



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

July 9, 2019

10 CFR 50.55a

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

Browns Ferry Nuclear Plant, Unit 2  
Renewed Facility Operating License No. DPR-52  
NRC Docket No. 50-260

Subject: **American Society of Mechanical Engineers, Section XI, Fifth 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 2, Cycle 20 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 2, Cycle 20 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 2, Cycle 20 refueling outage, during the first inspection period of the Fifth 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 2, Cycle 20 refueling outage ended on April 10, 2019. Accordingly, this submittal is due by July 9, 2019.

U.S. Nuclear Regulatory Commission  
Page 2  
July 9, 2019

There are no new regulatory commitments contained in this letter. Should you have any questions concerning this submittal, please contact J. L. Paul, Site Licensing Manager, at (256) 729-7874.

Respectfully,



D. L. Hughes  
Site Vice President

Enclosure: American Society of Mechanical Engineers, Section XI, Fifth 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 2, Cycle 20 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 2**

**American Society of Mechanical Engineers,  
Section XI, Fifth 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 2, Cycle 20 Operation**

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**See Enclosed**

# FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number BFNU2R20

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

Unit No. 2 Commercial service date March 1, 1975 Refueling Outage no. Refueling Outage 20  
(if applicable)

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

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

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

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

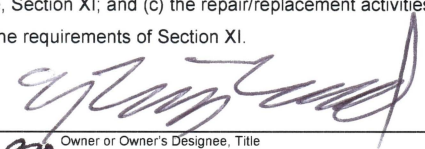
2007 Edition, 2008 Addenda (ISI)  
Edition and Addenda of Section XI applicable to repairs and replacements, if different than the inspection plan N/A

Code Cases used for inspection and evaluation: N-532-5, N-613-1, N-648-1, N-716-1, N-751 and N-795  
(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 U2R20 conform to the requirements of Section XI. (refueling outage number)

Signed

  
Owner or Owner's Designee, Title

Date

7/1/19

## 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.

  
Inspector's Signature

Commissions

NB 13977 I, N, R  
National Board Number and Endorsement

Date

7/1/19

# FORM OAR-1 OWNER'S ACTIVITY REPORT

## TABLES

Report Number BFNU2R20  
Plant Browns Ferry  
Unit No. 2 Commercial service date 03/01/1975 Refueling outage no. 20  
Current inspection interval 5th Current inspection period 2nd

**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 / F1.10C	Main Steam System constant force support, 2-47B400S0021	CR 1496212, NOI U2R20-002  A constant force support was observed to be outside of the cold range setting. Civil Engineering evaluated the conditions identified and concluded that the spring support would still be able to perform its intended design function due to mechanical tolerances in the support. The constant spring cold setting was reset to be within the design range and reexamined.

## FORM OAR-1 OWNER'S ACTIVITY REPORT

### TABLES

Report Number BFNU2R20  
 Plant Browns Ferry  
 Unit No. 2 Commercial service date 03/01/1975 Refueling outage no. 20  
 Current inspection interval 5th Current inspection period 2nd

**TABLE 2  
 ABSTRACT OF REPAIR/REPLACEMENT ACTIVITIES REQUIRED FOR CONTINUED SERVICE**

Code Class	Item Description	Description of Work	Date Completed	Repair/Replacement Plan Number
3	Through wall leak was identified.	Replace 4" piping/fittings immediately downstream of the 0-SHV-067-0675 valve on the discharge side of the Unit 1/2 Emergency Condensing Unit to remove through wall leak areas.	4/30/2018	116489865
3	Through wall leak was identified.	Replace 1-1/2" piping and elbows between valve BFN-2-SHV-023-0532 and the RHRSW header 16"X 1-1/2" weld-o-let.	6/23/2018	119667790
3	Through wall leak was identified.	Replace 1-1/2" piping and elbows between valve BFN-2-DRV-023-0511 and the RHRSW header 16"X 1-1/2" weld-o-let.	6/23/2018	119667746
3	Through wall leak was identified.	Replace 4" piping between elbows downstream of valve BFN-0-SHV-067-0643.	8/21/2018	119798026



# FORM OAR-1 OWNER'S ACTIVITY REPORT

## TABLES

Report Number	BFNU2R20				
Plant	Browns Ferry				
Unit No.	2	Commercial service date	03/01/1975	Refueling outage no.	20
Current inspection interval	5th	Current inspection period	2nd		

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

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

During BFN U2R20, the moisture seal barrier (MSB) of the SCV was identified to have conditions requiring examination of inaccessible areas beneath the barrier. The inaccessible areas of the SCV beneath the MSB were determined to be acceptable by visual examination and evaluation. These conditions were identified and resolved under NOI U2R20-003. No corrective actions are required.