



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

R. M. Krich
Vice President
Nuclear Licensing

July 14, 2011

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: **Response to NRC Request for Additional Information Regarding Relief Request 3-ISI-26**

- References:
1. NRC letter to TVA, "Browns Ferry Nuclear Plant, Unit 3 - Request for Additional Information Regarding Relief from Weld Examination Coverage Requirements, Request for Relief 3-ISI-26 (TAC No. ME5914)," dated June 10, 2011
 2. TVA letter to NRC, "American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, Inservice Inspection Program, Third Ten-Year Inspection Interval, Request for Relief 3-ISI-26," dated March 21, 2011

On March 21, 2011, the Tennessee Valley Authority (TVA) submitted a Request for Relief 3-ISI-26 for Browns Ferry Nuclear Plant, Unit 3(Reference 2). On June 10, 2011, the NRC transmitted a Request for Additional Information (RAI) (Reference 1).

The Enclosures to this letter provide the TVA's response to the RAI and supporting information. The due date for this response is July 15, 2011.

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There are no new regulatory commitments contained in this letter. Please direct any questions concerning this matter to Tom Matthews at (423) 751-2687.

Respectfully,

A handwritten signature in black ink, appearing to read 'R. M. Krich', written in a cursive style.

R. M. Krich

Enclosures:

1. TVA Responses to NRC Request for Additional Information Questions
2. Reference Report R-032

cc (Enclosures):

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

ENCLOSURE 1

Tennessee Valley Authority Browns Ferry Nuclear Plant, Unit 3

Request for Relief 3-ISI-26, Updated Risk Informed Inservice Inspection Program

TVA Responses to NRC Request for Additional Information Questions

By letter dated March 21, 2011 (Agencywide Document Access and Management System Accession No. ML110830037), Tennessee Valley Authority, the licensee for Browns Ferry Nuclear Plant, Unit 3 (BFN-3), submitted a request for relief (RR) from American Society of Mechanical Engineers (ASME Code), Boiler and Pressure Vessel Code Section XI requirements, in accordance with the provisions of Title 10 of the Code of Federal Regulations, Part 50, Section 50.55a, Paragraph (a)(3)(iii). This RR pertains to the third inservice inspection interval at BFN-3, which ends on November 18, 2015. The subject weld is a reactor pressure vessel nozzle-to-vessel (head) full penetration weld (N6A-NV).*

In order to complete its review of the licensee's submittal, the U.S. Nuclear Regulatory Commission staff requires a response to the following questions:

NRC Question 1: *Have any visual examinations been conducted on the associated nozzle inner radius area, such as those allowed by ASME Code Case N-648-1, "Alternative Requirements for Inner Radius Examinations of Class 1 Reactor Vessel Nozzles, Section XI, Division 1"?*

TVA Response: The inner radius of vessel (head) nozzle N6A (N6A-IR) was visually examined during the Unit 3 Cycle 13 (U3C13) refueling outage (March 25, 2008) that was in the first period of the third inservice inspection interval. This inspection was in accordance with ASME Code Case N-648-1. Please see Reference Report R-032 in Enclosure 2.

NRC Question 2: *If any such inspections have been completed, were any indications found in the associated N6A-NV nozzle-to-vessel head weld? If so, please describe each indication in detail.*

TVA Response: No indications were found when the inner radius of vessel (head) nozzle N6A (N6A-IR) was visually examined during the U3C13 refueling outage (March 25, 2008).

* Note: The NRC clarified in an e-mail to TVA, that 10 CFR 50.55a(g)(5)(iii) is the correct reference, and not 10 CFR 50.55a(a)(3)(iii), as stated in the paragraph above.

ENCLOSURE 2

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

Request for Relief 3-ISI-26, Updated Risk Informed Inservice Inspection Program

Reference Report R-032

TENNESSEE VALLEY AUTHORITY RECORD OF VISUAL EXAMINATION

EXAM DATE: 03/25/08 PROCEDURE: N-VT-1 REV 42 TC: N/A REPORT NO.: R032
 PLANT: BFN UNIT 3 CYCLE: 13 INSERVICE: PRESERVICE:
 COMPONENT ID N6A-IR MODIFIED PORTION ONLY: Yes: No:
 DRAWING NO 3-ISI-0295-A-01 SYSTEM: RPV CODE CATEGORY: B-D
 COMPONENT TYPE INNER RADIUS VISUAL AID(S) MIRROR, FLASH LIGHT
 TYPE OF VISUAL EXAM VT-1E DIRECT: REMOTE:
 ILLUMINATION CHECK ADEQUATE: VISUAL CARD S/N: 0 03/25/08 140 002

ATTRIBUTE	ACCEPT	REJECT	N/A	SUPPORT TYPE:
DEFORMED OR SHEARED BOLTS/STUDS/THREADS (VT-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	 N/A INNER RADIUS ^{not} 03/25/08 DUAL SPRING / SNUBBER
CORROSION (VT-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LOOSE BOLTING (VT-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	 Mfg: _____ Type: _____ Model: <u>N</u> Size: _____ Range: (1) <u>A</u> Setting: (1) _____ Range: (2) _____ Setting: (2) _____ Temp: <u>N/A</u> °F Pyro. No.: _____
THREAD ENGAGEMENT (VT-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
COOLANT LEAKAGE (VT-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
DEGRADATION OF PROTECTIVE COATING (VT-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CRACKS/FRACTURES (VT-1,3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
STRUCTURAL DEGRADATION/ DEFORMATION (VT-1,3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PHYS. DAMAGE/ DISPLACEMENT (VT-1,3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LOOSE/MISSING PARTS (VT-1,3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
ARC STRIKES, SPATTER, PAINT, SCORING, ROUGHNESS OF MACHINED SURFACES (VT-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
WEAR/EROSION/CORROSION (VT-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
FUNCTIONAL ADEQUACY (VT-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<div style="border: 1px solid black; padding: 5px;"> BOLTING: INPLACE: <input type="checkbox"/> REMOVED: <input type="checkbox"/> DISASSEMBLED: <input type="checkbox"/> </div>
FREEDOM OF MOTION (VT-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
VERIFICATION OF SETTING (VT-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
LOSS OF INTEGRITY (VT-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CLEARANCE VERIFICATION (VT-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
MISALIGNMENT OF SUPPORTS (VT-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
IMPROPER CLEARANCES OF GUIDES & STOPS (VT-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

REMARKS: N/A Ref: Code Case N-648-1, Plant which 3/25/08
1 mil WIRE ON 18% NEUTRAL GREY BACKGROUND. 11/3/08
11/3/08

NOI NUMBER: _____ WORK DOCUMENT: 3514.6.6

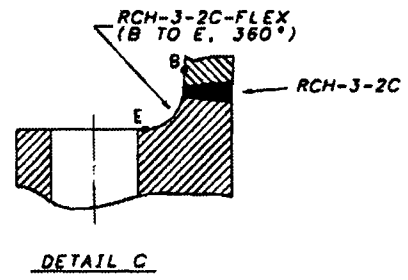
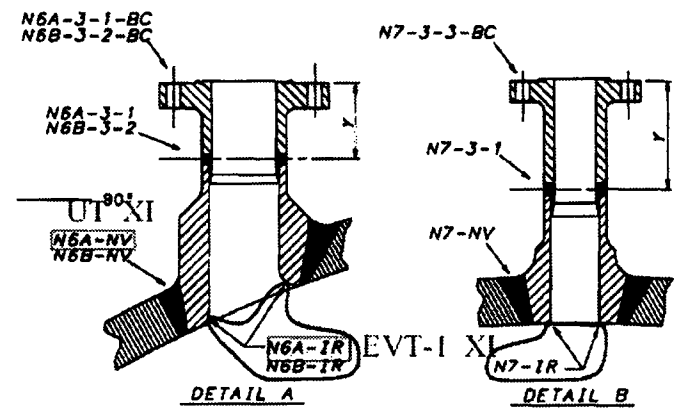
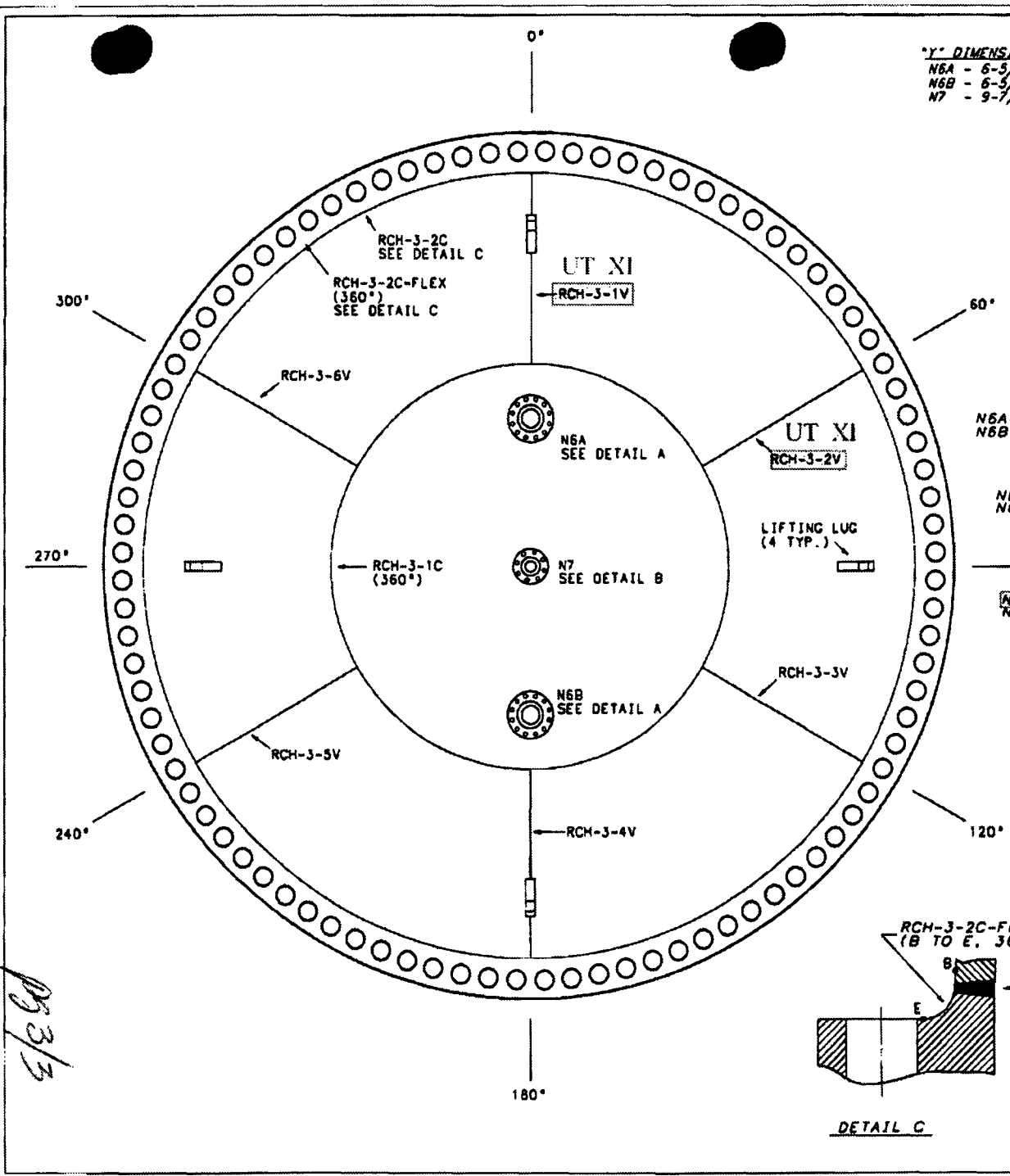
EXAMINER: Amason A. Thron LEVEL: II DATE: 03/25/08
 EXAMINER: N/A LEVEL: _____ DATE: _____
 REVIEWER: Walter White LEVEL: III DATE: 3/25/08
 ANII REVIEW: _____ DATE: 4/17/08 pg 1/3

***Y* DIMENSIONS**
 N6A - 6-5/8"
 N6B - 6-5/8"
 N7 - 9-7/16"

REFERENCE DRAWING
 B&W 122876
 B&W 122877
 NOTE: THIS DRAWING SUPERSEDES
 CHM-2102-A (UNIT 3 ONLY)

MATERIAL SPECIFICATIONS
 CLOSURE HEAD DOME/SEGMENTS
 CS MN/MO
 N-7
 NOZZLE - A508 CL.2 (MN-MO)
 LONG WELD NECK - SA-105 GR.11 CS

N6A, N6B
 NOZZLE - A508 CL.2 (MN-MO)
 LONG WELD NECK - SA-105 GR.11 CS
 ASME CC-1 (EQUIVALENT)



600157
 R032

001	ADDER	J. McFARLAND	MC McPHEES	DP	REV. 1	10-8-77
REVISED PER RTRB MWDG 814 040188 101						
REV	CHANGE REF	PREPARED	CHECKER	APPROVED	DATE	
TENNESSEE VALLEY AUTHORITY						
BROWNS FERRY NUCLEAR PLANT						
UNIT 3						
CLOSURE HEAD ASSEMBLY						
WELD LOCATIONS						
DRAWN: FMB	SUBMITTED	APPROVED	SCALE: NTP			
DATE: 7-10-78	BY: J. McFARLAND	DATE: 7-10-78	SHEET NO. OF SHEETS			
CONC'D: JLS	EDC	CLB	DRAWING NO.			
DATE: 5-15-77			3-151-0295-A1001			
CAD MAINTAINED DRAWING						CCD

ALL A/D HISTORY RESEARCHED AT R000

JESS W. JACKSON & ASSOCIATES, INC

Factory Trained Service Center
4852 Jimmy Carter Blvd, Norcross, GA 30093
(770) 923-4330 FAX (770) 923-9789

Certificate No. 102020001

Serial No. 001 through 020

CERTIFICATE OF CONFORMITY

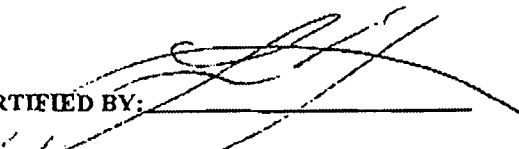
Customer: Tennessee Valley Authority
Igou Ferry Rd
Soddy Daisy, Tn 37379

Release No.
00029

Part Nomenclature Enhanced VT-1 Illumination Cards

We certify that the product mentioned above was subject to a quality inspection and testing procedure. It meets the test specifications for this product.
All measuring tools used for testing are calibrated and traceable back to NIST.
In view of the measures taken by us for the product quality assurance, we assure you of the conformity with the product data specified in the operating specification.

DATE CERTIFIED: October 04, 2002

CERTIFIED BY: 

TITLE: Vice President

The following Test Equipment was used to CERTIFY the $\leq .001$ Dia. Iron Wire on the VT-1 Cards:

Description	Make	Model	Serial Number	NIST No.	Exp. Date
Digital Caliper	Fowler	Max-Cal	285902	A47406	10/03/03

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