

January 7, 2003

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 2 - RELIEF FROM ASME BOILER  
AND PRESSURE VESSEL CODE, SECTION XI, REQUIREMENTS - RELIEF  
REQUEST 2-ISI-13 (TAC NO. MB6596)

Dear Mr. Scalice:

By letter dated October 25, 2002, the Tennessee Valley Authority (TVA) submitted a request for relief from the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Section XI Code requirements for inservice inspection (ISI) of snubbers for the Browns Ferry Plant (BFN), Unit 2, Third 10-Year Interval ISI Program.

Currently, TVA is required to incorporate the ASME Section XI Code, 1995 Edition, 1996 Addenda, as the governing document for the Third 10-Year ISI interval for BFN Unit 2. ASME Section XI Code, Article IWF-5000, provides the ISI requirements for Code Class snubbers, including the requirements to examine and test the snubbers in accordance with the ASME/American National Standards Institute (ANSI) Operation & Maintenance Code (OM), Part 4.

However, requirements for the examination and functional testing of all safety-related snubbers to ensure their operability are also contained in the BFN Unit 2 Technical Requirements Manual (TRM), Section 3.7.4. The snubbers are already within the current TRM scope, but the ASME/ANSI OM, Part 4, would require the creation of a separate program. Therefore, TVA has requested relief that would allow the examination and testing of snubbers in accordance with TRM Section 3.7.4.

The staff has reviewed the information provided in support of TVA's relief request. The staff's evaluation and conclusions are contained in the Enclosure. The staff finds that the use of the

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TRM program provides an acceptable level of safety and quality. Accordingly, the staff authorizes the use of such alternative pursuant to Title 10, Code of Federal Regulations, Section 50.55a(a)(3)(i) for the Third 10-Year Interval ISI Program at BFN Unit 2.

Sincerely,

***/RA by H.Berkow for/***

Allen G. Howe, Chief, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-260

Enclosure: As stated

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
THIRD TEN-YEAR INTERVAL INSERVICE INSPECTION PROGRAM PLAN  
RELIEF FROM ASME BOILER AND PRESSURE VESSEL CODE  
SECTION XI REQUIREMENTS - RELIEF REQUEST NO. 2-ISI-13  
TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT. UNIT 2  
DOCKET NUMBER 50-260

## 1.0 INTRODUCTION

Title 10 of the Code of Federal Regulations (10 CFR), Section 50.55a, requires that inservice inspection (ISI) of certain American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 components be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code (Code) applicable Edition and Addenda, except where relief has been requested by the licensee and authorized by the U.S. Nuclear Regulatory Commission (NRC) pursuant to 10 CFR 50.55a(g)(6)(i), (a)(3)(i), or (a)(3)(ii). In order to obtain authorization or relief, the licensee must demonstrate that (1) conformance is impractical for its facility, (2) the proposed alternative provides an acceptable level of quality and safety, or (3) compliance would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

As stated in 10 CFR 50.55a, the Commission may grant relief from the ASME Code requirements or authorize proposed alternatives upon making the necessary findings. The NRC staff findings, with respect to granting the requested relief or authorizing the proposed alternative requirements for snubber inservice examination, test, and repair or replacement activities, are contained in this Safety Evaluation.

Relief Request 2-ISI-13, submitted by Tennessee Valley Authority's (TVA's) letter dated October 25, 2002, proposes to use alternate requirements in accordance with its Technical Requirements Manual (TRM) TR 3.7.4, "Snubbers." TVA's ISI program relief request is based on the ASME Section XI Code, 1995 Edition, 1996 Addenda, Article IWF-5000 which provides, among other things, that snubber examinations shall be performed in accordance with ASME/ American National Standards Institute (ANSI) Operation & Maintenance Code (OM), Part 4.

## 2.0 RELIEF REQUEST 2-ISI-13

TVA's letter dated October 25, 2002, requested relief from the ASME Section XI Code, Article IWF-1000 which provides the requirements for ISI of Code Class 1, 2, and 3, and Metal Containment (MC) component supports and includes the visual examination of snubbers; and IWF-5000 which contains the inservice test requirements for snubbers. These requirements shall be performed in accordance with the ASME/ANSI OM, Part 4.

Enclosure

### 3.0 BASIS FOR RELIEF (as stated by TVA)

ASME Section XI, Class 1, 2, and 3 equivalent snubbers are examined and tested in accordance with BFN [Browns Ferry Nuclear] Plant Technical Requirements Manual (TRM), TR 3.7.4. The TRM is prepared in accordance with the guidance provide[d] by the NRC in GL [Generic Letter] 90-09. The scope for snubbers examined and tested in accordance with TR 3.7.4 is not limited by line size or other applicable code exemptions and includes a numerically greater population of snubbers than the Section XI program. Examination and testing of the snubbers in accordance with both ASME Section XI, and the plant TRM would result in a duplication of effort utilizing different standards and require the preparation of a separate program and associated procedures. This would result in additional cost and unnecessary radiological exposure. In addition, the personnel performing snubber visual examinations would also be required to be certified in accordance with the American Society of Nondestructive Testing (ASNT) SNT-TC-1A "Personnel Qualification and Certification in Nondestructive Testing" and/or ANSI/ASNT CP-189. This is an additional qualification and certification as compared to the task training qualification required to perform the TRM-required examinations and testing of snubbers. The existing TRM program for examination and testing of snubbers was promulgated and accepted by the NRC [on July 14, 1998, when the Improved Technical Specifications were approved for Browns Ferry Plant, Units 1, 2, and 3].

Implementing the ASME Section XI, 1995 Edition, 1996 Addenda would be a duplication of an existing program accepted by the NRC without a compensating increase in the level of quality and safety.

### 4.0 EVALUATION

TVA proposes that snubber examination and testing during the Third ISI Interval of commercial plant operation be performed in accordance with the requirements in TRM Section 3.7.4, "Snubbers." The two areas adjacent to the snubbers (i.e., between the snubbers and the building structure and between the snubbers and the component/piping being supported, including the pins) will remain in the ASME Section XI examination boundary (ISI Program).

TVA proposes, as an alternative to the ASME Section XI Code, Subarticle IWF-5300(a) and (b) requirements as defined in ASME/ANSI OM, Part 4, to perform the snubber inservice examination and testing in accordance with the BFN TRM TR 3.7.4. IWF-5300(a) covers the snubber visual inspection requirements and IWF-5300(b) covers the snubber functional test requirements.

The snubber visual inspection requirements of TR 3.7.4 are based on the provisions of GL 90-09. The staff developed GL 90-09, in part, to reduce unnecessary radiological exposure to plant personnel during snubber visual inspections. To verify that a snubber can operate within specific performance limits, licensees typically perform functional testing that involves removing the snubber and testing it on a specially designed test stand. Functional testing provides a 95-percent confidence level that 90 to 100 percent of the snubbers operate within the specified accepted limits. The performance of visual examinations is a separate process that complements the functional program and provides additional confidence of snubber operability. GL 90-09 provides an alternate schedule for snubber visual inspections that maintains the same confidence level as the existing inspection intervals and allows for inspections and corrective actions during plant outages. The staff determined that the visual inspection schedule of GL 90-09 is an acceptable alternative to the ASME Code requirements and encouraged licensees to change their technical specifications to be consistent with this guidance. The snubber visual inspection and functional test requirements of TR 3.7.4 are

consistent with the ASME Section XI Code, Subarticles IWF-5300(a) and (b) requirements as defined in ASME/ANSI OM, Part 4, and the alternative allowed by GL 90-09.

TVA also proposes, as an alternative to the ASME Section XI Code, Subarticle IWF-5300(a) that requires VT-3 certification for personnel performing snubber visual examinations, to use the TRM program training qualifications. Personnel performing the TRM visual examinations are "process qualified" to perform the examinations and testing in accordance with the TRM implementing instructions and procedures. The training includes a visual test associated with face mask fit, and "Visual Acuity" requirements. This proposed alternative to the Code-required certification including the Visual Acuity requirements, provides an acceptable level of quality and safety.

As an alternative to the ASME Section XI Code, Subarticle IWA-6230 requirements for filing snubber examination and test summary reports with the enforcement and regulatory authorities having jurisdiction at the plant site, and as an alternative to OM, Sections 2.4 and 3.4 requirements for examination and test documentation respectively, TVA proposes to use TR 3.7.4. The procedures and instructions implementing the TR 3.7.4 requirements are written and approved in accordance with the TVA Nuclear Quality Assurance (QA) Program. TVA's proposed alternative to maintain and control documentation as QA records, available onsite for review and inspection, provides an acceptable level of quality and safety.

In addition, as an alternative to certain ASME Code, Section XI, Subsubarticle IWA-2120(a)(5) and (c) requirements involving the Authorized Nuclear Inservice Inspection (ANII) duties to verify that required visual examinations and tests have been performed and the results recorded, TVA proposes to use the BFN TRM Snubber Program. In the BFN TRM Snubber Program, the ANII will not be involved in either the TRM visual examinations performed in the alternate VT-3 visual examinations as required by IWA-2110(a)(5), or the TRM functional testing performed as required by IWA-2110(c). The TRM snubber program is directed by a designated snubber program manager (SPM) who will provide oversight of the snubber program implementation for both visual examination and functional testing. The SPM responsibilities include both review and evaluation of visual examination and functional test data to ensure that the TRM requirements are met. ANII involvement in other inservice repair and replacement snubber activities, as required by IWA-2110(g) and (h) and implemented by BFN's Repair and Replacement Program, will be maintained. The staff finds that TVA's proposed alternative to use the TRM for snubber visual and functional testing without involving the ANII in these activities provides an acceptable level of quality and safety.

## 5.0 CONCLUSIONS

The staff finds that TVA's proposed alternative to certain of the ASME Section XI Code requirements for ISI of snubbers as contained in the relief request submitted by TVA's letter dated October 25, 2002, and evaluated herein, provides an acceptable level of quality and safety. Therefore, the licensee's request is authorized pursuant to 10 CFR 50.55a(3)(a)(i) for the Third 10-Year ISI Interval at BFN Unit 2.

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Date: January 7, 2003

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**BROWNS FERRY NUCLEAR PLANT**

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