



Entergy Nuclear Generation Company
Pilgrim Nuclear Power Station
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Charles M. Dugger
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July 5, 2002

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

SUBJECT: Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
Docket No. 50-293
License No. DPR-35

License Amendment Request
Relocation of Shock Suppressors (Snubbers) Requirements
As Described in Technical Specification 3/4.6.I to Updated
Final Safety Analysis Report

REFERENCE: NUREG 1433, Standard Technical Specifications for General Electric
Plants, BWR/4.

LETTER NUMBER: 2.02.050

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Entergy Nuclear Operations, Inc. (ENO) hereby proposes to amend the Pilgrim Station Facility Operating License, DPR-35. This proposed license amendment would relocate the "Primary System Boundary – Shock Suppressors (Snubbers)", Technical Specifications (TS) 3/4.6.I, from the TS to the Updated Final Safety Analysis Report. The affected TS contain snubber operability and surveillance requirements. This change is consistent with Standard Technical Specifications (NUREG 1433, Revision 2) and changes previously approved by the NRC for other reactor licensees. ENO has reviewed the proposed amendment in accordance with 10 CFR 50.92 and concludes it does not involve a significant hazards consideration.

ENO requests approval of the proposed amendment by March 1, 2003 to support Pilgrim's plans for snubber inspections in the upcoming refueling outage (scheduled to commence on April 19, 2003). Once approved, the amendment will be implemented within 60 days.

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If you have any questions or require additional information, please contact Bryan Ford at (508) 830-8403.

Sincerely,



Charles M. Dugger

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 5th day of July 2002.

Enclosure: Evaluation of the Proposed Changes – 6 pages

Attachments: 1. Proposed Technical Specification Changes (mark-up) – 4 pages
2. List of Regulatory Commitments – 1 page

Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station

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ENCLOSURE

Evaluation Of The Proposed Changes

Subject: Relocation of Shock Suppressors (Snubbers) Requirements as Described in Technical Specification 3/4.6.1 to Updated Final Safety Analysis Report (UFSAR)

1. DESCRIPTION
2. PROPOSED CHANGES
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4. TECHNICAL ANALYSIS
5. REGULATORY SAFETY ANALYSIS
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1. Description

This letter is a request to amend Operating License DPR-35 for Pilgrim Nuclear Power Station. The proposed change would revise the Operating License to relocate the Technical Specification (TS) requirements for shock suppressors (snubbers) from the TS to the Updated Final Safety Analysis Report (UFSAR). The proposed change will allow Entergy Nuclear Operations, Inc. (ENO) to revise snubber requirements in accordance with 10 CFR 50.59 without requiring a License Amendment. ENO requests approval of the proposed amendment by March 1, 2003 to support Pilgrim's plans for snubber inspections in the upcoming refueling outage (scheduled to commence on April 19, 2003).

2. Proposed Change

TS Section 3/4.6.I provides actions for functionality and surveillance requirements to verify the operability of safety-related snubbers. It is proposed that the current requirements of "Primary System Boundary – Shock Suppressors (Snubbers)", TS 3/4.6.I and their associated Bases be removed from the TS and relocated in their entirety to the UFSAR.

In summary, this proposed license amendment would relocate snubber operability and surveillance requirements contained in TS 3/4.6.I and their associated Bases from the TS to the UFSAR. This change is consistent with Standard TS, General Electric Plants, BWR/4, (NUREG-1433, Revision 2) and changes previously approved by the NRC for other reactor licensees.

3. Background

Snubbers are devices used to prevent unrestrained pipe motion under dynamic loads as might occur during an earthquake or severe transient. The restraining action of the snubbers ensures that the initiating event does not propagate to other parts of the affected system or to other safety systems. Snubbers also allow normal thermal expansion of piping to eliminate excessive thermal stresses during startup and shutdown.

The consequence of an inoperable snubber is an increase in the probability of structural damage to piping as a result of a seismic or other event initiating dynamic loads. It is therefore required that all snubbers required to protect the primary coolant system and all other safety-related systems or components be operable during reactor operation.

Requirements of Pilgrim's current TSs provide actions for functionality and surveillance requirements to verify the operability of safety-related snubbers. The current action for an inoperable snubber is to replace or return the snubber to operable status within 72 hours and perform an engineering evaluation of the attached component. The supported system is declared inoperable if the 72 hours expires or the evaluation indicates that the system is inoperable. The current surveillances provide requirements for an augmented in-service inspection program including visual and functional tests. This program also contains program allowances for inspection interval, lot size, inspection evaluation, lot composition, acceptance criteria, failure analysis, attached component analysis, service life and exceptions from visual or functional tests.

Current TS Bases discussions contain the basis for requiring snubbers, the basis for the allowed snubber outage time, and clarifications regarding the application of the snubber surveillance requirements.

Relocating TS 3/4.6.I to the UFSAR will allow revisions to the snubber requirements in accordance with 10 CFR 50.59 without requiring a license amendment. Any change of the relocated specifications in the UFSAR will be strictly controlled in accordance with the provisions of 10 CFR 50.59.

This relocation request is similar to those granted to other operating reactor licensees (References 3 and 4).

4. Technical Analysis

Section 182a of the Atomic Energy Act of 1954, as amended (the Act) requires applicants for nuclear power plant operating licenses to include the TSs as part of the license. The Commission's regulatory requirements related to the content for the TSs are set forth in 10 CFR 50.36. That regulation requires that the TSs include items in eight specific categories. The categories are (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; (5) administrative controls; (6) decommissioning; (7) initial notification; and (8) written reports. However, the regulation does not specify the particular requirements to be included in a plant's TSs.

The Commission amended 10 CFR 50.36 (60 FR 36593, July 19, 1995), and codified four criteria to be used in determining whether a particular matter is required to be included in a limiting condition for operation (LCO), 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 that 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 safety assessment has shown to be significant to public health and safety. LCOs and related requirements that fall within or satisfy any of the criteria in the regulation must be retained in the TSs, while those requirements that do not fall within or satisfy these criteria may be relocated to licensee-controlled documents. Pilgrim's UFSAR is one such licensee-controlled document.

The proposed changes are consistent with the Standard TS for General Electric plants (NUREG-1433) and 10 CFR 50.36. NUREG-1433 does not include requirements for verification of snubber operability and the criteria in 10 CFR 50.36 for features required to be retained in TSs do not apply to the snubbers at Pilgrim as discussed below. The NRC's Final Policy Statement recommends that TSs that do not meet the screening criteria for retention may be relocated to a licensee-controlled document. The four criteria of 10 CFR 50.36 are addressed below:

- (1) The snubbers are not installed instrumentation nor do they have the ability to detect abnormal degradation of the reactor coolant pressure boundary. Therefore, the Pilgrim 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 are 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 Pilgrim 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 a primary success path for accident mitigation; therefore they do not satisfy Criterion 3.
- (4) Operating experiences or probabilistic safety assessments have not shown snubber parameters to be significant to public health and safety. Therefore, the snubbers do not satisfy Criterion 4.

The snubber requirements will be relocated to the UFSAR. Any changes to these requirements will be strictly controlled under the provisions of 10 CFR 50.59. Therefore, the relocation of the snubber specifications from the TSs to the UFSAR will continue to provide adequate assurance that functionality and testing of the snubbers will be assured.

In conclusion, the above relocated requirements are not required to be in the TS under 10 CFR 50.36 or section 182a of the Atomic Energy Act, and are not required to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety. In addition, sufficient regulatory controls exist under 10 CFR 50.59 to assure continued protection of public health and safety.

5. Regulatory Safety Analysis

5.1 No Significant Hazards Consideration

Entergy Nuclear Operations, Inc. is proposing to relocate Pilgrim's Primary System Boundary – Shock Suppressors (Snubbers) as described in Technical Specification 3/4.6.1 to the UFSAR.

Entergy Nuclear Operations, Inc. 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 change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No. The proposed change is administrative in nature and does not involve the modification of any plant equipment or affect basic plant operation. Snubbers are not assumed to be an initiator of any analyzed event, nor are they assumed in the mitigation of consequences of accidents.

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

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

Response: No. The proposed change does not involve any physical alteration of plant equipment and 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.

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

Response: No. The proposed change 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 Technical Specifications to the UFSAR. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, Entergy Nuclear Operations, Inc. 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.

6. Environmental Consideration

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 to be prepared in connection with the proposed amendment.

7. References

1. 10 CFR 50.36
2. NUREG-1433, "Standard Technical Specifications, General Electric Plants, BWR/4"
3. Sequoyah Nuclear Plants, Units 1 and 2, Amendment Nos. 235 and 225, 8/28/98
4. South Texas Project, Units 1 and 2, Amendment Nos. 109 and 96, 5/17/99

Note: References 3 and 4 relocated the TS for snubbers to each plant's Technical Requirements Manual (TRM) to be controlled in accordance with 10 CFR 50.59. Since Pilgrim does not have a TRM, the relocated specifications and bases will be relocated to the UFSAR. The difference between these identified precedents and the proposed amendment does not affect acceptability of the proposed amendment.

ATTACHMENT 1
PROPOSED TECHNICAL SPECIFICATION
CHANGES (MARK-UP)

LIMITING CONDITIONS FOR OPERATION

3.6 PRIMARY SYSTEM BOUNDARY (Cont)

I. Shock Suppressors (Snubbers)

1. During all modes of operation except Cold Shutdown and Refuel, all safety-related snubbers listed in PNPS Procedures shall be operable except as noted in 3.6.I.2 through 3.6.I.3 below.

An Inoperable Snubber is a properly fabricated, installed and sized snubber which cannot pass its functional test.

Upon determination that a snubber is either improperly fabricated, installed or sized, the corrective action will be as specified for an inoperable snubber in Section 3.6.I.2.

2. From and after the time that a snubber is determined to be inoperable, replace or repair the snubber during the next 72 hours, and initiate an engineering evaluation to determine if the components supported by the snubber(s) were adversely affected by the inoperability of the snubbers and to ensure that the supported component remains capable of meeting its intended function in the specific safety system involved.

Further corrective action for this snubber, and all generically susceptible snubbers, shall be determined by an engineering evaluation.

SURVEILLANCE REQUIREMENTS

4.6 PRIMARY SYSTEM BOUNDARY (Cont)

I. Shock Suppressors (Snubbers)

The following surveillance requirements apply to all safety related hydraulic and mechanical snubbers listed in PNPS Procedures.

The required visual inspection interval varies inversely with the observed cumulative number of inoperable snubbers found during an inspection. 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 time interval has elapsed may not be used to lengthen the required interval.

Number of snubbers found inoperable during inspection or during inspection interval:

<u>Inoperable Snubbers</u>	<u>Subsequent Visual Inspection Interval</u>	
0	24 Months	± 25%
1	18 Months	± 25%
2	12 Months	± 25%
3,4	6 Months	± 25%
5,6,7	124 Days	± 25%
8,9	62 Days	± 25%
10 or more	31 Days	± 25%

The required inspection interval shall not be lengthened more than one step at a time.

Snubbers may be categorized in two groups, "accessible" or "inaccessible" based on their accessibility for inspection during reactor operation. These two groups may be inspected independently according to the above schedule.

LIMITING CONDITIONS FOR OPERATION

- 3.6 PRIMARY SYSTEM BOUNDARY (Cont)
- I. Shock Suppressors (Snubbers)
(Cont)
3. From and after the time a snubber is determined to be inoperable, improperly fabricated, improperly installed or improperly sized, if the requirements of Section(s) 3.6.I.1 and 3.6.I.2 cannot be met, then the affected safety system, or affected portions of that system, shall be declared inoperable, and the limiting condition for that system entered, as appropriate.
4. Snubbers may be added to, or removed from, per 10CFR50.59, safety related systems without prior NRC approval. The addition or deletion of snubbers shall be reported to the NRC in accordance with 10CFR50.59.

SURVEILLANCE REQUIREMENTS

- 4.6 PRIMARY SYSTEM BOUNDARY (Cont)
- I. Shock Suppressors (Snubbers)
(Cont)
1. Visual Inspection Acceptance Criteria
- A. Visual inspections shall verify:
1. That there are no visible indications of damage or impaired operability.
 2. Attachments to the foundation or support structure are such that the functional capability of the snubber is not suspect.
- B. Snubbers which appear INOPERABLE as a result of visual inspections may be determined OPERABLE 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
 2. The affected snubber is functionally tested, when necessary, in the as found condition and determined OPERABLE per specifications 4.6.I.2.B., 4.6.I.2.C., as applicable.
- C. For any snubber determined inoperable per specification 4.6.I.2, clearly establish the cause of rejection and remedy the problem for that snubber, and any generically susceptible snubber.
2. Functional Tests (Hydraulic and Mechanical Snubbers)
- A. Schedule
- At least once per operating cycle, a representative sample (12.5% of the total of each type:

LIMITING CONDITIONS FOR OPERATION

3.6 PRIMARY SYSTEM BOUNDARY (Cont)

SURVEILLANCE REQUIREMENT

4.6 PRIMARY SYSTEM BOUNDARY (Cont)

I. Shock Suppressors (Snubbers)
(Cont)

hydraulic, mechanical) of snubbers in use in the plant shall be functionally tested, either in place or in a bench test. For each snubber that does not meet the functional test acceptance criteria of Specification 4.6.I.2.B, or 4.6.I.2.C, as applicable, an additional 10% of that type of snubber shall be functionally tested.

B. General Snubber Functional Test Acceptance Criteria (Hydraulic and Mechanical)

The general snubber functional test shall verify that:

1. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
2. Snubber release, or bleedrate, as applicable, where required, is within the specified range in compression or tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

C. Mechanical Snubbers Functional Test Acceptance Criteria

The mechanical snubber functional test shall verify that:

LIMITING CONDITIONS FOR OPERATION

3.6 PRIMARY SYSTEM BOUNDARY (Cont)

SURVEILLANCE REQUIREMENTS

4.6 PRIMARY SYSTEM BOUNDARY (Cont)

I. Shock Suppressors (Snubbers)
(Cont)

1. The force that initiates free movement of the snubber rod in either tension or compression is less than the specified maximum drag force.

3. Snubber Service Life Monitoring

A. A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained.

B. At least once per cycle, the installation and maintenance records for each safety related snubber listed in PNPS Procedures shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated, or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This reevaluation, replacement or reconditioning shall be indicated in the records.

C. This Snubber Service Life Monitoring Program shall become effective July 1, 1982.

BASES:

3/4.6 PRIMARY SYSTEM BOUNDARY (Cont)

G. Structural Integrity

The Pilgrim Nuclear Power Station Inservice Inspection Program conforms to the requirements of 10CFR50.55a(g). Where practical, the inspection of ASME Section XI Class 1, 2, and 3 components conforms to the edition and addenda of Section XI of the ASME Boiler and Pressure Vessel Code required by 10CFR50.55a(g). When implementation of an ASME Code required inspection has been determined to be impractical for PNPS, a request for relief from the inspection requirement is submitted to the NRC in accordance with 10CFR50.55a(g)(5)(iii).

Requests for relief from the ASME Code inspection requirements will be submitted to the NRC prior to the beginning of each 10 year inspection interval for which the inspection requirement is known to be impractical. Requests for relief from inspection requirements which are identified to be impractical during the course of the inspection interval will be reported to the NRC on an annual basis throughout the inspection interval.

I. Shock Suppressors (Snubbers)

Snubbers are designed to prevent unrestrained pipe motion under dynamic loads as might occur during an earthquake or severe transient, while allowing normal thermal motion during startup and shutdown. The consequence of an inoperable snubber is an increase in the probability of structural damage to piping as a result of a seismic or other event initiating dynamic loads. It is therefore required that all snubbers required to protect the primary coolant system and all other safety related systems or components be operable during reactor operation.

The visual inspection frequency is based on maintaining a constant level of snubber protection to systems. The cumulative number of inoperable snubbers detected during any inspection interval is the basis for establishment of the subsequent inspection interval and the existing inspection interval should remain in effect until its completion.

When the cause of the rejection of a snubber is clearly established and remedied for that snubber and verified by inservice functional testing, that snubber may be exempted from being counted as inoperable.

Generically susceptible snubbers are those which are of a specific make or model and have the same design features directly related to rejection of the snubber by visual inspection, and are exposed to the same environmental conditions such as temperature, radiation, and vibration.

When a snubber is found inoperable, an engineering evaluation is initiated, in addition to the determination of the snubber mode of failure, in order to determine if any safety-related component or system has been adversely affected by the inoperability of the snubber. Initiating this evaluation within 72 hours ensures that prompt corrective action will be afforded.

Revision 196

Amendment No. 19, 93, 172

B3/4.6-11

BASES:

3/4.6 PRIMARY SYSTEM BOUNDARY (Cont)

I. Shock Suppressors (Snubbers) (Cont)

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

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 (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. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operation. Due to the number and complexity of the relevant interacting factors necessary to develop a comprehensive Service Life Program, this program shall become effective July 1, 1982:

ATTACHMENT 2
LIST OF REGULATORY COMMITMENTS

List of Regulatory Commitments

The following table identifies those actions committed to by Entergy Nuclear Operations, Inc. in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

REGULATORY COMMITMENT	DUE DATE
Relocate Technical Specifications 3/4.6.1 and associated Bases to UFSAR.	Within 60 days of receipt of NRC approval of the change.