



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

July 9, 2015

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, 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 18 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 18 Operation. The report is contained in the enclosure to this letter and is in accordance with the requirements of ASME Code Case N-532-4, 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 18 refueling outage, during the second inspection period of the fourth 10-year inspection interval. The applicable provisions of the ASME Code Case N-532-4 require that this report be submitted within 90 calendar days of the completion of each refueling outage. The BFN, Unit 2, Cycle 18 refueling outage ended on April 10, 2015. Accordingly, this submittal is due by July 9, 2015.

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

Respectfully,



S. M. Bono
Vice President

Enclosure:

American Society of Mechanical Engineers, Section XI, Fourth 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 18 Operation

cc (Enclosure):

NRC Regional Administrator – Region II
NRC Senior Resident Inspector – Browns Ferry Nuclear Plant

Enclosure

Tennessee Valley Authority

**Browns Ferry Nuclear Plant
Unit 2**

**American Society of Mechanical Engineers,
Section XI, Fourth 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 18 Operation**

See Enclosed

FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number BFNU2R18

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 18
(if applicable)

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

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

Edition and Addenda of Section XI applicable to the inspection plans 2004 Edition, No Addenda

Date and Revision of inspection plan 2-SI-4.6 G, Revision 0053, 02/11/2015

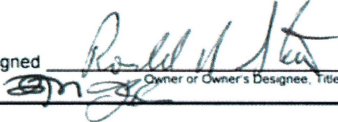
Edition and Addenda of Section XI applicable to repairs and replacements, if different than the inspection plan N/A

Code Cases used: N-460, N-504-4, N-528-1, N-532-4, N-552, N-586-1, N-613-1, N-648-1, N-686-1, N-702
(if applicable)

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 U2R18 conform to the requirements of Section XI.
(refueling outage number)

Signed


Owner or Owner's Designee, Title

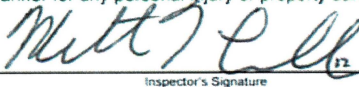
Date

6/29/15

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Alabama and employed by HSB Global Standards 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 A, N, I AL 109278
National Board, State, Province and Endorsements

Date

7/1/15

FORM OAR-1 OWNER'S ACTIVITY REPORT

TABLES

Report Number BFNU2R18
 Plant Browns Ferry
 Unit No. 2 Commercial service date 03/01/1975 Refueling outage no. 18
 Current inspection interval 4th 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, Item F1.20C	Loose pipe clamp bolt and a bound hanger rod weldless eye nut. (2-47B452H0064) [NOI U2R18-001]	EVALUATED ACCEPTABLE (No Corrective Measures Required.) Although, there is a loose bolt on one side of the pipe clamp, the second bolt remained intact so that the pipe lugs are engaged with the pipe clamp, allowing the pipe support to continue performing its design function in the as-found condition. The hanger rod weldless eye nut was aligned and restored to its original design configuration and the loosened pipe clamp bolt was tightened under Work Order 116662196 and re-examined.
F-A, Item F1.20C	Variable Spring setting out of range. Range 2628 to 2773 lbs. As-Found 2800 lbs. (2-47B452H0158) [NOI U2R18-002]	EVALUATED ACCEPTABLE (No Corrective Measures Required.) There is no adverse effect on the pipe support components or the associated piping with the out of range spring load setting. The spring setting was restored to the design range of 2628 to 2773 lbs. under Work Order 116694412 and re-examined.
F-A, Item F1.10B	Loose bolt/nut assembly on the W33 beam. (2-47B400S0007) [NOI U2R18-003]	EVALUATED ACCEPTABLE (No Corrective Measures Required.) Main Steam pipe support/whip restraint 2-47B400S0007 was capable of performing its design function in the "as found" condition. The loose bolting was tightened under Work Order 116671745 and re-examined.
D-A, Item D1.20	Missing welds on one side of four integral attachments to Emergency Equipment Cooling Water (EECW) piping. (2-47B451R0009-IA) [NOI U2R18-005]	EVALUATED ACCEPTABLE (No Corrective Measures Required.) There was sufficient design margin for the pipe support to be able to perform its design function in the "as-found" condition. Affected drawings and calculation CDQ2067891522 to be revised to document the as-found configuration under Condition Report (CR) 1006597

FORM OAR-1 OWNER'S ACTIVITY REPORT

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Unit No. 2 Commercial service date 03/01/1975 Refueling outage no. 18
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Examination Category and Item Number	Item Description	Evaluation Description
F-A, Item F1.10C	Variable Spring setting out of range. Range 12458 to 13124 lbs. As-Found 13457 lbs. (2-47B452S0239) [NOI U2R18-006]	EVALUATED ACCEPTABLE (No Corrective Measures Required.) There is no adverse effect on the pipe support components or the associated piping with the out of range spring load setting. The spring setting was restored to the design range of 12458 to 13124 lbs. under Work Order 116310767 and re-examined.

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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	BFN-0-HEX-082-000C2 Emergency Diesel Generator Cooling Water Heat Exchanger C2	Replace Water Box (Tee end)	7/10/2014	115946315
1	BFN-2-SHV-074-0850 Residual Heat Removal (RHR) Shutdown Cooling Supply Header, Chemical Injection and Drain Shutoff Valve	Repair Unit 2 RHR system leak identified downstream of 2-FCV-074-0048	8/8/2014	116022653
1	BFN-2-ACC-085-718/5827 Scram Water Accumulator	Replace Hydraulic Control Unit Water Accumulator	8/13/2014	116022785
2	BFN-2-CLR-064-0069 Reactor Building RHR Pump 'B' Room Cooler	Repair Leaking U-Bend on 2B RHR Room Cooler Coil	11/11/2014	116306134
2	BFN-2-CLR-064-0073 Reactor Building Core Spray (CS) Pump 'B' Room Cooler	Repair brazed joint on copper tube on B CS Room Cooling Coil	11/10/2014	116306135
3	BFN-2-CLR-064-0070 Reactor Building RHR Pump 'C' Room Cooler	Repair leak at welded connection on coil, supply side.	12/3/2014	116366514
3	BFN-2-CLR-064-0073 Reactor Building CS Pump 'B' Room Cooler	Reactor Building CS Pump 'B' Room Cooler	12/17/2014	116387178
3	BFN-2-CLR-064-0072 Reactor Building CS Pump 'A' Room Cooler	Repair tube leak on 2A CS Room Cooler	12/30/2014	116437239

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Summary of IWE Indications for U2R18

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

Examination Category and Item Number	Component Identifier	Indication Description	Acceptability/Corrective Action	Inaccessible Area (Location and Evaluation)	Additional Samples
E-A, Item E1.12	PSC INT 2-B-1B through 2-B-16B	Pitting, mechanical damage, and rusting. [NOI U2R18-007]	EVALUATED ACCEPTABLE (No Corrective Measures Required.) The indications primarily consisted of pitting in areas of upset of the protective coating by mechanical damage or from coating failure. Pitting ranged from 0.012" to 0.074". Civil Engineering Evaluation determined the indications are acceptable and continue to meet all code allowable stress limits in accordance with calculation CDQ0999970114, Attachment A. Inspected areas exhibited no signs of flaking, blistering, peeling, or other signs of distress. There was no degradation present which affects the structural integrity or containment function of the Pressure Suppression Chamber (PSC). The submerged coated surfaces of the PSC are accessible for examination. Therefore, no adverse condition exists which may be present in inaccessible areas. Protective coating was reapplied for pits greater than 0.035" to limit further degradation.	None	None