

December 22, 2006

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

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNIT 3 - RELIEF REQUEST FROM
AMERICAN SOCIETY OF MECHANICAL ENGINEERS, SECTION XI
REQUIREMENTS FOR THE THIRD INSERVICE INSPECTION INTERVAL
(TAC NO. MC8786)

Dear Mr. Singer:

By a letter dated October 19, 2005, as supplemented by letter October 17, 2006, the Tennessee Valley Authority (TVA, the licensee) submitted Relief Request 3-ISI-2 requesting to use an alternative to the American Society of Mechanical Engineers *Boiler and Pressure Vessel Code*, Section XI, related to the examination and testing of snubbers for the remainder of the third 10-year inservice inspection interval for Browns Ferry Nuclear Plant (BFN) Unit 3.

The U.S. Nuclear Regulatory Commission staff has reviewed and evaluated the information provided in support of TVA's relief requests. Based on the conclusions contained in the enclosed safety evaluation, the staff authorizes relief pursuant to Title 10 of the *Code of Federal Regulations* Section 50.55a(a)(3)(I) on the basis that the alternative provides an acceptable level of quality and safety.

This relief is authorized for the remainder of the third 10-year inservice inspection interval at BFN Unit 3, which began November 19, 2005, and ends November 18, 2015.

Sincerely,

/RA/

L. Raghavan, Chief
Project Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-296

Enclosure: Safety Evaluation

cc w/encl: See next page

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DATE	12/12/06	12/19/06	12/11/06	by memo dated 11/16/06	12/21/06	12/22/06

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
THIRD 10-YEAR INTERVAL INSERVICE EXAMINATION PROGRAM FOR SNUBBERS
RELIEF REQUEST 3-ISI-2
TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT, UNIT 3
DOCKET NO. 50-296

1.0 INTRODUCTION

By letter dated October 19, 2005, as supplemented by letter dated October 17, 2006, the Tennessee Valley Authority (the licensee) submitted Relief Request 3-ISI-2 for the third 10-year inservice inspection (ISI) and testing program interval for snubbers at Browns Ferry Nuclear Plant, Unit 3. The licensee requested relief from certain ISI and examination requirements of the American Society of Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* (ASME Code) Section XI, 2001 Edition through 2003 Addenda, Article IWF-5000. This Article references ASME/American National Standards Institute Operating Manual, Part 4 (OM-4), 1987 Edition with OMa-1988. The Unit 3 third 10-year ISI interval commenced on November 19, 2005.

2.0 REGULATORY EVALUATION

The ISI of ASME Code Class 1, 2, and 3 components shall be performed in accordance with Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the ASME Code and applicable addenda as required by Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(g), except where specific written relief has been granted by the NRC, pursuant to 10 CFR 50.55a(g)(6)(i). Section 50.55a(a)(3) states, in part, that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if: (i) the proposed alternatives would provide an acceptable level of quality and safety, or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the preservice examination requirements, set forth in the ASME Code, Section XI, to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code

ENCLOSURE

incorporated by reference in 10 CFR 50.55a(b), 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The applicable edition of Section XI of the ASME Code for the Unit 3 third 10-year ISI interval is the 2001 Edition through 2003 Addenda.

3.0 TECHNICAL EVALUATION

3.1 Affected Components

The licensee proposed an alternative to the ASME Code, Section XI, requirements for inspection and testing of ASME Code Class 1, 2 and 3 snubbers.

3.2 Code Requirements

From the 2001 Edition with 2003 Addenda of Section XI of the ASME Code:

ASME Code Section XI, IWF-5200(a) and (b) require preservice examinations and tests be performed in accordance with OM-4, using the VT-3 visual examination method in accordance with IWA-2213.

ASME Code Section XI, IWF-5300(a) and (b) require inservice examinations and tests be performed in accordance with OM-4, using the VT-3 visual examination method in accordance with IWA-2213.

ASME Code Section XI, IWF-5400, references IWF-5200 for snubber examination and test requirements following repair/replacement activities.

ASME Code Section XI, IWA-6230, requires the preparation of an ISI summary report after each refueling outage.

ASME Code Section XI, IWA-2110, requires Authorized Nuclear Inservice Inspector (ANII) involvement for snubber examination and testing.

3.3 Licensee's Proposed Alternative

Technical Requirements Manual (TRM) Section TR 3.7.4, *Snubbers*, will be used to perform visual examination and functional testing of ASME Code Class 1, 2 and 3 snubbers in lieu of meeting ASME Code, Section XI requirements.

3.4 Licensee's Basis for Requesting Relief (as stated)

ASME Section XI Class 1, 2 and 3 equivalent snubbers are examined and tested in accordance with the Unit 3 TRM, Section TR 3.7.4. This section is prepared in accordance with the guidance given by NRC in Generic Letter (GL) 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 ASME/ASNT-CP-189, which is an additional certification as compared to the task training qualification required to perform the TRM-required examinations and testing of snubbers.

The implementation of OM-4 would require a new snubber examination and testing program that is more complicated and expensive to perform without a compensating increase in the level of quality and safety.

The Unit 3 TRM, Section TR 3.7.4, requirements will be utilized for the examination and testing of snubbers for preservice, inservice, and repair/replacement activities. The procedures utilized for these examinations are:

3-SI-4.6.H-1, "Visual Examination of Hydraulic and Mechanical Snubbers";

3-SI-4.6.H-2A, "Functional Testing of Mechanical Snubbers";

3-SI-4.6.H-2B, "Functional Testing of Bergen-Patterson, Anchor/Darling, or Fronek Snubbers";

3-SI-4.6.H-2C, "Functional Testing of Bergen-Patterson Torus Dynamic Restraints";

MPI-0-000-SNB002, "Hydraulic Shock and Sway Arrestor Bergen-Patterson, Anchor/Darling, and Fronek Unit Disassembly and Reassembly"; and

MPI-0-000-SNB004, "Removing and Reinstalling Pacific Scientific Mechanical, Bergen-Patterson, Anchor/Darling, Fronek, and Grinnell Hydraulic, and Bergen Patterson, or Lisega Torus Dynamic Restraint Snubbers."

This includes the pin-to-pin area inclusive of applicable snubbers.

Testing of repaired and replaced snubbers will also be performed in accordance with TR 3.7.4. Visual examination of repaired and replaced snubbers, and will be performed in accordance with MPI-0-000-SNB004, "Removing and Reinstalling Pacific Scientific Mechanical, Bergen Patterson, Anchor/Darling, Fronek, and Grinnell Hydraulic, and Bergen Patterson, or Lisega Torus Dynamic Restraint Snubbers."

Snubber examination and testing data will be maintained in accordance with the requirements of TR 3.7.4, the site corrective action program, SSP-3.1, and the implementing procedures listed above.

The area from the pin to the building structure and to the component/piping being supported will remain in the ASME Section XI examination boundary.

The current program, as defined by Section TR 3.7.4, provides for a level of quality and safety equal to or greater than that provided by OM-4, and utilizes NRC guidance not incorporated into

the OM Code referenced by the 2001 Edition, 2003 addenda of ASME Section XI. Examination, testing, repair and replacement of snubbers is currently performed in accordance with Section TR 3.7.4, which utilizes the guidance provided by NRC in GL 90-09, *Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions*. The OM Code referenced by ASME Section XI has a different basis for examination (failure mode groups) and testing plans (10, 37, or 55 percent). It is impractical to implement both plans because of the resulting duplication of examination and testing efforts and different requirements for snubber quantities subject to examination or test, actually examined and/or tested, and sample expansion requirements. This would result in additional cost and unnecessary radiological exposure.

Subarticle IWF-5400 provides the requirements for repair and replacement of snubbers to be in accordance with OM-1987, Part 4. OM-1987, Part 4, Sections 1.5.6, *Snubber Maintenance or Repair* and 1.5.7, *Snubber Modification and Replacement* require repaired and replaced snubbers to meet the visual examination requirements of paragraph 2.3.1.2 and the operability test requirements of paragraph 3.2.11. Section 1.5.6 also requires an evaluation of the maintenance or repair activity and Section 1.5.7 requires a suitability evaluation on the replacement/modified snubber. TR 3.7.4 (TSR 3.7.4.6) requires replacement snubbers and snubbers which have repairs which might affect the functional test results to be tested to meet the functional test criteria prior to installation.

Maintenance procedure MPI-0-000-SNB004 provides visual examination criteria for installation of a snubber after repair or replacement. The ASME Section XI repair/replacement program documents the suitability of repairs/replacements, IWA-4160.

ASME Section XI, VT-3 certification required by personnel performing snubber visual examinations is an additional certification as compared with the TRM program training qualifications. Personnel performing the TRM required visual examinations are "process qualified" to perform the examinations and testing required by the TRM and implemented by the referenced procedures. This training currently includes a visual test associated with face mask fit and specific training on the acceptance criteria associated with procedure MPI-0-000-SNB004. Additional "visual acuity" verification for personnel performing snubber visual examinations will include visual acuity requirements that meet ASME Section XI. The training and documentation of personnel to the visual acceptance criteria, specified in the TRM implementing procedures, provides an acceptable level of quality and safety. Because relief is sought from the ASME Code Section XI snubber examination and test requirements, there will be no ASME Code Section XI snubber examination and test activities to require ANII involvement. The TRM snubber program does not require the use of an ANII for examination and test requirements. The ANII will not be involved in the TRM required visual examination or testing activities performed in lieu of the ASME Code requirements. A snubber program manager provides oversight of the TRM snubber program implementation for both visual examination and functional testing. This oversight includes both review and evaluation of visual examination and functional testing data to ensure TRM requirements are met. The snubber program manager provides an acceptable level of quality and safety without ANII involvement in those activities. ANII involvement in other inservice repair and replacement snubber activities, as required by IWA-2110(g) and (h) and implemented by the ASME Section XI repair and replacement program, will be maintained.

Subarticle IWA-6230 and OM-4, Sections 2.3 and 3.3 provide requirements for ASME Section XI inservice examination and test documentation for snubbers and a summary report of examinations and testing. Under the alternate requirements for snubbers, there will be no ASME Section XI inservice examination and testing to document in a summary report. Section TR 3.7.4 is implemented by surveillance instructions 3-SI-4.6.H-1, 3-SI-4.6.H-2A, 3-SI-4.6.H-2B, and 3-SI-4.6.H-2C and maintenance instruction MPI-0-000-SNB004. These instructions are written and approved in accordance with the licensee's Nuclear Quality Assurance (QA) Program, include data sheets for documenting the visual examination and functional test data and results, and provide for documentation of nonconforming results and evaluation of those results. The completed data sheets are QA records and are controlled and maintained in accordance with the QA records program. These records are available onsite for review and inspection. The QA records documenting snubber visual examinations and functional tests provide an acceptable level of quality and safety when compared to the requirements of ASME Section XI and OM-4.

The proposed alternative will be used for the entire third ten-year interval of the ISI Program for snubbers at Unit 3.

4.0 STAFF EVALUATION

The licensee requested authorization of an alternative to the requirements of the ASME Code, Section XI, paragraphs IWF-5200(a), and (b), and IWF-5300(a), and (b). The licensee proposed that the visual examinations and functional testing of ASME Code Class 1, 2 and 3 snubbers be performed in accordance with the requirements of the TRM, Section TR 3.7.4 and its procedures in lieu of meeting the requirements in the ASME Code, Section XI, paragraphs IWF-5200(a), and (b), and IWF-5300(a), and (b). The licensee stated that areas outside the snubber pin to the building structure and to the component/piping being supported will remain in the ASME Section XI examination boundary.

The applicable edition of Section XI of the ASME Code for the Unit 3 third 10-year ISI interval is the 2001 Edition through 2003 Addenda. The ASME Code, Section XI, paragraphs IWF-5200(a), and (b), and IWF-5300(a), and (b) references OM-4, 1987 Edition with OMa-1988.

ASME Code, Section XI, paragraphs IWF-5200(a) and IWF-5300(a) require that snubber preservice and inservice examinations be performed in accordance with OM-4, using the VT-3 visual examination method described in IWA-2213. Paragraphs IWF-5200(b) and IWF-5300(b) require that snubber preservice and inservice tests be performed in accordance with OM-4.

OM-4 specifies the requirements for visual examination and functional testing of snubbers. The licensee proposes to use the TRM Section TR 3.7.4 surveillance requirements for visual inspection and functional testing of all safety-related snubbers. A visual inspection is the observation of the condition of installed snubbers to identify those that are damaged, degraded, or inoperable as caused by physical means, leakage, corrosion, or environmental exposure. To verify that a snubber can operate within specific performance limits, the licensee performs functional testing that typically involves removing the snubber and testing it on a specially designed stand or bench. The performance of visual examinations is a separate process that complements the functional testing program and provides additional confidence in snubber operability.

The TRM incorporates GL 90-09. The GL 90-09 acknowledges that the visual inspection schedule (as contained in OM-4) is excessively restrictive and that licensees with large snubber populations have spent a significant amount of resources and have subjected plant personnel to unnecessary radiological exposure to comply with the visual examination requirements. GL 90-09 states that its alternative schedule for visual inspection provides the same confidence level as that provided by OM-4.

The TRM defines inservice examination requirements, visual examination, visual examination frequency, method of visual examination, subsequent examination intervals, failure evaluation, inservice operability test requirements, initial snubber sample size, additional sampling, failure evaluation, test failure mode groups, and corrective actions for the 10 percent sample plan that are similar to those provided by OM-4. The OM-4 requirements and the TRM, Section TR 3.7.4 criteria are compared and summarized in the following table and followed by a detailed review:

4.1 Inservice Examination Requirements

Visual Examination

The TRM Section TSR 3.7.4.1 states that visual inspections shall verify that there are: (a) no indications of damage or impaired operability; (b) attachments to the foundation or supporting structure are secure; and (c) fasteners for attachment of the snubber to the component or system and to the snubber anchorage are functional. The discovery of loose or missing attachment fasteners will be evaluated to determine whether the cause may be localized or generic. The visual examination per the TRM verifies visible indication of damage or impaired operability of snubbers as well as its attachments and support. The licensee states that visual examination verifies visible indication of damage due to leakage, corrosion, degradation, and bending. The OM-4, paragraph 2.3.1.1, states that snubber visual examinations are required to identify impaired functional ability due to physical damage, leakage, corrosion, or degradation. Based on the above, the TRM Section TR 3.7.4 snubber visual examination requirements are considered to be equivalent to the snubber visual examination requirements of OM-4 paragraph 2.3.1.1 and the TRM provides an acceptable level of quality and safety.

Visual Examination Interval Frequency

The TRM Table 3.7.4-1 provides snubber visual inspection interval frequency requirements which are different than the OM-4 visual inspection interval requirements. Table 3.7.4-1 incorporates the visual inspection interval frequency as specified in GL 90-09. The GL 90-09 acknowledges that the visual inspection interval frequency, as contained in OM-4, is excessively restrictive and that licensees with large snubber populations have spent a significant amount of resources and have subjected plant personnel to unnecessary radiological exposure to comply with the visual examination requirements. The GL 90-09 states that the alternative schedule (interval frequency) for visual inspection provides the same confidence level as that provided by OM-4. Based on the fact that the TRM Section TR 3.7.4 uses the same interval frequency as GL 90-09, the TRM visual interval frequency provides an acceptable level of quality and safety.

Method of Visual Examination

Subsections IWF-5200(a) and IWF-5300(a) require that preservice and inservice examination be performed in accordance with OM-4, using the VT-3 visual examination method described in IWA-2213. The licensee proposes, as an alternative to the IWF-5200(a) and IWF-5300(a) that requires that VT-3 certification for personnel performing snubber visual examination, to use TRM program 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. This training includes a visual test associated with face mask fit, and "Visual Acuity" requirements of the ASME Section XI. In a letter dated October 17, 2006, the licensee stated that the visual examination training qualification and documentation is provided by Surveillance Instruction 3-SI-4.6.H-1, *Visual Examination of Hydraulic and Mechanical Snubbers*, and the visual acuity requirements of IWA-2320 are satisfied. Visual Examination Surveillance Instruction 3-SI-4.6.H-1 will be used to verify visible indication of damage or impaired operability of snubbers. The areas adjacent to the snubbers (i.e., between the snubbers and 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). Based on the TRM program qualification requirements, including the Visual Acuity requirements, being equivalent to the Code-required certification, the TRM qualification requirements provides an acceptable level of quality and safety.

Subsequent Examination Intervals

The TRM Table 3.7.4-1 establishes subsequent snubber visual inspection intervals based on the number of unacceptable snubbers discovered, in lieu of OM-4, paragraph 2.3.2 requirements. These requirements are equivalent to the guidance provided in GL 90-09, which has been approved for use by the NRC. Based on the fact that the TRM Table 3.7.4-1 snubber visual inspection intervals are equivalent to the guidance provided in GL 90-09, NRC staff finds that the subsequent examination intervals contained in TRM Table 3.7.4-1 provide an acceptable level of quality and safety.

Inservice Examination Failure Evaluation

The OM-4, paragraph 2.3.4.1 requires that snubbers not meeting examination criteria be evaluated to determine the cause of unacceptability. The OM-4, paragraph 2.3.4.2 states that snubbers found unacceptable, may be tested in accordance with the requirements of paragraph 3.2. The TRM Section TSR 3.7.4.1 states that snubbers which appear inoperable as a result of visual inspections shall be classified unacceptable and may be reclassified acceptable for the purpose of establishing the next visual inspection interval, provided that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers irrespective of the type that may be generically susceptible; and (2) the affected snubber is functionally tested in the as-found condition and determined operable per the criteria of TSR 3.7.4.2. Since the TRM Section TSR 3.7.4.1 provides for inservice examination failure evaluation equivalent to the requirements of OM-4, paragraph 2.3.4.1, the NRC staff finds that the TRM's inservice examination failure evaluation requirements provide an acceptable level of quality and safety.

4.2 Inservice Operability Test Requirements

Inservice Operability Test

Section TSR 3.7.4.2 states that snubbers shall be functionally tested either in-place or in a bench test. The functional test is to verify that (a) activation is achieved in both tension and compression within specified range; (b) snubber bleed or release, where required, is within the specified range in both compression and tension; (c) for mechanical snubbers, the force required to initiate or maintain motion of the snubber; (d) for snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement; and (e) measure any other parameters indirectly. OM-4, paragraph 3.2.1.1, Operability Test, states that snubber operational readiness tests verify activation, release rate, and breakaway force or drag force by either an in-place or bench test. Based on the staff's finding that TRM functional testing requirements are equivalent to the snubber operability test requirements of OM-4, paragraph 3.2.1, the TRM operability test requirements provide an acceptable level of quality and safety.

Snubber Sample Size

The TRM Section TSR 3.7.4.2 states that functional tests will be performed on a representative sample of 10 percent of each type of safety-related snubber. The OM-4, Section 3.2.3 requires either a 10-percent testing sampling plan, a 37 testing sample plan, or a 55 testing sample plan. The licensee is using a 10-percent sample criteria, which is equivalent to the 10-percent sample testing requirements of OM-4. Based on the number of snubbers tested during outages in accordance with TRM Section TSR 3.7.4.2 are considered to be equivalent to the OM-4 testing sample plan requirements, the NRC staff finds that the TRM snubber sample size provides an acceptable level of quality and safety.

Additional Sampling

Section TSR 3.7.4.3 requires that for each functionally tested snubber that fails, an additional lot equal to 10 percent of the remainder of that type of snubber is to be functionally tested. The OM-4, paragraph 3.2.3.1(b) states that the additional sample size must be at least one-half the size of the initial sample size of the "defined test plan group" of snubbers. That is, for a 10-percent sample program, an additional 5 percent of the same type of snubber in the overall population would need to be tested. Based on the fact that the TRM Section TSR 3.7.4.3 requires an additional percentage of snubbers to be sampled for each failed snubber, which is equivalent to the requirements of OM-4, paragraph 3.2.3.1(b), the NRC staff finds that the TRM additional testing requirements are acceptable and provides an acceptable level of quality and safety.

Inservice Operability Failure Evaluation

The OM-4 paragraph 3.2.4.1 requires that snubbers not meeting operability testing acceptance criteria in paragraph 3.2.1 be evaluated to determine the cause of the failure. The cause of failure evaluation requires review of other unacceptable snubbers and determination whether other snubbers of similar design would require further examination. Section TSR 3.7.4.3 states that a failure analysis shall be made of each failure to meet the functional test acceptance criteria of Section TSR 3.7.4.2 to determine the cause of the failure. Surveillance instructions

0-SI-4.6.H-2A, 0-SI-4.6.H-2B, 0-SI-4.6.H-2C, and 0-SI-4.6.H-2E provide the requirements for performing failure evaluations of failed snubbers, and an engineering failure analysis for inoperable snubbers must be performed using the appropriate data sheets of applicable surveillance instructions to determine the cause of failure. Based on the NRC staff's finding that the TRM requirements related to inservice operability failure evaluation are equivalent to the OM-4 requirements, the TRM Section TSR 3.7.4.3 inservice operability failure evaluation requirements provide an acceptable level of quality and safety.

Test Failure Mode Groups

The OM-4, paragraph 3.2.4.2 requires that unacceptable snubber(s) be categorized into failure mode group(s). A test failure mode group shall include all unacceptable snubbers that have a given failure mode and all other snubbers subject to the same failure mode. Section TSR 3.7.4.4 states that for any snubber which fails to lockup or fails to move (i.e., frozen in place), the cause must be evaluated. If it is caused by manufacturer or design deficiency, then the licensee must perform in-place or bench functional test of all snubbers of same design that are subject to same defect. The functional test criteria is specified in Section TSR 3.7.4.2. The TRM states that the testing requirements of Section TSR 3.7.4.4 are independent of TSR 3.7.4.3. The TSR 3.7.4.3 requirements are discussed above.

In addition, the applicable Unit 3 surveillance instructions require an engineering evaluation of snubber failures, and classification of the snubber failure mode as isolated, location, manufacturing, design or other. The engineering evaluation includes a determination of subsequent testing required, based on the failure mode, which may involve testing of snubbers susceptible to the same failure mode. The licensee states that establishment of specific groupings based on failure is not performed. The TRM Section TR 3.7.4 does not specifically address "Failure Mode Groups." However, Section TSR 3.7.4.4 accomplishes the same intent as Failure Mode Grouping. Based on the NRC staff's finding that the TRM Section TSR 3.7.4.4 is considered to be equivalent to the OM-4 requirements, the TRM engineering evaluation and failure classification provides an acceptable level of quality and safety.

Inservice Operability Testing Corrective Actions (for 10 percent testing sample plan)

The OM-4, paragraph 3.2.5.1 requires that unacceptable snubbers be adjusted, repaired, modified, or replaced. In a letter dated October 17, 2006, the licensee stated that for each unacceptable or failed snubber, a problem event report is initiated, failure analysis performed and work order initiated to replace the snubber, if necessary. Based on the TRM corrective actions being equivalent to the OM-4 paragraph 3.2.5.1 requirements, the NRC staff finds that the TRM corrective actions associated with unacceptable snubbers provide an acceptable level of quality and safety.

4.3 Repair and Replacement Activities

Subsection IWF-5400 states that snubbers installed, corrected or modified by repair/replacement activities shall be examined and tested in accordance with the applicable requirements of IWF-5200 prior to return to service. The ASME Section XI, IWF-5200 references OM-4, 1987 Edition with OMa-1988. The detailed comparison and evaluation of the licensee's alternative with respect to IWF-5200 is performed above. Based on the NRC staff's

finding that the TRM requirements related to repair and replacement activities associated with snubbers are considered to be equivalent to IWF-5200 requirements, the TRM requirements related to repair and replacement of snubbers provides an acceptable level of quality and safety.

4.4 Record of Snubber Examinations and Testing

The ASME Section XI, IWA-6230, provides the requirements for snubber examination and test summary report preparation for snubbers inservice examination and test documentation, and OM-4, Sections 2.4 and 3.4 provides requirements for examination and test documentation. The licensee proposes an alternative to use the TRM Section TR 3.7.4 in lieu of these requirements. The licensee states that the TRM is implemented by surveillance instructions 3-SI-4.6.H-1, 3-SI-4.6.H-2A, 3-SI-4.6.H-2B, and 3-SI-4.6.H-2C and maintenance instruction MPI-0-000-SNB004. The procedures and instructions are written and approved in accordance with the QA Program. The licensee-proposed alternative to maintain and control documentation as QA records available onsite for review and inspection is equivalent to ASME Code and OM-4 requirements and, therefore, provides an acceptable level of quality and safety. In addition to this, the NRC has endorsed the use of ASME OM Code, Subsection ISTD for snubber inservice examination and testing. Based on the TRM requirements for snubber examination and test summary report preparation for snubber inservice examination and test documentation being similar to the OM Code requirements, the licensee proposed method of preparing and maintaining records of snubber examinations and tests provides an acceptable level of quality and safety.

4.5 Authorized Inspection Agency

The ASME Code, Section XI, Subsection IWA-2110 specifies various inspector duties related to examination and testing activities. Subsection IWA-9000 states that an ANII is a person who is employed and has been qualified by an Authorized Inspection Agency to verify examination, tests and repair/replacement activities. The TRM snubber program does not require the use of an ANII for examination and test requirements. The ANII will not be involved in the TRM required visual examination or testing activities performed in lieu of the ASME Code requirements. The TRM snubber program is directed by a designated snubber program manager who will provide oversight of the snubber program implementation for both visual examination and functional testing.

The snubber program manager responsibilities include both review and evaluation of visual examination and functional test data to ensure that 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 the Repair and Replacement Program will be maintained. In addition to this, the NRC has endorsed the use of ASME OM Code, Subsection ISTD for snubber inservice examination and testing. The OM Code states that the Owner's responsibility includes qualification of personnel who perform and evaluate examinations and tests in accordance with the Owner's QA program. These requirements are similar to the TRM requirements. The staff finds that the Unit 3 proposed alternative to use the TRM snubber manager for overview of snubber visual examination and functional testing is similar to the OM Code and therefore provides an acceptable level of quality and safety.

5.0 CONCLUSION

Based on the above discussion, the staff finds that snubber visual examinations and functional testing conducted in accordance with the TRM Section TR 3.7.4, provide reasonable assurance of snubber operability and provide a level of quality and safety equivalent to that of the ASME Code, Section XI, subarticles IWF-5200(a) and (b), and IWF-5300(a) and (b). Therefore, the staff finds that the licensee's proposed alternative provides an acceptable level of quality and safety with respect to snubber visual inspection and functional testing. It should be noted that in authorizing Relief Request 3-ISI-2, the TRM Section TR 3.7.4 becomes a licensing basis that may be used in lieu of ASME Code, Section XI requirements for performing ISI and testing of snubbers. Changes to these requirements must be reviewed and approved by the NRC staff for authorization pursuant to 10 CFR 50.55a(a)(3) or as an exemption pursuant to 10 CFR 50.12.

The staff concludes that the proposed alternative to use the TRM Section TR 3.7.4 for snubber visual inspection and functional testing provides an acceptable level of quality and safety based on the information provided. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the licensee's alternative is authorized for the Unit 3 third 10-year ISI interval which began on November 19, 2005, and ends November 18, 2015.

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