



Tennessee Valley Authority
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R. M. Krich
Vice President
Nuclear Licensing

July 7, 2009

10 CFR 50.4
10 CFR 50.55a

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

Browns Ferry Nuclear Plant, Unit 3
Facility Operating License No. DPR-68
NRC Docket No. 50-296

Subject: American Society of Mechanical Engineers Section XI, Inservice Inspection, System Pressure Test, Containment Inspection, and Repair and Replacement Programs - Summary Report for Cycle 14 Operation

In accordance with paragraphs IWA-6230, "Summary Report Preparation," and IWA-6240, "Summary Report Submittal," of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, the Tennessee Valley Authority (TVA) is submitting the Browns Ferry Nuclear Plant (BFN), Unit 3, outage summary report for NRC review. The summary report is for Inservice Inspection, System Pressure Test, Containment Inspection, and Repair and Replacement activities for BFN, Unit 3, Cycle 14 operation.

The summary report, provided in the enclosure, contains an overview of the inservice examination results for components within the ASME Section XI boundary, up to and including the Unit 3, Cycle 14 refueling outage, during the second inspection period of the third ten-year inspection interval. The enclosure contains the Owner's Activity Report which contains Table 1, "Items with Flaws or Relevant Conditions that Required Evaluation for Continued Service;" Table 2, "Abstract of Repair/Replacement Activities Required for Continued Service;" and a summary of ASME Section XI, Subsection IWE containment inspections.

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This report is being provided in accordance with ASME Section XI and 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."

TVA has determined that one weld received ASME Section XI Code ultrasonic test (UT) examination coverage less than the required 90 percent. This weld is listed in Attachment A of the enclosure. TVA plans to submit a request for relief for this weld's UT examination coverage limitation by January 20, 2011.

There are no new regulatory commitments in this letter. If you have any questions regarding these reports, please contact Terry Cribbe at (423) 751-3850.

Respectfully,



R. M. Krich

Enclosure: American Society of Mechanical Engineers, Section XI, Third Ten-Year Inspection Interval, Inservice Inspection, System Pressure Test, Containment Inspection, and Repair and Replacement Programs, Summary Report for Cycle 14 Operation

cc (Enclosure):

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

Enclosure

**Tennessee Valley Authority
Browns Ferry Nuclear Plant
Unit 3**

**American Society of Mechanical Engineers, Section XI, Third Ten-Year Inspection
Interval, Inservice Inspection, System Pressure Test, Containment Inspection, and
Repair and Replacement Programs**

Summary Report for Cycle 14 Operation

(See Attached)

FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number BFNU3R14

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

Unit No. 3 Commercial service date March 1, 1977 Refueling Outage no. Cycle 14
(if applicable)

Current Inspection Interval Third 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 2001 Edition through 2003 Addenda

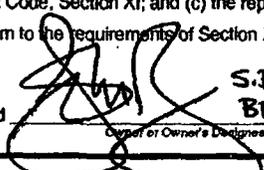
Date and Revision of inspection plan 3-SI-4.6.G, Revision 033 03/12/2010

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-460, N-526, N-532-4, N-552, N-586-1, N-613-1, N-624, N-648-1, N-658, N-686, N-695
(if applicable)

CERTIFICATE OF CONFORMANCE

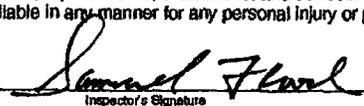
I certify that (a) the statements made in this report are correct; (b) the examinations and tests meet the inspection Plan as required by the ASME Code, Section XI; and (c) the repair/replacement activities and evaluations supporting the completion of U3R14 conform to the requirements of Section XI.
(refueling outage number)

Signed  S. BOND Date 6/30/10
Chief of Owner's Design, Title BFN ENGINEERING DIRECTOR

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 TN4011
Inspector's Signature National Board, State, Province and Endorsements

Date 7/1/10

FORM OAR-1 OWNER'S ACTIVITY REPORT

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Report Number	BFNU3R14		
Plant	Browns Ferry		
Unit No.	3	Commercial service date	03/01/1977
		Refueling outage no.	14
Current inspection interval	3rd	Current inspection period	2rd

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

Examination Category and Item Number	Item Description	Evaluation Description
F-A, Item F1.20A	Loose lock nut on strut. (3-47B452-1456) [NOI U3C14-002]	EVALUATED ACCEPTABLE (No Corrective Measures Required. The loose lock nut will not prevent the support from performing its design function. End attachments remained in place and provided adequate support for any expected loads. Lock nut was tightened to restore the support to its original design condition.)
F-A, Item F1.10C	As-Found variable spring can setting out of range. Range 15564 to 16450 pounds. As-found setting 14386 pounds. (3-47B452-3044) [NOI U3C14-004]	EVALUATED ACCEPTABLE (No Corrective Measures Required. Spring setting is acceptable and within design specified requirements.)

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**TABLE 1
ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRED
EVALUATIONS FOR CONTINUED SERVICE (Continued)**

Examination Category and Item Number	Item Description	Evaluation Description
F-A, Item F1.40B	Loose bolting on anchor studs 4 of 16 connections. (RHRG-3-14-B) [NOI U3C14-005]	EVALUATED ACCEPTABLE (No Corrective Measures Required. Loose nuts were identified on four of sixteen wedge bolts on the support base plate for the 3B RHR Heat Exchanger. The wedge bolts were not loose in the holes and there was no indication that the anchors pulled out of the concrete. The anchors with loose nuts were capable of carrying tensile load. Shear capacity of the anchors was not affected. The support was determined to be capable of performing its design function when subjected to design loads including short duration dynamic loads. The wedge bolts were tightened to restore the support to its original design condition.)
F-A, Item F1.40B	Loose bolting at 1 of 3 locations. (RHRG-3-12-B) [NOI U3C14-006]	EVALUATED ACCEPTABLE (No Corrective Measures Required. The bolts in this configuration as shown on drawing 69-D-180-06 are loaded only in shear and their capacity is not significantly affected by the loose nuts. The primary function of the nuts is to ensure the bolts do not become dislodged. The connection remains capable of performing its design function in the as-found condition. The loose nuts were tightened to restore the support to its original design condition.)

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**TABLE 1
ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRED
EVALUATIONS FOR CONTINUED SERVICE (Continued)**

Examination Category and Item Number	Item Description	Evaluation Description
F-A, Item F1.40B	Loose bolting at 2 of 3 locations. (RHRG-3-13-B) [NOI U3C14-007]	EVALUATED ACCEPTABLE (No Corrective Measures Required. The bolts in this configuration as shown on drawing 69-D-160-06 are loaded only in shear and their capacity is not significantly affected by the loose nuts. The primary function of the nuts is to ensure the bolts do not become dislodged. The connection remains capable of performing its design function in the as-found condition. The loose nuts were tightened to restore the support to its original design condition.)
F-A, Item F1.10C	As-Found variable spring can setting out of range. Range 6289 to 6666 pounds. As-found setting 6011 pounds. (3-47B452-3033 [NOI U3C14-008])	EVALUATED ACCEPTABLE (No Corrective Measures Required. Spring load setting range on drawing 3-47B452-3033 was changed to 5822 to 6666 pounds. Spring setting is acceptable and within design specified requirements.)

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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
CODE CLASS 1	Damaged constant force support. (3-47B400-114) [NOI U3C14-009]	REPLACED BENT RODS (DCN 69860)	3-30-2010	Work Order 110779395
CODE CLASS 1	Damaged deformed threads on one of twelve studs. Not service induced. (PCV1-3-030-PBC) [NOI U3C14-003]	Replaced studs	4-8-2010	Work Order 09-720146-000
CODE CLASS 2	Snubber failed test (3-SNUB-001-5041)	Replaced snubber	3-12-2010	Work Order 09-718078-000
CODE CLASS 2	Snubber failed test (3-SNUB-001-5033)	Replaced snubber	3-18-2010	Work Order 09-719792-000
CODE CLASS 2	Snubber failed test (3-SNUB-001-5017)	Replaced snubber	3-23-2010	Work Order 110761541
CODE CLASS 3	Valves damaged due to valve design (3-FCV-023-34 and 3-FCV-023-40)	Replaced valves (DCN 69226)	3-22-2010	Work Order 07-722382-006
CODE CLASS 3	Valves damaged due to valve design (3-FCV-023-46 and 3-FCV-023-52)	Replaced valves (DCN 69226)	3-25-2010	Work Order 07-722382-008
CODE CLASS 3	Pin hole leak in copper cooling coil (3-CLR-064-0068)	Replaced U-bend on cooling coil	7-29-2009	Work Order 09-719736-000
CODE CLASS 3	Pin hole leak in pipe butt weld (EECW pipe near 3-RTV-067-0301A)	Replaced section of piping	2-26-2010	Work Order 10661559

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Summary of IWE Indications for U3C14

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-3-1	Moisture seal barrier (MSB) reportable indications consisting of a 1" diameter pitted area in the liner at the MSB with a maximum depth of 1/16", damage to the concrete at edge of seal, separation of the seal from the liner. [NOI U3C14-001]	Engineering accept-as-is. Conditions noted do not impact structural integrity or leak tightness of the Steel Containment Vessel (SCV). The conditions identified are expected based on the age and service conditions of the SCV. None of the conditions noted were suspect. No detrimental flaws have been observed. There is no indication that an adverse condition exists that may be present in inaccessible areas.	None. Entire MSB was inspected. VT-3 examinations conducted of liner in areas where portions of MSB excavated for repair. No evidence of moisture intrusion or reportable indications found.	None
E-A E1.11B	PEN 3-X-223	Scratches and mechanical damage 1/32" or less in flange surface. [NOI U3C14-010]	Engineering accept-as-is. The indications noted are consistent with damage caused by use of the hatch for access and transfer of tools and equipment and not due to any degradation mechanism that could challenge structural integrity or leak tightness of the SCV. Minor surface indications consisting of scrapes, dings, dents, etc. are expected based on the age and service conditions of the SCV. None of the conditions noted are considered suspect and do not impact the structural integrity or leak tightness of the SCV.	None. 100% of the flange surface was inspected.	None

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Examination Category and Item Number	Component Identifier	Indication Description	Acceptability/Corrective Action	Inaccessible Area (Location and Evaluation)	Additional Samples
E-A E1.11B	PEN 3-X-200A	Pitting 1/64" or less in flange surface. [NOI U3C14-011]	Engineering accept-as-is. The indications of pitting noted on the flange surface are consistent with the age and service condition of the penetration. The pitting noted is existing pitting and not new pitting resulting from active corrosion on the flange surface. The upper mating surface of the flange was in good condition. The condition noted was not due to any degradation mechanism that could challenge structural integrity or leak tightness of the SCV.	None. 100% of the flange surface was inspected.	None
E-A E1.11B	DW FLG-3-1	Pitting 1/32" or less on drywell head flange and o-ring grooves. [NOI U3C14-012]	The indications of pitting noted on the flange surface are consistent with the age and service condition of the penetration. Pitting on the lower flange of the drywell head is a known condition and has existed since restart of Unit 3. The upper mating surface of the Drywell Head was in good condition. The condition noted was not due to any degradation mechanism that could challenge structural integrity or leak tightness of the SCV.	None. 100% of the flange surface was inspected.	None

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Examination Category and Item Number	Component Identifier	Indication Description	Acceptability/Corrective Action	Inaccessible Area (Location and Evaluation)	Additional Samples
E-A E1.11B	PEN 3-X-1B	Dents and punch marks on flange surfaces. [NOI U3C14-013]	Indications on Drywell Equipment Hatch Penetration 3-X-1B sealing surfaces consisting of dents 1/4" long and 3/32" wide with depth to 1/32" located in a line between the 11 and 12 o'clock position of the removable equipment door and multiple dents of no appreciable depth from the 3 to 9 o'clock position, lines of multiple dents at the 7 and 8 o'clock position, and 3 punch marks located at the 6 o'clock position on the equipment door fixed flange were observed during the performance of a VT-3 examination of the flange sealing surfaces. The indications on the flange surfaces are consistent with routine removal of the equipment door and usage of the equipment hatch for movement of personnel and equipment into the drywell during outage periods. The condition noted was not due to any degradation mechanism that could challenge structural integrity or leak tightness of the SCV.	None. 100% of the flange surface was inspected.	None

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Examination Category and Item Number	Component Identifier	Indication Description	Acceptability/Corrective Action	Inaccessible Area (Location and Evaluation)	Additional Samples
E-A E1.11B	PEN 3-X-1A	Dents, scratches, and light pitting on flange surface. [NOI U3C14-014]	Indications on Drywell Equipment Hatch Penetration 3-X-1A fixed flange sealing surface consisting of dents 1/4" long and 1/16" wide with depth less than 1/64" located in lines at the 4, 7, and 8 o'clock positions, dents 1/2" long and 1/8" wide with a depth of 1/64", a 1/8" diameter dent with a depth of 1/32", and a scratch across the outer o-ring sealing surface 1" long and 1/8" wide with a depth of 1/32" between the 6 and 7 o'clock position were observed during the performance of a VT-3 examination of the flange sealing surfaces. Light pitting in the inner o-ring sealing surface from the 5 to 8 o'clock position was also noted. No active corrosion was noted or expected due to the location of the Hatch. The indications on the flange surfaces are consistent with routine removal of the equipment door and usage of the equipment hatch for movement of personnel and equipment into the drywell during outage periods. The condition noted was not due to any degradation mechanism that could challenge structural integrity or leak tightness of the SCV.	None. 100% of the flange surface was inspected.	None

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ATTACHMENT A

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

WELD ID	CONFIG	Limitation	%	Report
DRHR-3-21	Elbow to Valve	single side exam	53.75%	R-024