



Tennessee Valley Authority
1101 Market Street, LP 3R
Chattanooga, Tennessee 37402-2801

R. M. Krich
Vice President
Nuclear Licensing

July 6, 2011

10 CFR 50.55a

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

Browns Ferry Nuclear Plant, Unit 2
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 Cycle 16 Operation**

The Tennessee Valley Authority is submitting the Browns Ferry Nuclear Plant, American Society of Mechanical Engineers (ASME), Section XI, Owner's Activity Report for Unit 2 Cycle 16 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, "Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission as Required by IWA-4000 and IWA-6000, Section XI, Division 1."

The report is an overview of the results from inservice examinations that were performed on components within the ASME Section XI boundary, up to and including the Unit 2 Cycle 16 refueling outage, during the third inspection period of the third 10-year inspection interval. The applicable provisions of the ASME Code require that this report be submitted 90 days from the end of the applicable outage, i.e., by July 7, 2011.

AD47
NRR

U.S. Nuclear Regulatory Commission
Page 2
July 6, 2011

There are no new regulatory commitments in this letter. If you have any questions regarding this report, please contact Tom Matthews at (423) 751-2687.

Respectfully,



R. M. Krich

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 Cycle 16 Operation

cc (Enclosure):

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, Third 10-Year Inspection Interval**

**Inservice Inspection, System Pressure Test, Containment Inservice Inspection,
and Repair and Replacement Programs**

Owner's Activity Report for Cycle 16 Operation

(See Attached)

FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number BFNU2C16

Plant Browns Ferry Nuclear Plant, P.O. Box 2000, Decatur, AL 35602-2000

Unit No. 2 Commercial service date March 1, 1975 Refueling Outage no. U2R16
(if applicable)

Current Inspection Interval Third 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 1995 Edition through 1996 Addenda

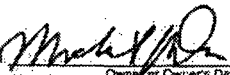
Date and Revision of Inspection plan 2-SI-4.6.G, Revision 043, 03/07/2011

Edition and Addenda of Section XI applicable to repairs and replacements, if different than the inspection plan 2001 Edition through 2003 Addenda

Code Cases used: N-323-1, N-460, N-498-4, N-504-3, N-526, N-532-4, N-552, N-577, N-586-1, N-598, N-623, N-624, N-652, N-658, N-686-1
(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 U2R16 conform to the requirements of Section XI.
(refueling outage number)

Signed  Engineering Director Date 6/20/11
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 the State or Province of Tennessee and employed by HSB CT 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 requirement of Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations, tests, repairs, replacements, evaluations, and corrective measures 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 TN 4011
Inspector's Signature National Board, State, Province and Endorsements

Date 6/22/11

FORM OAR-1 OWNER'S ACTIVITY REPORT

TABLES

Report Number	BFNU2C16		
Plant	Browns Ferry		
Unit No.	2	Commercial service date	03/01/1975
		Refueling outage no.	U2R16
Current inspection interval	3rd	Current inspection period	3rd

<p align="center">TABLE 1 ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRE EVALUATIONS FOR CONTINUED SERVICE</p>		
Examination Category and Item Number	Item Description	Evaluation Description
F-A, Item F1.10B	(RHR-2H-10) Significant corrosion on support members. [NOI U2RF16-002]	EVALUATED ACCEPTABLE (No Corrective Measures Required.) Wall thickness readings of the tube steel (4" x 4" x 0.500") were taken on the affected support members. Indications did not affect the structural integrity of support.
B-M-2, Item B12.50	(2-FCV-74-53) Valve body has excessive grind marks on body internal wall. [NOI U2RF16-003]	EVALUATED ACCEPTABLE (No Corrective Measures Required.) The grinding marks noted inside BFN-2-FCV-74-53, RHR SYSTEM I INBD RECIRC LOOP VLV, are very likely the result of manufacturing. The grind marks on the internal valve body were initially discovered in 1985. Ultrasonic testing indicates that the measured minimum wall thickness is 2.019 inches. The measured value still exceeds the calculated minimum wall thickness of 1.92 inches. As such, BFN-2-FCV-74-53, RHR SYSTEM I INBD RECIRC LOOP VLV, is acceptable for continued service.
F-A, Item F1.20C	(RHR-2-H-371) Dual Spring can support. East spring can setting out of range. Range 7418 to 11000 pounds. As-found setting 12125 pounds. [NOI U2RF16-004]	EVALUATED ACCEPTABLE (No Corrective Measures Required.) Field personnel took the reading of spring support H-371 (east support) from the bottom of what looks like a dual load plate. This was not correct. What appeared to be a second load plate was actually part of the spring that ensures the actual load plate achieves good bearing and even load distribution to the spring. The spring setting taken from the bottom of the actual load plate was within the range documented on drawing 2-476452-722.

FORM OAR-1 OWNER'S ACTIVITY REPORT

TABLES

Report Number BFNU2C16
 Plant Browns Ferry
 Unit No. 2 Commercial service date 03/01/1975 Refueling outage no. U2R16
 Current inspection interval 3rd 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	Recirc pump seal flange bolting (2-PMP-068-0060A) NOI-U2RF16-005	replaced bolting	04/06/2011	Work Order 07-721332-000
3	18" EECW pipe below C RHRSW pump room	base metal repair	05/27/2010	Work Order 07-727522-000
3	14" RHRSW pump discharge check valve (0-CKV-023-0591)	weld buildup on hinge pin holes	12/20/2009	Work Order 09-720394-000
3	14" RHRSW pump discharge check valve (0-CKV-023-0597)	weld buildup on hinge pin holes	11/13/2009	Work Order 09-720395-000
3	18" EECW pipe below C RHRSW pump room	base metal repair	07/21/2010	Work Order 111155185
3	2D RHR room cooler (2-CLR-064-0071)	re-brazed several joints and replaced two u-bends	11/13/2010	Work Order 111633642
3	1½" RHRSW pipe near 2-SHV-023-0571	replaced section of pipe	03/25/2011	Work Order 111771257
3	2C RHR HTX (2-HEX-074-0900C)	replaced pass partition plate	03/22/2011	Work Order 111879971
2	RCIC Condensate Test Valve (2-FCV-071-0038)	replaced valve disc and repaired cracked tack welds on locking nut to disc	04/12/2011	Work Order 112021768
1	Recirc motor support (2-SNUB-068-5008)	re-design of support to correct binding; no snubber failure	04/03/2011	Work Order 112028940
2	Main Steam support (2-47B400S0002) NOI-U2RF16-007	repaired indication on support member	03/30/2011	Work Order 112083105

FORM OAR-1 OWNER'S ACTIVITY REPORT

TABLES

Report Number	BFNU2C16				
Plant	Browns Ferry				
Unit No.	2	Commercial service date	03/01/1975	Refueling outage no.	U2R16
Current inspection interval	3rd	Current inspection period	3rd		

Summary of IWE Indications for U2C16

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 E1.30	MSB-2-1	Mechanical Damage/Adhesion [NOI U2RF16-001]	Seal adhesion was sufficient to prevent water intrusion. Damaged portions of the Moisture Seal Barrier (MSB) were removed and exposed liner examined in these areas. Damaged portions of the MSB were replaced.	None	None
E-A E1.11	DW LNR-2-1A	Localized pitting in liner below Moisture Seal Barrier (MSB) in areas excavated for seal replacement. [NOI U2RF16-006]	Engineering accept-as-is. Evidence of pitting was observed in the Steel Containment Vessel (SCV) liner in the area under the MSB in areas excavated for repair. Localized pitting has been previously identified in this area. UT readings in the area of the indications (pits) were evaluated. The remaining plate thicknesses exceed the minimum plate thickness documented in calculation CDQ0303970088. Damaged portions of the MSB were replaced.	None	None

FORM OAR-1 OWNER'S ACTIVITY REPORT

TABLES

Report Number	BFNU2C16		
Plant	Browns Ferry		
Unit No.	2	Commercial service date	03/01/1975
		Refueling outage no.	U2R16
Current inspection interval	3rd	Current inspection period	3rd

ATTACHMENT A

The following welds were calculated to have ASME Section XI Code examination coverage less than 90 percent. TVA will submit a request for relief for these weld examinations in separate correspondence.

WELD ID	CONFIG	Limitation	%	Report
N10-NV	RPV Head to Nozzle	UT Joint configuration of RPV nozzle	86.2%	VE-11-019
RWCU-2-003-070	Pipe to Pipe	UT Circ scan limitation due to joint configuration	85.5%	UT-11-019
GR-2-09	Saddle to Pipe	UT Single side access due to joint configuration	75%	UT-11-024
DRHR-2-03	Valve to Flued Head	UT Joint configuration	89.5%	UT-11-033
DRHR-2-11	Pipe to Valve	UT Single side access DM weld	79.48%	UT-11-040
RCRD-2-50	Elbow to Valve	UT Single side access DM weld	53.4%	UT-11-043