UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 28, 1998

50-296

Mr. J. A. Scalice
Chief Nuclear Officer
and Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNIT 3 – RELIEF FROM ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI REQUIREMENTS: RELIEF REQUEST 3-SPT-3 AND 3-SPT-4 (TAC NO. M97805)

Dear Mr. Scalice:

By letters dated January 22, 1997, and June 12, 1998, the Tennessee Valley Authority (TVA) submitted its second 10-year interval inservice inspection plan for the Browns Ferry Nuclear Plant, Unit 3 (BFN-3) and associated requests for relief.

Relief Request 3-SPT-3 requests relief regarding the qualifications of personnel performing VT-2 visual examinations. The American Society of Mechanical Engineers Boiler and Pressure Code (ASME Code), Section XI, Paragraph IWA-2300, requires that personnel performing VT-2 visual examinations be qualified in accordance with comparable levels of competency as defined in American National Standards Institute N45.2.6. In accordance with 10 CFR 50.55a(a)(3)(i), TVA has proposed to use Code Case N-546 in lieu of the requirements of Paragraph IWA-2300 for VT-2 visual examination personnel.

The staff has reviewed the information submitted regarding TVA's proposed alternative to use Code Case N-546. This Code Case includes the following requirements:

1. At least 40 hours of plant walkdown experience, such as that gained by licensed and nonlicensed operators, local leak rate personnel, system engineers, and inspection and nondestructive examination personnel.

2. At least 4 hours of training on Section XI requirements and plant specific procedures for VT-2 visual examination.

3. Vision test requirements of Paragraph IWA-2321, 1995 Edition.

In addition to the Code Case requirements, TVA's alternative includes commitments to use procedural guidelines for consistent, quality VT-2 visual examinations, to verify and maintain records of the qualification of persons selected to perform VT-2 visual examinations, and to perform independent reviews and evaluations of leakage.

Based on the information provided in support of Relief Request 3-SPT-3, the staff concludes that TVA's proposed alternative to use Code Case N-546 as supplemented by additional TVA commitments provides an acceptable level of quality and safety. Therefore, TVA's proposed alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(i). Use of Code Case N-546 is authorized for the second interval or until it is published in Regulatory Guide 1.147. At that time, use of the Code Case shall include limitations, if any, issued in Regulatory Guide 1.147.

1/1

DF01

Relief Request 3-SPT-4 requests relief from ASME Code, Section XI, Paragraph IWA-5250 (a)(2) regarding the visual examination of components and corrective measures if leakage occurs at bolted connections during system pressure tests. ASME Code, Section Xi, Paragraph IWA-5250 (a)(2), states, "If leakage occurs at a bolted connection, the bolting shall be removed, VT-3 visually examined for corrosion, and evaluated in accordance with Paragraph IWA-3100."

In accordance with 10 CFR 50.55a(a)(3)(i), TVA has proposed an alternative that involves an engineering evaluation of the bolted connection to determine the susceptibility of the bolting to corrosion and potential failure. This evaluation will consider, as a minimum, the location of the leakage, the leakage history of the connection, the fastener materials, evidence of corrosion, with the connection assembled, the corrosiveness of the process fluid, the history and studies of similar fastener material in a similar environment, and other components in the vicinity that may be degraded due to the leakage.

If the evaluation determines that the leaking condition has not degraded the fasteners, then no further action is required, other than reasonable attempts to stop the leakage. If the evaluation indicates the need for further evaluation, or if no evaluation is performed, then a bolt closest to the source of leakage shall be removed, VT-1 examined and evaluated for corrosion in accordance with Paragraph IWA-3100(a), and dispositioned in accordance with Paragraph IWB-3140. When the removed bolting shows evidence of rejectable degradation, all remaining bolts in the connection shall be removed and receive a VT-1 examination and evaluation in accordance with Paragraph IWB-3140.

Based on the information provided for Relief Request 3-SPT-4, the staff concludes that TVA's proposed alternative examination and corrective measures provide an acceptable level of quality and safety. Therefore, TVA's proposed alternative is authorized for the second interval at BFN-3 pursuant to 10 CFR 50.55a(a)(3)(i).

The staff's safety evaluation and conclusions are contained in the Enclosure. Attached to the Enclosure is the INEEL Technical Letter Report.

Sincerely,
Original signed by
Frederick J. Hebdon, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-296
Serial No. BFN-98-021

Enclosure: Safety Evaluation

cc w/enclosure: See next page

DISTRIBUTION:

Docket File	BClayton	THarris (e-mail SE, TLH3)
PUBLIC	OGC	GHill (2)
JZwolinski	ACRS	MTschiltz
FHebdon	LPlisco, RII	TMcLellan
ADeAgazio	BFN r/f	

DOCUMENT NAME: G:\BFN\97805.WPD * See previous concurrence

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	PDII-3/PM	PDII-3/LA	E	OGC	PDII-3/D
NAME	ADeAgazio:cw	BClayton			FHebdon
DATE	09/25/98	09/[illegible]/98		09/[illegible]/98	09/[illegible]/98

OFFICIAL RECORD COPY

Relief request 3-SPT-4 requests relief from ASME Code, Section XI, Paragraph IWA-5250 (a)(2) regarding the visual examination of components and corrective measures if leakage occurs at bolted connections during system pressure tests. ASME Code, Section XI, Paragraph IWA-5250 (a)(2), states, "If leakage occurs at a bolted connection, the bolting shall be removed, VT-3 visually examined for corrosion, and evaluated in accordance with Paragraph IWA-3100."

In accordance with 10 CFR 50.55a(a)(3)(i), TVA has proposed an alternative that involves an engineering evaluation of the bolted connection to determine the susceptibility of the bolting to corrosion and potential failure. This evaluation will consider, as a minimum, the location of the leakage, the leakage history of the connection, the fastener materials, evidence of corrosion, with the connection assembled, the corrosiveness of the process fluid, the history and studies of similar fastener material in a similar environment, and other components in the vicinity that may be degraded due to the leakage.

If the evaluation determines that the leaking condition has not degraded the fasteners, then no further action is required, other than reasonable attempts to stop the leakage. If the evaluation indicates the need for further evaluation, or if no evaluation is performed, then a bolt closest to the source of leakage shall be removed, VT-1 examined and evaluated for corrosion in accordance with Paragraph IWA-3100(a), and dispositioned in accordance with Paragraph IWB-3140. When the removed bolting shows evidence of rejectable degradation, all remaining bolts in the connection shall be removed and receive a VT-1 examination and evaluation in accordance with Paragraph IWB-3140.

Based on the information provided for Relief Request 3-SPT-4, the staff concludes that TVA's proposed alternative examination and corrective measures provide an acceptable level of quality and safety. Therefore, TVA's proposed alternative is authorized for the second interval at BFN-3 pursuant to 10 CFR 50.55a(a)(3)(i).

The staff's safety evaluation and conclusions are contained in the Enclosure. Attached to the Enclosure is the INEEL Technical Letter Report.

Sincerely,

Frederick J. Hebdon

Frederick J. Hebdon, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-296
Serial No. BFN-98-021

Enclosure: Safety Evaluation

cc w/enclosure: See next page

Mr. J. A. Scalice
Tennessee Valley Authority

cc:
Senior Vice President
Nuclear Operations
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Jack A. Bailey, Vice President
Engineering & Technical Services
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. C. M. Crane, Site Vice President
Browns Ferry Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Decatur, AL 35609

General Counsel
Tennessee Valley Authority
ET 10H
400 West Summit Hill Drive
Knoxville, TN 37902

Mr. Raul R. Baron, General Manager
Nuclear Assurance
Tennessee Valley Authority
5M Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Karl W. Singer, Plant Manager
Browns Ferry Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Decatur, AL 35609

Mr. Mark J. Burzynski, Managar
Nuclear Licensing
Tennessee Valley Authority
4X Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Timothy E. Abney, Manager
Licensing and Industry Affairs
Browns Ferry Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Decatur, AL 35609

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
61 Forsyth Street, SW., Suite 23T85
Atlanta, GA 30303-3415

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
Browns Ferry Nuclear Plant
10833 Shaw Road
Athens, AL 35611

State Health Officer
Alabama Dept. of Public Health
434 Monroe Street
Montgomery, AL 36130-1701

Chairman
Limestone County Commission
310 West Washington Street
Athens, AL 35611