPLACEMENTS, OR CORRECTIVE MEASURES REQUIRED FOR**  
**CONTINUED SERVICE**

Code Class	Item Description	Description of Work	Date Completed	Repair / Replacement Plan Number Work Order (WO)
3	WBN-2-PIPE-070-C, WBN-2-HTX-062-0124.	Replace 3/4" diameter stud on shell side (070) flange of the 2A Letdown Heat Exchanger. (Replaced Non-Conforming Hardware)	04/20/2015	116202562
1	WBN-2-CKV-063-0560	Disassemble and inspect 2-CKV-63-560 for suspected seat leakage. Replaced one stud and nut. (Replaced Non-Conforming Hardware)	11/16/2015	117058827
		Perform ISLT VT-2 for WO 117058827.	04/22/2016	117331668
2	SGH-1-1, SGH-1-2, SGH-1-3, SGH-1-4	Replace sheared splice bolts on upper Steam Generator support for SG #2. Install anti-rotation plates by welding on all four SGs.	12/22/2015	117032292
3	WBN-2-PIPE-067-C	Replace flange bolting material. (Replaced Non-Conforming Hardware)	03/14/2011	111721186
		Perform ISLT (VT-2) for WO 111721186	03/14/2016	111954214
1	Pipe support 47A465-1-59	Replace bolts and nuts on support on 3/4" RPV vent line. (Bolting damaged during RVH vent removal)	03/15/2016	116990433
1	WBN-2-RFV-68-563	Replace one stud and one nut. (Stud and nut found damaged during disassembly)	05/12/2016	116013171
2	WBN-2-SFV-001-0528	Replace 1 Inlet Flange Stud and 2 Nuts. (Stud and nut found damaged during disassembly)	7/11/2016	116977548