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PSEG
*Nuclear L.L.C.*

10 CFR 50.55a
10 CFR 50.90

LR-N08-0150

JUL 3 0 2008

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

Hope Creek Generating Station
Facility Operating License No. NPF-57
NRC Docket No. 50-354

Subject: Relief Request for Third Interval Inservice Inspection Program for Examinations and Tests of Snubbers and Associated License Amendment Request

Reference:
1) Letter from D. Garchow (PSEG Nuclear LLC) to USNRC, July 3, 2002 (Accession No. ML021970412)
2) Letter from G. Salamon (PSEG Nuclear LLC) to USNRC, December 18, 2002 (Accession No. ML023610335)
3 Letter from Jeffrie Keenan (PSEG Nuclear LLC) to USNRC, December 12, 2007 (Accession No. ML073531254)

In accordance with 10 CFR 50.55a, "Codes and standards," paragraph (a)(3)(i), PSEG Nuclear LLC (PSEG), hereby requests NRC approval of the attached request associated with the third 10-year inservice inspection (ISI) interval for the Hope Creek Generating Station (HCGS). This relief request provides an alternative to the requirements of the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants, 2001 Edition through the 2003 Addenda, Section ISTD-5200, "Inservice Operational Readiness Testing." The proposed alternative would permit HCGS to adopt ASME Code Case OMN-15 to extend test intervals for snubber operational readiness testing, based on acceptable test performance. The proposed alternative would provide an acceptable level of quality and safety.

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There are three elements to this request:

- Obtain authorization to use OMN-15 Code Case as an alternative to ISTD-5200 and ISTD-5240.
- Relocate snubber surveillance requirements from Technical Specifications (TS) to the HCGS Technical Requirements Manual (TRM).
- Incorporate new Limiting Condition for Operation (LCO) 3.0.8 into HCGS TS.

Snubber operational readiness testing is currently performed in accordance with the requirements of HCGS Technical Specification (TS) 3/4.7.5, "Snubbers," in lieu of the ASME Code, Section XI requirements. However, after restart from HCGS refueling outage RF15 (Spring 2009), PSEG intends to adopt Subsection ISTD, "Inservice Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Power Plants," ASME OM Code, 2001 Edition through the 2003 Addenda, for examinations and tests of HCGS snubbers, as permitted in 10 CFR 50.55a(b)(3)(v), in place of the requirements for snubbers in Section XI, IWF–5200(a) and (b) and IWF–5300(a) and (b). The relief request in Attachment 1 would be implemented in conjunction with adoption of subsection ISTD.

The proposed alternative would permit use of the alternative test interval rules specified in ASME OM Code Case, OMN-15, published in the 2004 Edition of the ASME OM Code. Use of extended test intervals for snubber operational readiness testing is justified on the basis of the high demonstrated reliability of the Lisega hydraulic snubbers installed in HCGS.

PSEG originally proposed to extend the testing interval for HCGS snubbers, based upon exceptional snubber performance, in Reference 1. After discussion with the NRC staff, this request was subsequently withdrawn (Reference 2) since no industry initiative or consensus document had been published to validate such a request. Subsequent to the initial request, ASME Code Case OMN-15 has been published which describes a method to extend the testing interval for snubbers which demonstrate a high level of operability performance.

Pursuant to 10 CFR 50.90, PSEG also requests an amendment to Facility Operating License No. NPF-57 for HCGS in order to implement the proposed alternative in Attachment 1. The proposed license amendment will modify TS by relocating the current snubber TS requirements to the HCGS Technical Requirements Manual (TRM) and adding LCO 3.0.8 for inoperable snubbers to the TS. The associated TS Bases section would also be relocated. These changes are consistent with changes previously approved by the NRC for other reactor licensees and with Standard Technical Specifications, including Nuclear Regulatory Commission (NRC) approved Industry/Technical Specification Task Force (TSTF) STS change TSTF-372 Revision 4.

Attachment 2 to this letter describes the proposed changes and provides justification for the changes. PSEG has concluded that the proposed changes present no significant hazards consideration under the standards set forth in 10 CFR 50.92. Attachment 3

provides the marked up Technical Specification pages. Attachment 4 provides the marked up Technical Specifications Bases pages. These Bases pages are being submitted for information only and do not require issuance by the NRC.

To support planning for the Fall 2010 HCGS refueling outage, PSEG requests approval of the proposed changes by August 31, 2009, with implementation to be completed within 90 days. Upon implementation of the proposed changes, PSEG will no longer use Relief Request HC-I3R-02, currently under NRC review (Reference 3), for snubber inservice examinations and tests. Upon implementation, PSEG will make appropriate changes to the TRM reflecting adoption of Subsection ISTD.

Regulatory commitments contained within this submittal are summarized in Attachment 5.

These proposed TS changes have been reviewed by the Plant Operations Review Committee, and the Nuclear Safety Review Board. We are notifying the State of New Jersey of this application for changes to the TS by transmitting a copy of this letter and its attachments to the designated State Official.

If you have any questions or require additional information, please contact Mr. Paul Duke at 856-339-1466.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 7/30/08
(date)

Sincerely,

George P. Barnes

George P. Barnes
Site Vice President
Hope Creek Generating Station

Attachments (5)
1. Relief Request HC-I3R-04
2. Description of Proposed Changes, Technical Analysis, and Regulatory Analysis
3. Markup of Technical Specification pages
4. Markup of Technical Specification Bases pages
5. List of Commitments

cc: S. Collins, Regional Administrator – NRC Region I
R. Ennis, Project Manager - USNRC
NRC Senior Resident Inspector - Hope Creek
P. Mulligan, Manager IV, NJBNE

**ATTACHMENT 1**

**Relief Request HC-I3R-04**

**Hope Creek Generating Station**

**NRC Docket No. 50-354**

**10 CFR 50.55a RELIEF REQUEST: HC-I3R-04**
**Revision 0**


**Request for Relief for Alternate Testing and Examination Requirements for Snubbers In Accordance with 10 CFR 50.55a(a)(3)(i)**

## 1.0 ASME CODE COMPONENTS AFFECTED:

Snubbers within the scope described in OM Code Subsection ISTA-1100.

## 2.0 APPLICABLE CODE EDITION AND ADDENDA:

The Inservice Inspection program for examination and testing of snubbers will be based on the American Society of Mechanical Engineers (ASME) Operations and Maintenance (OM) Code, Section ISTD, 2001 Edition through the 2003 Addenda.

## 3.0 APPLICABLE CODE REQUIREMENT:

The regulation in 10 CFR 50.55a (b)(3)(v) permits the use of Subsection ISTD, "Preservice and Inservice Examination and Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Nuclear Power Plants," ASME OM Code, 1995 Edition through the 2001 edition with 2003 addenda, in place of the requirements for snubbers in ASME Section XI, IWF-5200(a), IWF-5200(b), IWF-5300(a) and IWF-5300(b), by making appropriate changes to their technical specifications or licensee controlled documents.

ISTD-5200 specifies that snubbers shall be tested for operational readiness during each fuel cycle.

ISTD-5240 specifies that tests of snubbers from the facility shall be performed every fuel cycle.

## 4.0 REASON FOR REQUEST:

ISTD-5200 and ISTD-5240 require snubber operational readiness testing during each fuel cycle. Pursuant to 10 CFR 50.55a (a)(3)(i), relief is requested from Subsection ISTD, "Preservice and Inservice Examination and Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Nuclear Power Plants," ASME OM Code, 2001 edition with 2003 addenda , on the basis that the proposed alternative of utilizing the initial sample size and extended test intervals specified in ASME OM Code Case OMN-15, provides an acceptable level of quality and safety. OM Code Case, OMN-15, 2004 Edition through 2006 Addenda, has not yet been addressed by the NRC.

Use of the extended test intervals would result in significant reductions in maintenance costs and radiological exposure to plant personnel, while maintaining the same or better

confidence level in snubber operational readiness as that provided by following ASME OM Code, ISTD requirements.

**5.0 Proposed Alternative And Basis For Use:**

Proposed Alternative

As an alternative to performing operational readiness testing during each fuel cycle, PSEG Nuclear LLC (PSEG) requests relief to use the alternative test interval rules specified in ASME OM Code Case, OMN-15, published in the 2004 Edition of the ASME OM Code and revised in the 2006 Addenda.

Snubber preservice and inservice visual examinations will be conducted using the VT-3 visual examination method described in IWA-2213 of ASME B&PV Code, Section XI.

Integral and non-integral attachments for snubbers, including lugs, bolting, pins and clamps, shall be visually examined in accordance with ASME Section XI, Subsection IWF.

Repair/replacement activities performed on snubbers shall be in accordance with Article IWA-4000 of the ASME B&PV Code, Section XI.

Basis for Use

ASME OMN-15 Code Case describes a method to extend the testing interval for snubbers. Code Case OMN-15 has not yet been addressed by the NRC under RG 1.192, or RG 1.193. However, based on the demonstrated reliability of the HCGS snubbers, the requirements in Code Case OMN-15 provide the same confidence level or better than those resulting from the use of ISTD-5200 and ISTD-5240.

HCGS recognized snubber performance as an area for improvement in 1987. Improved performance would result in fewer tests, thereby reducing maintenance costs and radiological exposure to plant personnel. After substantial research, the Lisega snubber was chosen to replace all of the PSA mechanical snubbers as well as E-Systems hydraulic snubbers installed at the HCGS. Snubber replacements were completed in 1997. After four subsequent operating cycles without a test failure, it was determined to pursue an extended test interval based upon improved snubber performance. As a result of initial discussions with NRC staff, PSEG supported the development of an ASME Code Case that would provide an industry consensus document and a method to accomplish this.

Since the installation of the improved snubbers at HCGS, after seven operating cycles there have been only 2 test failures in 345 tests, compared to the seven previous operating

cycles in which there were 103 test failures including 38 test failures in RF01. This demonstrates the significant improvement in snubber performance at HCGS.

With regard to the implementation of the OMN-15 Code Case, HCGS snubber population includes more than 370 snubbers, therefore the test plan specified in OMN-15 for this size population is Test Plan 1. Under the OMN-15 Code Case, Test Plan 1, the initial test sample for the HCGS population will be 52 rather than the 37 sample under the previous plan. Testing an initial sample of 52 snubbers meets the statistical basis for the OMN-15 Code Case which demonstrates a higher minimum operational readiness level than the existing ISTD Code. With the HCGS test population of 630 snubbers, there would have to be an uncharacteristically large number of snubber test failures to fall below the 95/90 confidence level presently required by the 37 plan specified in Subsection ISTD. Based upon site specific testing experience at HCGS since the installation of the replacement snubbers, this is highly unlikely to occur, and would be a significant departure from the HCGS experience over the past seven operating cycles where there have been only 2 failures in 345 tests.

With regard to implementation of other approved Code cases relating to snubbers, PSEG will not apply the OMN-13 visual examination extended interval Code Case. It is recognized that the combined examination, testing and service life monitoring requirements defined in ISTD result in a comprehensive approach toward maintaining snubber health and operational readiness. Visual examinations will be performed in accordance with the requirements of Table ISTD-4252-1 of Subsection ISTD.

The Lisega hydraulic snubbers installed in HCGS are designed to operate with reduced degradation that can cause snubbers to fail. Design features that contribute to their demonstrated high reliability include a sealed and pressurized design to prevent moisture intrusion; the use of corrosion resistant materials; non-metallic guide rings to isolate metal to metal sliding surfaces; and the use of hydraulic fluids qualified for long service life. To date, there have been two Lisega functional test failures in a total 345 tests during the previous seven test campaigns since 1997. This reveals a test failure rate of below 1% over this entire period.

Snubber visual inspections will continue to be performed in accordance with the requirements of the OM ISTD Code to provide assurance of snubber operational readiness. The interval for visual inspection depends on the number of unacceptable snubbers found in proportion to the size of the population or category for each type of snubber included in the previous inspection. The manufacturer's guidance for service life monitoring, (Reference 5), states that the majority of information concerning a Lisega hydraulic snubber's condition and application environment can be obtained by visual examination.

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**Revision 0**


The service life of snubbers will be monitored to ensure that the service life is not exceeded between surveillance inspections. The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records. The maximum expected service life of critical snubber components is extended or shortened based on monitored test results and failure history. Critical parts are required to be replaced so that the maximum service life will not be exceeded during a period when snubber operational readiness is required. Based on guidance from the manufacturer (Reference 5), PSEG has determined the service life of Lisega hydraulic snubbers installed in HCGS to be 21 years.

Functionally testing a representative sample of these snubbers once per 18 months requires a significant expenditure of resources and subjects plant personnel to radiological exposure while providing a negligible benefit. Extending the interval for functional testing as allowed in Code Case OMN-15 will reduce maintenance costs and occupational radiological exposure while maintaining the required assurance of functional reliability for the hydraulic snubbers.

## 8.0 DURATION OF PROPOSED ALTERNATIVE:

Relief is requested for the remainder of the Third Ten-Year Inspection Interval for Hope Creek Generating Station.

## 9.0 PRECEDENTS:

Extended surveillance intervals have been granted for snubbers based upon reliable performance.

- GL 90-09: Alternative Requirements for Snubber visual examination intervals
- OMN-13 Code Case: Requirements for extending snubber inservice visual examination interval.

## 10.0 REFERENCES:

1. D. Garchow (PSEG) letter to USNRC dated July 3, 2002, Document LR-N02-0229 requesting increased snubber test interval
2. White Paper – Mathematical Basis for ASME OMN-15 Code Case Prepared for Electric Power Research Institute.
3. ASME OM Code, 2001 Edition with 2003 Addenda

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4. ASME Code Case OMN-15, 2004 Edition through 2006 Addenda

5. Lisega Inc. letter to Lisega Users Group member plants, dated March 29, 2001, "Service Life of Lisega Hydraulic Snubbers"

**ATTACHMENT 2**

**License Amendment Request**

**Hope Creek Generating Station**

**NRC Docket No. 50-354**

**Description of Proposed Changes, Technical Analysis, and Regulatory Analysis**

Subject: Relocation of Technical Specification 3/4.7.5 and Addition of LCO 3.0.8 Regarding Snubbers


1.0 DESCRIPTION

2.0 PROPOSED CHANGE

3.0 BACKGROUND

4.0 TECHNICAL ANALYSIS

5.0 REGULATORY ANALYSIS

5.1 No Significant Hazards Consideration

5.2 Applicable Regulatory Requirements/Criteria

6.0 ENVIRONMENTAL CONSIDERATION

7.0 REFERENCES

# DESCRIPTION OF PROPOSED CHANGES, TECHNICAL ANALYSIS, AND REGULATORY ANALYSIS

## 1.0 DESCRIPTION

In accordance with 10 CFR 50.90, PSEG Nuclear LLC (PSEG) requests the following amendment to Appendix A, Technical Specifications (TS), of Facility Operating License NPF-57 for Hope Creek Generating Station (HCGS). The proposed change would revise the Operating License by relocating Technical Specification (TS) requirements for snubbers to the HCGS Technical Requirements Manual (TRM) and adding a new Limiting Condition for Operation (LCO) 3.0.8 to the TS.

Relocating the snubber TS requirements to the TRM would allow PSEG to revise snubber testing requirements in accordance with 10 CFR 50.59. This change is consistent with NUREG-1433, Rev. 3.0, "Standard Technical Specifications, General Electric Plants, BWR/4."

LCO 3.0.8 would provide a delay time for entering a supported system TS when the inoperability is due solely to an inoperable snubber, if risk is assessed and managed. The proposed addition of LCO 3.0.8 is consistent with Nuclear Regulatory Commission (NRC) approved Industry/Technical Specification Task Force (TSTF) STS change TSTF-372 Revision 4. The availability of this TS improvement was published in the Federal Register on May 4, 2005 as part of the Consolidated Line Item Improvement Process (CLIIP).

## 2.0 PROPOSED CHANGE

TS 3/4.7.5, "Snubbers," would be removed from the TS and relocated to the HCGS TRM. In addition, TS 6.10.3.l which refers to Technical Specification 4.7.5, would be removed from the TS and relocated to the TRM.

The proposed change would add a new LCO 3.0.8 to the TS. This new LCO states:

> When one or more required snubbers are unable to perform their associated support function(s), any affected supported LCO(s) are not required to be declared not met solely for this reason if risk is assessed and managed, and:
>
> a. the snubbers not able to perform their associated support function(s) are associated with only one train or subsystem of a multiple train or subsystem supported system or are associated with a single train or subsystem supported system and are able to perform their associated support function within 72 hours; or
>
> b. the snubbers not able to perform their associated support function(s) are associated with more than one train or subsystem of a multiple train or

subsystem supported system and are able to perform their associated support function within 12 hours.

At the end of the specified period the required snubbers must be able to perform their associated support function(s), or the affected supported system LCO(s) shall be declared not met.

Marked up TS pages are provided in Attachment 3. Marked up TS Bases pages are provided in Attachment 4. These Bases pages are being submitted for information only and do not require issuance by the NRC. PSEG will implement the TS Bases changes in accordance with the TS Bases Control Program.

## 3.0 BACKGROUND

Snubbers are devices that provide restraint to a component or system during the sudden application of forces, but allow essentially free motion during thermal movement. Snubbers function to ensure that the structural integrity of the reactor coolant system and other safety related systems is maintained during and following a seismic or other event initiating dynamic loads.

Snubbers are chosen in lieu of rigid supports in areas where restricting thermal growth during normal operation would induce excessive stresses in the piping nozzles or other equipment. Although they are classified as component standard supports, they are not designed to provide any transmission of force during normal plant operations. However, in the presence of dynamic transient loadings, which are induced by seismic events as well as by plant accidents and transients, a snubber functions as a rigid support. The location and size of the snubbers are determined by stress analysis based on different combinations of load conditions, depending on the design classification of the particular piping.

TS 3/4.7.5 currently contains requirements for snubber operability and surveillance testing. With one or more snubbers inoperable, the required TS Action is to replace or restore the inoperable snubber(s) to operable status and perform an engineering evaluation of the supported component within 72 hours. Otherwise, the supported system is required to be declared inoperable.

As discussed below, requirements for snubber operability and surveillance testing are not required by 10 CFR 50.36(d)(2)(ii) to be included in the TS. Relocating TS 3/4.7.5 to the TRM would permit snubber requirements to be revised in accordance with 10 CFR 50.59 without requiring a license amendment. The TRM is controlled as a procedure described in the Updated Final Safety Analysis Report (UFSAR). Changes to the TRM are subject to review in accordance with 10 CFR 50.59.

The NRC has taken the position that relocating snubber requirements to a licensee-controlled document effectively eliminates the 72-hour delay to enter the TS actions for

supported equipment when snubbers are unable to perform their required support function. TSTF-372 Revision 4 resolves this discrepancy by adding LCO 3.0.8. The availability of this TS improvement was published in the Federal Register on May 4, 2005 as part of the consolidated line item improvement process (CLIIP).

## 4.0 TECHNICAL ANALYSIS

Relocation of TS 3/4.7.5 to the TRM

The proposed change would remove TS 3/4.7.5, "Snubbers," from the TS and relocate it to the HCGS TRM. As discussed below, the snubber TS requirements do not meet any of the four criteria in 10 CFR 50.36(d)(2)(ii) for inclusion in the TS.

1. Snubbers are not installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary. Therefore, the HCGS snubbers do not satisfy Criterion 1.

2. Snubbers are design features used to prevent unrestrained pipe motion under dynamic loads as might occur during an earthquake or severe transient. However, the snubbers are not explicitly considered in the accident analysis and are not considered a required initial condition for a design basis accident or transient to maintain the integrity of a fission product barrier. The effects of an inoperable snubber will be controlled by the Technical Specification requirements of the supported system. The availability of the snubbers is assured based on the performance of periodic inspections and testing. Therefore, the HCGS snubbers do not satisfy Criterion 2.

3. Safety-related snubbers are design features that function during accidents or severe transients to prevent the propagation of an event to systems that are part of the primary success path for accident mitigation. However, snubbers are not explicitly considered in the accident analysis, but are a structural design feature whose operation is assured by an inspection program. The snubbers are not part of the primary success path for accident mitigation; therefore the HCGS snubbers do not satisfy Criterion 3.

4. Operational experience or probabilistic safety assessment have not shown snubber performance to be significant to the public health and safety. Therefore, the HCGS snubbers do not satisfy Criterion 4.

Removal of TS 3/4.7.5, "Snubbers," from the TS and relocation to the HCGS TRM is consistent with NUREG-1433, "Standard Technical Specifications, General Electric Plants, BWR/4." Changes to the TRM are subject to review in accordance with

10 CFR 50.59. Therefore, the functionality and testing of snubbers will continue to be adequately assured.

TS 6.10.3.l, which specifies that retention requirements for "records of the snubber service life monitoring pursuant to Technical Specification 4.7.5," would also be relocated to the TRM. Record retention requirements are also located in 10 CFR 50, Appendix B, and in 10 CFR 50.71. It is not necessary to include redundant or additional requirements in the TS administrative controls. Removal of record retention requirements from the TS and relocation to the HCGS TRM is consistent with NUREG-1433, "Standard Technical Specifications, General Electric Plants, BWR/4."

Addition of TS LCO 3.0.8 - Applicability of Published Safety Evaluation
PSEG has reviewed the safety evaluation dated May 4, 2005 as part of the CLIIP. This review included a review of the NRC staff's evaluation, as well as the supporting information provided to support TSTF-372. PSEG has concluded that the justifications presented in the TSTF proposal and the safety evaluation prepared by the NRC staff are applicable to HCGS and justify this amendment for the incorporation of the changes to the HCGS TS.

Addition of TS LCO 3.0.8 - Optional Changes and Variations
PSEG is not proposing any variations or deviations from the TS changes described in TSTF-372, Revision 4 or the NRC staff's model safety evaluation dated May 4, 2005.

## 5.0 REGULATORY ANALYSIS

### 5.1 No Significant Hazards Consideration

PSEG has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   The proposed change to relocate TS 3/4.7.5 to the TRM is administrative in nature and does not involve the modification of any plant equipment or affect basic plant operation. Snubber operability and surveillance requirements will be contained in the TRM to ensure design assumptions for accident mitigation are maintained.

   The proposed change to add LCO 3.0.8 allows a delay time for entering a supported system technical specification (TS) when the inoperability is due solely to an inoperable snubber if risk is assessed and managed. Entrance into TS actions or delaying entrance into actions is not an initiator of any accident

previously evaluated. Consequently, the probability of an accident previously evaluated is not significantly increased. The consequences of an accident while relying on allowance provided by proposed LCO 3.0.8 are no different than the consequences of an accident while relying on the current TS required actions in effect without the allowance provided by proposed LCO 3.0.8.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change to relocate TS 3/4.7.5 to the TRM is administrative and does not involve any physical alteration of plant equipment. The proposed change does not change the method by which any safety-related system performs its function. As such, no new or different types of equipment will be installed, and the basic operation of installed equipment is unchanged. The methods governing plant operation and testing remain consistent with current safety analysis assumptions. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change to add LCO 3.0.8 does not involve a physical alteration of the plant (no new or different type of equipment will be installed). Allowing delay times for entering supported system TS when inoperability is due solely to inoperable snubbers, if risk is assessed and managed, will not introduce new failure modes or effects.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed change to relocate TS 3/4.7.5 to the TRM is administrative in nature, does not negate any existing requirement, and does not adversely affect existing plant safety margins or the reliability of the equipment assumed to operate in the safety analysis. As such, there are no changes being made to safety analysis assumptions, safety limits or safety system settings that would adversely affect plant safety as a result of the proposed change. Margins of

safety are unaffected by requirements that are retained, but relocated from the TS to the TRM.

The proposed change to add LCO 3.0.8 to TS allows a delay time before declaring supported TS systems inoperable when the associated snubber(s) cannot perform the required safety function. The proposed change retains an allowance in the current HCGS TS while upgrading it to be more conservative for snubbers supporting multiple trains or sub-systems of an associated system. The updated TS will continue to provide an adequate margin of safety for plant operation upon incorporation of LCO 3.0.8. The station design and safety analysis assumptions provide margin in the form of redundancy to account for periods of time when system capability is reduced.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, PSEG concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

**5.2 Applicable Regulatory Requirements/Criteria**

10 CFR 50.36 requires that the TSs include items in five specific categories, including (1) safety limits, limiting safety system settings and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; and (5) administrative controls and states also that the Commission may include additional TSs as it finds to be appropriate. However, the regulation does not specify the particular TSs to be included in a plant's license.

The regulation sets forth four criteria to be used in determining whether a limiting condition for operation (LCO) is required to be included in the TS, as follows:

(1) installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary;

(2) a process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;

(3) a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier; or

(4) a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

Existing LCOs and related surveillances included as TS requirements which fall within or satisfy any of the criteria must be retained in the TSs, while those TS requirements which do not fall within or satisfy these criteria may be relocated to other, licensee-controlled documents.

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

### 5.3 Addition of TS LCO 3.0.8 - Verification and Commitments

As discussed in the notice of availability published in the Federal Register on May 4, 2005 for this TS improvement, plant-specific verifications were performed as follows:

The licensee will establish TS Bases for LCO 3.0.8 which provide guidance and details on how to implement the new requirements. LCO 3.0.8 requires that risk be managed and assessed. The Bases will also state that while the Industry and NRC guidance on implementation of 10 CFR 50.65(a)(4), the Maintenance Rule, does not address seismic risk, LCO 3.0.8 should be considered with respect to other plant maintenance activities, and integrated into the existing Maintenance Rule process to the extent possible so that maintenance on any unaffected train or subsystem is properly controlled, and emergent issues are properly addressed. The risk assessment need not be quantified, but may be a qualitative assessment of the vulnerability of systems and components when one or more snubbers are not able to perform their associated support function. Finally, HCGS has a Bases Control Program consistent with Section 5.5 of the STS.

## 6.0 ENVIRONMENTAL CONSIDERATION

PSEG has reviewed the environmental evaluation included in the model safety evaluation dated May 4, 2005 as part of the CLIIP. PSEG has concluded that the staff's findings presented in that evaluation are applicable to HCGS and the evaluation is hereby incorporated by reference for this application.

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the

amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

## 7.0 REFERENCES

1. NUREG-1433, "Standard Technical Specifications, General Electric Plants, BWR/4."

2. Federal Register Notice, "Notice of Availability of Model Application Concerning Technical Specification Improvement To Modify Requirements Regarding the Addition of Limiting Condition for Operation 3.0.8 on the Inoperability of Snubbers Using the Consolidated Line Item Improvement Process," published May 4, 2005 (70 FR 23252).

3. TSTF-372, Revision 4, "Addition of LCO 3.0.8, Inoperability of Snubbers," April 23, 2004.

4. Vermont Yankee Nuclear Power Station - Issuance of Amendment Re: Adoption of Technical Specification Task Force (TSTF) Change TSTF-372, "The Addition of Limiting Condition for Operation (LCO) 3.0.8 on the Inoperability of Snubbers" (TAC No. MD1664) Accession No. ML070530159

**ATTACHMENT 3**

**Hope Creek Generating Station**

**Facility Operating License No. NPF-57**
**NRC Docket No. 50-354**

**Relocation of Technical Specification 3/4.7.5 and Addition of LCO 3.0.8 Regarding Snubbers**

**Markup of Proposed Technical Specification Page Changes**

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Insert 1

3.0.6 Not used.

3.0.7 Not used.

3.0.8 Inoperability of Snubbers

When one or more required snubbers are unable to perform their associated support function(s), any affected supported LCO(s) are not required to be declared not met solely for this reason if risk is assessed and managed, and:

a. the snubbers not able to perform their associated support function(s) are associated with only one train or subsystem of a multiple train or subsystem supported system or are associated with a single train or subsystem supported system and are able to perform their associated support function within 72 hours; or

b. the snubbers not able to perform their associated support function(s) are associated with more than one train or subsystem of a multiple train or subsystem supported system and are able to perform their associated support function within 12 hours.

At the end of the specified period the required snubbers must be able to perform their associated support function(s), or the affected supported system LCO(s) shall be declared not met.

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3/4.0 APPLICABILITY

LIMITING CONDITION FOR OPERATION

3.0.1 Compliance with the Limiting Conditions for Operation contained in the succeeding Specifications is required during the OPERATIONAL CONDITIONS or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met, and except as provided in LCO 3.0.8.

3.0.2 Noncompliance with a Specification shall exist when the requirements of the Limiting Condition for Operation and associated ACTION requirements are not met within the specified time intervals. If the Limiting Condition for Operation is restored prior to expiration of the specified time intervals, completion of the Action requirements is not required.

3.0.3 When a Limiting Condition for Operation is not met, except as provided in the associated ACTION requirements, within one hour action shall be initiated to place the unit in an OPERATIONAL CONDITION in which the Specification does not apply by placing it, as applicable, in:

1. At least STARTUP within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual Specifications.

This Specification is not applicable in OPERATIONAL CONDITIONS 4 or 5.

3.0.4 Entry into an OPERATIONAL CONDITION or other specified condition shall not be made when the conditions for the Limiting Condition for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL CONDITION or other specified condition may be made in accordance with the ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time. This provision shall not prevent passage through or to OPERATIONAL CONDITIONS as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual Specifications.

3.0.5 Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

INSERT 1

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PLANT SYSTEMS

3/4.7.5 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.5 All snubbers shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1,2, and 3. OPERATIONAL CONDITIONS 4 and 5 for snubbers located on systems required OPERABLE in those OPERATIONAL CONDITIONS.

ACTION:

With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.5.g on the attached component or declare the attached system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.5 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 4.0.5.

a. Inspection Types

As used in this specification, type of snubber shall mean snubbers of the same design and manufacturer, irrespective of capacity.

b. Visual Inspections

Snubbers are categorized as inaccessible or accessible during reactor operation. Each of these categories (inaccessible and accessible) may be inspected independently according to the schedule determined by Table 4.7.5-1. The visual inspection interval for each type of snubber shall be determined based upon the criteria provided in Table 4.7.5-1 and the first inspection interval determined using this criteria shall be based upon the previous inspection interval as established by the requirements in effect before amendment 50.

PAGES 3/4 7-14 through 3/4 7-18 have been intentionally omitted.

SURVEILLANCE REQUIREMENTS (Continued)

c. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, (2) attachments to the foundation or supporting structure are secure, and (3) fasteners for attachment of the snubber to the component and to the snubber anchorage are secure. Snubbers which appear inoperable as a result of visual inspections shall be classified as unacceptable and may be reclassified acceptable for the purpose of establishing the next visual inspection period, providing that: (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers irrespective of type on that system that may be generically susceptible; or (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Specifications 4.7.4.f. A review and evaluation shall be performed and documented to justify continued operation with an unacceptable snubber. If continued operation cannot be justified, the snubber shall be declared inoperable and the ACTION requirements shall be met.

d. Transient Event Inspection

An inspection shall be performed of all snubbers attached to sections of systems that have experienced unexpected, potentially damaging transients, as determined from a review of operational data or a visual inspection of the systems, within 72 hours for accessible systems and 6 months for inaccessible systems following this determination. In addition to satisfying the visual inspection acceptance criteria, freedom-of-motion of mechanical snubbers shall be verified using at least one of the following: (1) manually induced snubber movement, or (2) evaluation of in-place snubber piston setting.

SURVEILLANCE REQUIREMENTS (Continued)

e. Functional Tests

During the first refueling shutdown and at least once per 18 months thereafter during shutdown, a representative sample of snubbers shall be tested using one of the following sample plans for each type of snubber. The sample plan shall be selected prior to the test period and cannot be changed during the test period. The NRC Regional Administrator shall be notified in writing of the sample plan selected prior to the test period or the sample plan used in the prior test period shall be implemented:

1) At least 10% of the total of each type of snubber shall be functionally tested either in-place or in a bench test. For each snubber of a type that does not meet the functional test acceptance criteria of Specification 4.7.5.f., an additional 10% of that type of snubber shall be functionally tested until no more failures are found or until all snubbers of that type have been functionally tested. Testing equipment failure during functional testing may invalidate that day's testing and allow that day's testing to resume anew at a later time, providing all snubbers tested with the failed equipment during the day of equipment failure are retested; or

2) A representative sample of each type of snubber shall be functionally tested in accordance with Figure 4.7.5-1. "C" is the total number of snubbers of a type found not meeting the acceptance requirements of Specification 4.7.5.f. The cumulative number of snubbers of a type tested is denoted by "N". At the end of testing "N" snubbers, the results shall be plotted on Figure 4.7.5-1. If at any time the point plotted falls on or above the "Reject" line all snubbers of that type shall be functionally tested. If at any time the point plotted falls on or below the "Accept" line, testing of snubbers of that type may be terminated. When the point plotted lies in the "Continue Testing" region, additional snubbers of that type shall be tested until the point falls in the "Accept" region or the "Reject" region, or all the snubbers of that type have been tested. Testing equipment failure during functional testing may invalidate that day's testing and allow that day's testing to resume anew at a later time, providing all snubbers tested with the failed equipment during the day of equipment failure are retested; or

3) An initial representative sample of 55 snubbers of each type shall be functionally tested. For each snubber type which does not meet the functional test acceptance criteria, another sample of at least one-half the size of the initial sample shall be tested until the total number tested is equal to the initial sample size multiplied by the factor, 1 + C/2, where "C" is the number of snubbers found which do not meet the functional test acceptance criteria. The results from this sample plan shall be plotted using an "Accept" line which follows the equation N = 55(1 + C/2). Each snubber point should be plotted when "N" snubbers have been tested. If the

SURVEILLANCE REQUIREMENTS (Continued)

point plotted falls on or below the "Accept" line, testing of that type of snubber may be terminated. If the point plotted falls above the "Accept" line, testing must continue until the point falls on or below the "Accept" line or all the snubbers of that type have been tested. Testing equipment failure during functional testing may invalidate that day's testing and allow that day's testing to resume anew at a later time, providing all snubbers tested with the failed equipment during the day of equipment failure are retested.

The representative sample selected for the initial function test sample plans shall be randomly selected from the snubbers of each type and reviewed before beginning the testing. The review shall ensure as far as practical that they are representative of the various configurations, operating environments, range of size, and capacity of snubbers of each type. Snubbers placed in the same locations as snubbers which failed the previous functional test shall be retested at the time of the next functional test but shall not be included in the sample plan, and failure of this functional test shall not be the sole cause for increasing the sample size under the sample plan. If during the functional testing, additional sampling is required due to failure of only one type of snubber, the functional testing results shall be reviewed at the time to determine if additional samples should be limited to the type of snubber which has failed the functional testing.

f. Functional Test Acceptance Criteria

The snubber functional test shall verify that:

1) Activation (restraining action) is achieved within the specified range in both tension and compression;

2) Snubber bleed, or release rate where required, is present in both tension and compression, within the specified range (hydraulic snubbers only);

3) For mechanical snubbers, the force required to initiate or maintain motion of the snubber is within the specified range in both directions of travel; and

4) For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement.

Testing methods may be used to measure parameters indirectly or parameters other than those specified if those results can be correlated to the specified parameters through established methods.

g. Functional Test Failure Analysis

An engineering evaluation shall be made of each failure to meet the functional test acceptance criteria to determine the cause of the failure. The results of this evaluation shall be used, if applicable, in selecting snubbers to be tested in an effort to determine the

SURVEILLANCE REQUIREMENTS (Continued)

OPERABILITY of other snubbers irrespective of type which may be subject to the same failure mode.

For the snubbers found inoperable, an engineering evaluation shall be performed on the components to which the inoperable snubbers are attached. The purpose of this engineering evaluation shall be to determine if the components to which the inoperable snubbers are attached were adversely affected by the inoperability of the snubbers in order to ensure that the component remains capable of meeting the designed service.

If any snubber selected for functional testing either fails to lock up or fails to move, i.e., frozen-in-place, the cause will be evaluated and if caused by manufacturer or design deficiency all snubbers of the same type subject to the same defect shall be functionally tested. This testing requirement shall be independent of the requirements stated in Specification 4.7.5.e. for snubbers not meeting the functional test acceptance criteria.

h. Functional Testing of Repaired and Replaced Snubbers

Snubbers which fail the visual inspection or the functional test acceptance criteria shall be repaired or replaced. Replacement snubbers and snubbers which have repairs which might affect the functional test result shall be tested to meet the functional test criteria before installation in the unit. Mechanical snubbers shall have met the acceptance criteria subsequent to their most recent service, and the freedom-of-motion test must have been performed within 12 months before being installed in the unit.

i. Snubber Service Life Replacement Program

The service life of all snubbers shall be monitored to ensure that the service life is not exceeded between surveillance inspections. The maximum expected service life for various seals, springs, and other critical parts shall be extended or shortened based on monitored test results and failure history. Critical parts shall be replaced so that the maximum service life will not be exceeded during a period when the snubber is required to be OPERABLE. The parts replacements shall be documented and the documentation shall be retained in accordance with Specification 6.10.3.

TABLE 4.7.5-1

SNUBBER VISUAL INSPECTION INTERVAL

NUMBER OF UNACCEPTABLE SNUBBERS

| Population or Category (Notes 1 and 2) | Column A Extend Interval (Notes 3 and 6) | Column B Repeat Interval (Notes 4 and 6) | Column C Reduce Interval (Notes 5 and 6) |
|---|---|---|---|
| 1 | 0 | 0 | 1 |
| 80 | 0 | 0 | 2 |
| 100 | 0 | 1 | 4 |
| 150 | 0 | 3 | 8 |
| 200 | 2 | 5 | 13 |
| 300 | 5 | 12 | 25 |
| 400 | 8 | 18 | 36 |
| 500 | 12 | 24 | 48 |
| 750 | 20 | 40 | 78 |
| 1000 or greater | 29 | 56 | 109 |

Note 1: The next visual inspection interval for a snubber population or category size shall be determined based upon the previous inspection interval and the number of unacceptable snubbers found during that interval. Snubbers may be categorized, based upon their accessibility during power operation, as accessible or inaccessible. These categories may be examined separately or jointly. However, that decision shall be made and documented before any inspection and shall serve as the basis upon which the next inspection interval for that category is determined.

Note 2: Interpolation between population or category sizes and the number of unacceptable snubbers is permissible. Use the next lower integer for the value of the limit for Columns A, B, or C if that integer includes a fractional value of unacceptable snubbers as determined by interpolation.

Note 3: If the number of unacceptable snubbers is equal to or less than the number in Column A, the next inspection interval may be twice the previous interval but not greater than 48 months.

(Continued)

TABLE 4.7.5-1 (Continued)

SNUBBER VISUAL INSPECTION INTERVAL

Note 4: If the number of unacceptable snubbers is equal to or less than the number in Column B but greater than the number in Column A, the next inspection interval shall be the same as the previous interval.

Note 5: If the number of unacceptable snubbers is equal to or greater than the number in Column C, the next inspection interval shall be two-thirds of the previous interval. However, if the number of unacceptable snubbers is less than the number in Column C but greater than the number in Column B, the next interval shall be reduced proportionally by interpolation, that is:

$$I_1 = I_0 - I_0 \cdot 1/3 \cdot \frac{U - B}{C - B}$$

where:

$I_1$ = next inspection interval

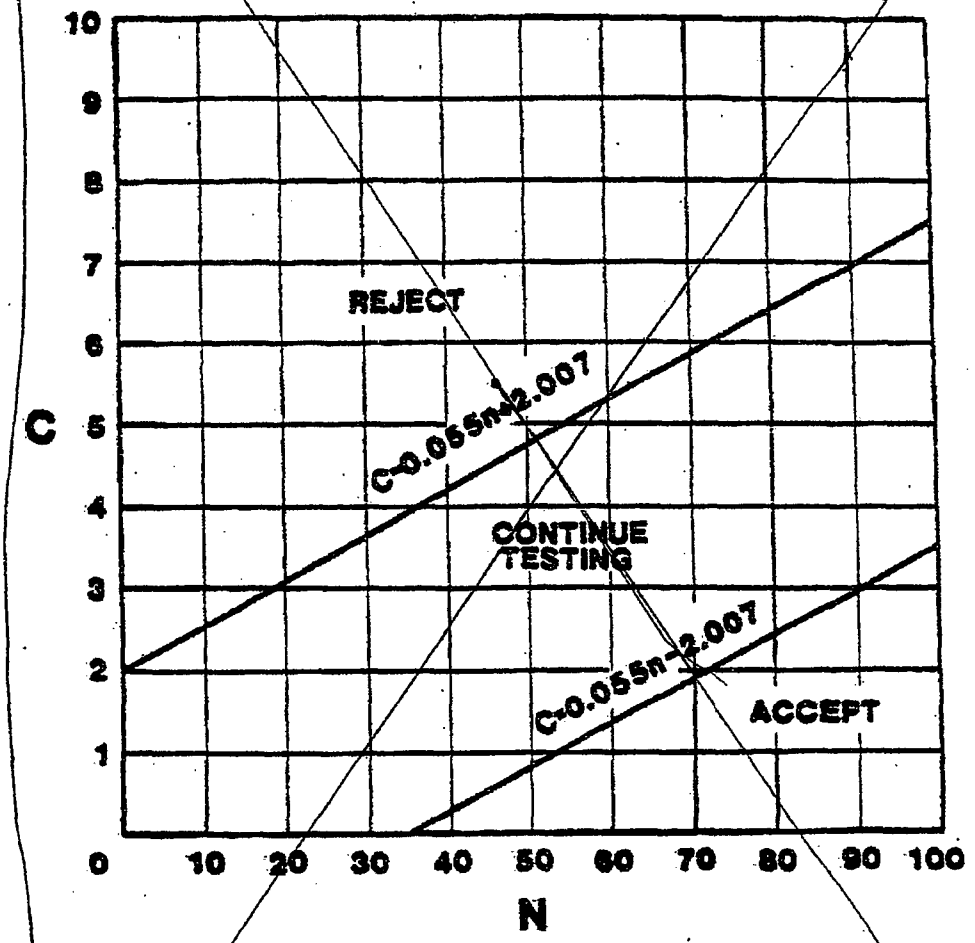
$I_0$ = previous inspection interval

U = number of unacceptable snubbers found during the previous inspection interval

B = number in Column B

C = number in Column C

Note 6: The provisions of Specification 4.0.2 are applicable for all inspection intervals up to and including 48 months.




SAMPLE PLAN 2) FOR SNUBBER FUNCTIONAL TEST

Figure 4.7.5-1

RECORD RETENTION (Continued)

6.10.3 The following records shall be retained for the duration of the unit Operating License:

a. Records and drawing changes reflecting unit design modifications made to systems and equipment described in the Final Safety Analysis Report.

b. Records of new and irradiated fuel inventory, fuel transfers, and assembly burnup histories.

c. Records of radiation exposure for all individuals entering radiation control areas.

d. Records of gaseous and liquid radioactive material released to the environs.

e. Records of transient or operational cycles for those unit components identified in Table 5.7.1-1.

f. Records of reactor tests and experiments.

g. Records of training and qualification for current members of the unit staff.

h. Records of inservice inspections performed pursuant to these Technical Specifications.

i. Records of quality assurance activities required by the Quality Assurance Program.

j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.

k. Records of SORC meetings and activities of the Nuclear Review Board (and activities of its predecessor, the Offsite Safety Review (OSR) staff).

DELETED

l. Records of the snubber service life monitoring pursuant to Technical Specification 4.7.5.

m. Records of analyses required by the radiological environmental monitoring program which would permit evaluation of the accuracy of the analyses at a later date. This should include procedures effective at specified times and QA records showing that these procedures were followed.

n. Records of reviews performed for changes made to the OFFSITE DOSE CALCULATIONAL MANUAL and the PROCESS CONTROL PROGRAM.

**ATTACHMENT 4**

**Hope Creek Generating Station**

**Facility Operating License No. NPF-57**
**NRC Docket No. 50-354**

**Relocation of Technical Specification 3/4.7.5 and Addition of LCO 3.0.8 Regarding Snubbers**

**Markup of Technical Specification Bases Page Changes (for information only)**

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Insert 2

LCO 3.0.8 establishes conditions under which systems are considered to remain capable of performing their intended safety function when associated snubbers are not capable of providing their associated support function(s). This LCO states that the supported system is not considered to be inoperable solely due to one or more snubbers not capable of performing their associated support function(s). This is appropriate because a limited length of time is allowed for maintenance, testing, or repair of one or more snubbers not capable of performing their associated support function(s) and appropriate compensatory measures are specified in the snubber requirements, which are located outside of the Technical Specifications (TS) under licensee control. The snubber requirements do not meet the criteria in 10 CFR 50.36(d)(2)(ii), and, as such, are appropriate for control by the licensee.

If the allowed time expires and the snubber(s) are unable to perform their associated support function(s), the affected supported system's LCO(s) must be declared not met and the Conditions and Required Actions entered in accordance with LCO 3.0.2.

LCO 3.0.8.a applies when one or more snubbers are not capable of providing their associated support function(s) to a single train or subsystem of a multiple train or subsystem supported system or to a single train or subsystem supported system. LCO 3.0.8.a allows 72 hours to restore the snubber(s) before declaring the supported system inoperable. The 72 hour Completion Time is reasonable based on the low probability of a seismic event concurrent with an event that would require operation of the supported system occurring while the snubber(s) are not capable of performing their associated support function and due to the availability of the redundant train of the supported system.

LCO 3.0.8.b applies when one or more snubbers are not capable of providing their associated support function(s) to more than one train or subsystem of a multiple train or subsystem supported system. LCO 3.0.8.b allows 12 hours to restore the snubber(s) before declaring the supported system inoperable. The 12 hour Completion Time is reasonable based on the low probability of a seismic event concurrent with an event that would require operation of the supported system occurring while the snubber(s) are not capable of performing their associated support function.

LCO 3.0.8 requires that risk be assessed and managed. Industry and NRC guidance on the implementation of 10 CFR 50.65(a)(4) (the Maintenance Rule) does not address seismic risk. However, use of LCO 3.0.8 should be considered with respect to other plant maintenance activities, and integrated into the existing Maintenance Rule process to the extent possible so that maintenance on any unaffected train or subsystem is properly controlled, and emergent issues are properly addressed. The risk assessment need not be quantified, but may be a qualitative awareness of the vulnerability of systems and components when one or more snubbers are not able to perform their associated support function.

3.0.8

BASES

Specifications 3.0.1 through ~~3.0.4~~ establish the general requirements applicable to Limiting Conditions for Operation. These requirements are based on the requirements for Limiting Conditions for Operation stated in the Code of Federal Regulations, 10 CFR 50.36(c)(2):

"Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specification until the condition can be met."

Specification 3.0.1 establishes the Applicability statement within each individual specification as the requirement for when (i.e., in which OPERATIONAL CONDITIONS or other specified conditions) conformance to the Limiting Conditions for Operation is required for safe operation of the facility. The ACTION requirements establish those remedial measures that must be taken within specified time limits when the requirements of a Limiting Condition for Operation are not met. It is not intended that the shutdown ACTION requirements be used as an operational convenience which permits (routine) voluntary removal of a system(s) or component(s) from service in lieu of other alternatives that would not result in redundant systems or components being inoperable.

There are two basic types of ACTION requirements. The first specifies the remedial measures that permit continued operation of the facility which is not further restricted by the time limits of the ACTION requirements. In this case, conformance to the ACTION requirements provides an acceptable level of safety for unlimited continued operation as long as the ACTION requirements continue to be met. The second type of ACTION requirement specifies a time limit in which conformance to the conditions of the Limiting Condition for Operation must be met. This time limit is the allowable outage time to restore an inoperable system or component to OPERABLE status or for restoring parameters within specified limits. If these actions are not completed within the allowable outage time limits, a shutdown is required to place the facility in an OPERATIONAL CONDITION or other specified condition in which the specification no longer applies.

The specified time limits of the ACTION requirements are applicable from the point in time it is identified that a Limiting Condition for Operation is not met. The time limits of the ACTION requirements are also applicable when a system or component is removed from service for surveillance testing or investigation of operational problems. Individual specifications may include a specified time limit for the completion of a Surveillance Requirement when equipment is removed from service. In this case, the allowable outage time limits of the ACTION requirements are applicable when this limit expires if the surveillance has not been completed. When a shutdown is required to comply with ACTION requirements, the plant may have entered an OPERATIONAL CONDITION in which a new specification becomes applicable. In this case, the

BASES (Continued)

Specification 3.0.5 establishes the allowance for restoring equipment to service under administrative controls when it has been removed from service or declared inoperable to comply with ACTIONS. The sole purpose of this Specification is to provide an exception to LCO 3.0.2 (e.g., to not comply with the applicable Required Action(s)) to allow the performance of testing required to restore and demonstrate:

a. The OPERABILITY of the equipment being returned to service; or

b. The OPERABILITY of other equipment.

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the testing required to restore and demonstrate the OPERABILITY of the equipment. This Specification does not provide time to perform any other preventative or corrective maintenance.

An example of demonstrating the OPERABILITY of the equipment being returned to service is reopening a containment isolation valve that has been closed to comply with Required Actions and must be reopened to perform the testing required to restore and demonstrate OPERABILITY.

An example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to prevent the trip function from occurring during the performance of testing required to restore OPERABILITY of another channel in the other trip system. A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to permit the logic to function and indicate the appropriate response during the performance of testing required to restore and demonstrate the OPERABILITY on another channel in the same trip system.

LCO 3.0.5 is applicable to all Technical Specifications; however, the intent of LCO 3.0.5 is not to supersede more specific guidance contained within any individual specification.

INSERT 2

REACTOR CORE ISOLATION COOLING SYSTEM (Continued)

The surveillance requirements provide adequate assurance that RCIC will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation during reactor operation, a complete functional test requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage and to start cooling at the earliest possible moment.

(DELETED)

3/4.7.5 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the reactor coolant system and all other safety related systems is maintained during and following a seismic or other event initiating dynamic loads. Snubbers excluded from this inspection program are those installed on non-safety-related systems and then only if their failure or failure of the system on which they are installed would have no adverse effect on any safety related system.

Snubbers are classified and grouped by design and manufacturer but not by size. For example, mechanical snubbers utilizing the same design features of the 2-kip, 10-kip, and 100-kip capacity manufactured by Company "A" are of the same type. The same design mechanical snubbers manufactured by Company "B" for the purposes of this Technical Specification would be of a different type, as would hydraulic snubbers from either manufacturer.

A list of individual snubbers with detailed information of snubber location and size and of system affected shall be available at the plant in accordance with Section 50.71(c) of 10 CFR Part 50. The accessibility of each snubber shall be determined and approved by the Plant Operations Review Committee. The determination shall be based upon the existing radiation levels and the expected time to perform a visual inspection in each snubber location as well as other factors associated with accessibility during plant operations (e.g., temperature, atmosphere, location, etc.), and the recommendations of Regulatory Guide 8.8 and 8.10. The addition or deletion of any snubber shall be made in accordance with Section 50.59 of 10 CFR Part 50.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to each safety-related system. Therefore, the required inspection interval is based on the number of unacceptable snubbers found during the previous inspection in proportion to the sizes of the various snubber populations or categories. This inspection schedule is based on the guidance provided in Generic Letter 90-09. In order to establish the inspection frequency for each type of snubber on a safety-related system, it was assumed that the frequency of snubber failures and initiating events is constant with time and that the failure of any snubber on that system could cause the system to be unprotected and to result in failure during an assumed

SNUBBERS (Continued)

initiating event. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. However, the results of such early inspections performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval. Any inspection whose results required a shorter inspection interval will override the previous schedule.

The acceptance criteria are to be used in the visual inspection to determine OPERABILITY of the snubbers.

To provide assurance of snubber functional reliability one of three functional testing methods is used with the stated acceptance criteria:

1. Functionally test 10% of a type of snubber with an additional 10% tested for each functional testing failure, or

2. Functionally test a sample size and determine sample acceptance or rejection using Figure 4.7.5-1, or

3. Functionally test a representative sample size and determine sample acceptance or rejection using the stated equation.

Figure 4.7.5-1 was developed using "Wald's Sequential Probability Ratio Plan" as described in Quality Control and Industrial Statistics" by Acheson J. Duncan.

Permanent or other exemptions from the surveillance program for individual snubbers may be granted by the Commission if a justifiable basis for exemption is presented and, if applicable, snubber life destructive testing was performed to qualify the snubbers for the applicable design conditions at either the completion of their fabrication or at a subsequent date. Snubbers so exempted shall be listed in the list of individual snubbers indicating the extent of the exemptions.

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (i.e., newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life.

**ATTACHMENT 5**

**Hope Creek Generating Station**

**Facility Operating License No. NPF-57**
**NRC Docket No. 50-354**

**Relocation of Technical Specification 3/4.7.5 and Addition of LCO 3.0.8 Regarding Snubbers**

Summary of Commitments

The following table identifies commitments made in this document. (Any other actions discussed in the submittal represent intended or planned actions. They are described to the NRC for the NRC's information and are not regulatory commitments.)

| COMMITMENT | COMMITTED DATE OR "OUTAGE" | COMMITMENT TYPE | |
|---|---|---|---|
| | | One-Time Action (Yes/No) | Programmatic (Yes/No) |
| PSEG will establish the Technical Specification Bases for LCO 3.0.8 as adopted with the applicable license amendment. | To be implemented with the license amendment | Yes | No |