



Post Office Box 2000, Decatur, Alabama 35609-2000

June 20, 2023

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 22 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 22 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 22 refueling outage, during the third 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 22 refueling outage ended on March 22, 2023. Accordingly, this submittal is due by June 20, 2023.

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There are no new regulatory commitments contained in this letter. Should you have any questions concerning this submittal, please contact C. L. Vaughn, Site Licensing Manager, at (256) 729-2636.

Respectfully,



Manu Sivaraman
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 22 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 Inspection, and Repair and Replacement Programs,
Owner's Activity Report for Browns Ferry Nuclear Plant, Unit 2, Cycle 22 Operation**

See Enclosed

FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number BFNU2R22

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 22
(if applicable)

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

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

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

Date and Revision of inspection plan 0-TPP-ENG-467, Revision 0001, 01/12/2023
0-TPP-ENG-376, Revision 0004, 11/18/2022
0-TI-364, Revision 0025, 02/06/2023

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-613-2, N-716-1, N-751, N-854, and N-864
(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 U2R22 conform to the requirements of Section XI.
(refueling outage number)

Signed

R. Scott D. Crane
Owner or Owner's Designee, Title

AMP Engineer

Date

6-6-2023

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.

William J. Cell
Inspector's Signature

Commissions

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

Date

6/7/23

FORM OAR-1 OWNER'S ACTIVITY REPORT

TABLES

Report Number BFNU2R22
 Plant Browns Ferry
 Unit No. 2 Commercial service date 03/01/1975 Refueling outage no. 22
 Current inspection interval 5th Current inspection period 3rd

**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 / F1.30C	Residual Heat Removal Service Water Variable Support, 2-47B450H0041	NOI U2R22-001 A variable spring support setting was found out of tolerance/ out of its load seeing range. It was determined that the as-found setting was within the allowable working range, and that the variable spring support would have been able to perform its intended design function without any adverse effect. The spring was reset to within the design limit.

FORM OAR-1 OWNER'S ACTIVITY REPORT

TABLES

Report Number BFNU2R22
 Plant Browns Ferry
 Unit No. 2 Commercial service date 03/01/1975 Refueling outage no. 22
 Current inspection interval 5th Current inspection period 3rd

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

Code Class	Item Description	Description of Work	Date Completed	Repair/Replacement Plan Number
1	Through wall leak was identified	Replacement of BFN-2-FCV-068-0003 valve drain line (3/4") leak. Flaw was removed with the drain line and replaced with a 2" line. Design change was detailed in Engineering Change Paper (ECP) number BFN-23-018.	3-14-2023	123498959

FORM OAR-1 OWNER'S ACTIVITY REPORT

TABLES

Report Number	BFNU2R22			
Plant	Browns Ferry			
Unit No.	2	Commercial service date	03/01/1975	Refueling outage no. 22
Current inspection interval	5th	Current inspection period	3rd	

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.

Browns Ferry Unit 2 is currently in the Third IWE Inspection Interval, Second Period. During BFN U2R22, there were no degradation assessments of inaccessible areas as a result of conditions identified in accessible areas during performance of the ASME Section XI, Subsection IWE SCV Inspection Program.

Examination Category and Item Number	Component Identifier	Indication Description	Acceptability/Corrective Action	Inaccessible Area (Location and Evaluation)	Additional Samples
E-A, Item E1.30	MSB-2-1 (Moisture Seal Barrier)	Mechanical Damage	During BFN 2R22, inspection of the drywell Moisture Seal Barrier identified unsatisfactory locations that could potentially permit moisture intrusion into the inaccessible areas beneath the barrier. The MSB was excavated in these locations to make the steel containment vessel accessible and visually examined with no reportable conditions identified. Conditions were corrected by cleaning and replacing damaged areas of the MSB with no Repair/Replacement Activity required. The MSB was repaired with examination of the repaired sections having no reportable conditions. A post repair visual examination of the entire MSB was completed with no reportable conditions identified.	None	None