



Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

---

February 20, 2019

10 CFR 50.55

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

Browns Ferry Nuclear Plant, Unit 1  
Renewed Facility Operating License No. DPR-33  
NRC Docket No. 50-259

Subject: **American Society of Mechanical Engineers Section XI, Inservice Inspection, System Pressure Test, Containment Inservice Inspection, and Repair and Replacement Programs - Owner's Activity Report for Browns Ferry Nuclear Plant, Unit 1, Cycle 12 Operation**

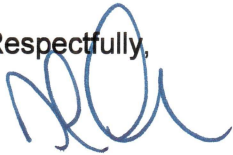
The Tennessee Valley Authority is submitting the Browns Ferry Nuclear Plant (BFN), American Society of Mechanical Engineers (ASME), Section XI, Owner's Activity Report for BFN, Unit 1, Cycle 12 Operation. The report is contained in the enclosure to this letter and is in accordance with the requirements of ASME Code Case N-532-5, Repair/Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission, Section XI, Division 1.

The report is an overview of the inservice examination results that were performed on components within the ASME Section XI boundary, up to and including the BFN, Unit 1, Cycle 12 refueling outage, during the first inspection period of the Third 10 Year Inspection Interval. The applicable provisions of the ASME Code Case N-532-5 require that this report be submitted within 90 calendar days of the completion of each refueling outage. The BFN, Unit 1, Cycle 12 refueling outage ended on November 22, 2018. Accordingly, this submittal is due by February 20, 2019.

U.S. Nuclear Regulatory Commission  
Page 2  
February 20, 2019

There are no new regulatory commitments contained in this letter. Should you have any questions concerning this submittal, please contact M. W. Oliver, Acting Nuclear Site Licensing Manager, at (256) 729-7874.

Respectfully,



D. L. Hughes  
Site Vice President

Enclosure: American Society of Mechanical Engineers, Section XI, Third 10 Year Inspection Interval, Inservice Inspection, System Pressure Test, Containment Inspection, and Repair and Replacement Programs, Owner's Activity Report for Browns Ferry Nuclear Plant, Unit 1, Cycle 12 Operation

cc (Enclosure): NRC Regional Administrator – Region II  
NRC Senior Resident Inspector – Browns Ferry Nuclear Plant  
NRC Project Manager – Browns Ferry Nuclear Plant

**Enclosure**

**Tennessee Valley Authority**

**Browns Ferry Nuclear Plant  
Unit 1**

**American Society of Mechanical Engineers,  
Section XI, Third 10 Year Inspection Interval, Inservice Inspection,  
System Pressure Test, Containment Inservice Inspection,  
and Repair and Replacement Programs,  
Owner's Activity Report for Browns Ferry Nuclear Plant, Unit 1, Cycle 12 Operation**

---

**See Enclosed**

## FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number BFNU1R12

Plant Browns Ferry Nuclear Plant, P.O. Box 2000, Decatur, AL 35609

Unit No. 1 Commercial service date August 1, 1974 Refueling Outage no. U1R12  
(if applicable)

Current Inspection Interval Third Ten Year Inspection Interval  
(1st, 2nd, 3rd, other)

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

2007 Edition, 2008 Addenda (ISI)  
Edition and Addenda of Section XI applicable to the inspection plans 2013 Edition (CIS)

0-TPP-ENG-376, Revision 0000, 09/06/2018  
0-TI-364, Revision 0022, 09/19/2018  
Date and Revision of inspection plan 0-SI-4.6.G, Revision 0003, 09/14/2018

2007 Edition, 2008 Addenda (ISI)  
Edition and Addenda of Section XI applicable to repairs/replacement activities, if different than the inspection plans N/A

Code Cases used for inspection and evaluation: N-508-4, N-532-5, N-613-2, N-648-1, N-702, N-716-1, and N-751  
(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 U1R12 conform to the requirements of Section XI.  
(refueling outage number)

Signed RSD  Date 2/13/17  
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 and employed by The Hartford Steam Boiler Inspection and Insurance Company 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.

 Commissions NB 13977 I, N, R  
Inspector's Signature National Board Number and Endorsement

Date 2/13/17

# FORM OAR-1 OWNER'S ACTIVITY REPORT

## TABLES

Report Number BFNU1R12  
 Plant Browns Ferry  
 Unit No. 1 Commercial service date 08/01/1974 Refueling outage no. 12  
 Current inspection interval 3rd Current inspection period 1st

**TABLE 1**  
**ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRE**  
**EVALUATIONS FOR CONTINUED SERVICE**

Examination Category and Item Number	Item Description	Evaluation Description
F-A, Item F1.20C	Variable spring as-found setting found out of range. Acceptance range is 2078 lbs, +/- 54 (2024 lbs to 2132 lbs). As-found setting 2350 lbs. [NOI U1R12-001]	(Acceptance by Evaluation) The condition was evaluated in accordance with IWF-3122.3. Since the spring support was determined to still be able to perform its design function, corrective measures were performed to restore the support to its original design condition per IWF-3122.3 (b). WO 119973691 reset the load setting of the spring to the design range specifications. Therefore, no additional or preservice exams are applicable. The spring support was then reinspected to verify the settings.
E-A, Item E1.11	Gouge in Drywell liner. [NOI U1R12-002]	EVALUATED ACCEPTABLE (No Corrective Measures Required.) An indication consisting of mechanical damage 1/32" in depth, 3/8" in width, and 7/16" in length was identified on the steel containment vessel (Drywell) liner. The remaining wall thickness was 0.73" in the area of mechanical damage. The wall thickness was below the acceptance criteria without Civil Design Engineering evaluation of 0.75". Civil Engineering determined that the remaining thickness of 0.73" is greater than the allowed 10% reduction of wall thickness (0.675"), thus it is acceptable for continued operation. Per IWE-3122.3 (b) the area will be reexamined in accordance with IWE-2420.



## FORM OAR-1 OWNER'S ACTIVITY REPORT

### TABLES

Report Number BFNU1R12

Plant Browns Ferry

Unit No. 1 Commercial service date 08/01/1974 Refueling outage no. 12

Current inspection interval 3rd Current inspection period 1st

**TABLE 2**

#### ABSTRACT OF REPAIR/REPLACEMENT ACTIVITIES REQUIRED FOR CONTINUED SERVICE

Code Class	Item Description	Description of Work	Date Completed	Repair/Replacement Plan Number
	NONE	NONE		

## FORM OAR-1 OWNER'S ACTIVITY REPORT

### TABLES

Report Number BFNU1R12  
Plant Browns Ferry  
Unit No. 1 Commercial service date 08/01/1974 Refueling outage no. 12  
Current inspection interval 3rd Current inspection period 1st

### Summary of IWE Indications for U1R12

The summary table below is provided in accordance with the requirements of 10 CFR 50.55a(b)(2)(ix)(A).

Examination Category and Item Number	Component Identifier	Indication Description	Acceptability/Corrective Action	Inaccessible Area (Location and Evaluation)	Additional Samples
E-A, Item E1.30	Moisture Seal Barrier MSB-1-1	Areas of Separation. [NOI U1R12-003]	EVALUATED ACCEPTABLE None of the areas penetrated the full depth of the seal, seal adhesion was good in all locations, and there was no seal failure. The affected portions of the seal identified for repair were excavated and drywell liner below the seal was VT-1 examined. No evidence of moisture intrusion or damage to the liner indicative of moisture intrusion was observed demonstrating no seal failure occurred. The MSB was then re-poured in these areas and re-examined.	None	None