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2CAN070805

July 21, 2008

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

SUBJECT: License Amendment Request  
Regarding Technical Specification Change to Add LCO 3.0.8 on the  
Inoperability of Snubbers and Relocate TS 3.7.8 to the TRM  
Arkansas Nuclear One, Unit 2  
Docket No. 50-368  
License No. NFP-6

Dear Sir or Madam:

In accordance with the provisions of 10 CFR 50.90, Entergy Operations, Inc. (Entergy) is submitting a request for an amendment to the technical specifications (TS) for Arkansas Nuclear One, Unit 2 (ANO-2).

The proposed amendment would modify TS requirements for inoperable snubbers by adding LCO 3.0.8 and relocating the current TS 3.7.8, Shock Suppressors (Snubbers), to the Technical Requirements Manual (TRM).

Attachment 1 provides a description of the proposed change, the requested confirmation of applicability, and plant-specific verifications. Attachment 2 provides the existing TS pages marked up to show the proposed change. Attachment 3 provides revised (clean) TS pages. Attachment 4 provides a summary of the regulatory commitments made in this submittal. Attachment 5 provides the existing TS Bases pages marked up to show the proposed change (for information only).

Entergy requests approval of the proposed License Amendment by August 1, 2009, with the amendment being implemented within 60 days.

If you have any questions or require additional information, please contact Dale James at 479-858-4619.

I declare under penalty of perjury under the laws of the United States of America that I am authorized by Entergy to make this request and that the foregoing is true and correct.  
Executed on July 21, 2008.

Sincerely,

TGM/dbb

Attachments:

1. Description and Assessment
2. Proposed Technical Specification Changes
3. Revised Technical Specification Pages
4. Regulatory Commitments
5. Proposed Technical Specification Bases Changes (for information only)

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**Attachment 1**

**To**

**2CAN070805**

**Description and Assessment**

## **1.0 DESCRIPTION**

The proposed amendment would modify Arkansas Nuclear One, Unit 2 (ANO-2) Technical Specification (TS) requirements for inoperable snubbers by adding Limiting Condition for Operation (LCO) 3.0.8 and relocating the current TS 3.7.8, Shock Suppressors (Snubbers), to the Technical Requirements Manual (TRM).

The changes relating to the addition of LCO 3.0.8 are consistent with Nuclear Regulatory Commission (NRC) approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification (STS) change TSTF-372 Revision 4. The availability of this TS improvement was published in the *Federal Register* on April 27, 2005 as part of the consolidated line item improvement process (CLIIP). The change which relocates TS 3.7.8 to the TRM is consistent with the STS, which does not contain a TS for snubbers.

## **2.0 ASSESSMENT**

### **2.1 Applicability of Published Safety Evaluation**

With regard to application of TSTF-372 (adoption of LCO 3.0.8), Entergy Operations, Inc. (Entergy) has reviewed the safety evaluation dated April 27, 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. Entergy has concluded that the justifications presented in the TSTF proposal and the safety evaluation prepared by the NRC staff are applicable to ANO-2 and justify this amendment for the incorporation of the changes to the ANO-2 TS.

The relocation of the snubber-related requirements of TS 3.7.8 to the TRM is consistent with the original (and current) version of the STS. The NRC's Final Policy Statement states that LCOs and associated requirements that do not satisfy or fall within any of the four specified criteria presently contained in 10 CFR 50.36, may be relocated from existing TS (an NRC-controlled document) to appropriate licensee-controlled documents. Relocation of these requirements to the TRM is acceptable in that changes to the TRM will be adequately controlled by 10 CFR 50.59. These provisions will continue to be implemented by appropriate station procedures (i.e., operating procedures, maintenance procedures, surveillance and testing procedures, and work control procedures).

Shock suppressors (snubbers) are used on piping systems or equipment to limit displacement from dynamic loads such as earthquake or thermal-hydraulic transient, while allowing displacement from thermal expansion. Snubbers are not active components, but are a type of support like springs, baseplates, or struts with the same potential for impact on operability as any support. The majority of snubbers at ANO-2 are installed on Seismic Class I piping, which include all of the safety systems. Snubber testing is required by 10 CFR 50.55a to be performed in accordance with ASME/American Nuclear Standards Institute (ANSI) OM Part 4, "Examination and Performance Testing of Nuclear Power Plant Dynamic Restraints." Thus, specifying such testing in the TS is unnecessary. Snubbers are not a design feature that is an initial condition of a DBA or transient. Thus, TS requirements for snubbers do not meet the criteria of 10 CFR 50.36 for retention in the TS. In addition, snubber degradation does not necessarily render the associated safety system inoperable. Rather, it is appropriate to evaluate issues with a snubber using existing guidance for degraded or nonconforming conditions and corrective action programs. If a problem with one or more snubbers does make

a system or component inoperable, the TS for the affected system will define the appropriate remedial actions. Testing will be adequately controlled in accordance with TS 6.5.8, Inservice Test Program, 10 CFR 50.55a, and 10 CFR 50.59. Based on the above, it is acceptable to relocate the snubber specifications to the TRM.

## **2.2 Optional Changes and Variations**

The relocation of TS 3.7.8 to the TRM is not included in the CLIIP associated with TSTF-372. However, this relocation is necessary to support application of the new LCO 3.0.8 and the intent of TSTF-372. Furthermore, this relocation is consistent with the STS.

Because ANO-2 is a non-STs plant and because Entergy proposes to relocate TS 3.7.8 to support the adoption of LCO 3.0.8, these changes are not proposed to be approved under the normal 6-month CLIIP review process. Notwithstanding the additional review and time the NRC may require to issue the requested amendment, Entergy has confirmed that all other requirements of the CLIIP, as stated in Section 2.1 above, are met for ANO-2. Given the necessity of TS 3.7.8 relocation in order to adopt TSTF-372, Entergy believes this deviation is minor.

Other than discussed above, the only remaining minor deviation is the maintenance of ANO-2 custom TS wording and usage rules in the adoption of TSTF-372. Specifically:

1. TSTF-372 adds LCO 3.0.8 reference to LCO 3.0.1. Currently, the STS has reference to LCO 3.0.2 and 3.0.7 within LCO 3.0.1. ANO-2 TS does not contain LCO 3.0.7 (associated with Special Test Exceptions); therefore, reference to LCO 3.0.7 is not included in the ANO-2 LCO 3.0.1. However, reference to LCO 3.0.2 should be included and, therefore, Entergy is adding this reference to the ANO-2 LCO 3.0.1 to gain consistency with the STS. These additions to LCO 3.0.1 require moving LCO 3.0.6 to the next page due to space limitations. No changes are made to LCO 3.0.6.
2. As discussed in Item 1 above, ANO-2 does not have an LCO 3.0.7. However, to maintain consistent numbering (where possible) with the STS, Entergy proposes to add an LCO 3.0.7 placeholder, which will permit using the LCO 3.0.8 designation for snubbers, consistent with TSTF-372 and the STS.
3. Item 1(e) of the model Safety Evaluation, Section 3.2, contains the statement "LCO 3.0.8 does not apply to non-seismic snubbers." This does not appear to be captured in the implementation process of the TSTF. Therefore, Entergy proposes to include this statement in the LCO 3.0.8 Bases (see Attachment 5 of this submittal). Further guidance associated with the intent of this statement, as discussed in Section 3.0 of the model SE and in TSTF-IG-05-03, Implementation Guidance for TSTF-372, Revision 4, "Addition of LCO 3.0.8, Inoperability of Snubbers," is also included in the Bases. In addition, the TSTF use of "10 CFR 50.36(c)(2)(ii)" is modified to simply 10 CFR 50.36. This is due to the recent rule change that inadvertently re-designated Part 50.36(c) as Part 50.36(d).
4. The footer of TS Page 3/4 7-18 is revised to account for the pages being deleted by the relocation of TS 3.7.8. This is administrative in nature.

These variations are few and insignificant with regard to ensuring proper application of TSTF-372 intent. Note that TS Page 3/4 7-18 is tied to the October 22, 2007, Entergy letter to adopt TSTF-448, which is currently under review by the NRC. The proposed changes contained within the TSTF-448 submittal are not shown on the attached mark-up or clean page for TS Page 3/4 7-18.

### **3.0 REGULATORY ANALYSIS**

#### **3.1 No Significant Hazards Consideration Determination**

Entergy Operations, Inc. (Entergy) has reviewed the proposed no significant hazards consideration determination (NSHCD) published in the *Federal Register* as part of the CLIP. Entergy has concluded that the proposed NSHCD presented in the *Federal Register* notice is applicable to ANO-2 and is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

#### **3.2 Verification and Commitments**

As discussed in the notice of availability published in the *Federal Register* on April 27, 2005 for this TS improvement, plant-specific verifications were performed as follows.

In the model Safety Evaluation (SE), two requirements (the first of the two having five parts, 1(a) through 1(e)) for application of TSTF-372 are specified. Each is discussed below.

1. Item 1(a) assumes the availability of one Emergency Feedwater (EFW) train during application of LCO 3.0.8.a. TSTF-372, the model SE, and the LCO 3.0.8 TS Bases required to be adopted in conjunction with implementation of TSTF-372 all state the application of LCO 3.0.8.a is contingent on the assumption that the redundant train remains available. In addition, loss of both EFW trains during operation in the Modes of Applicability associated with EFW would result in LCO 3.0.3 entry, rendering the allowances of LCO 3.0.8 ineffective. Although the TS implementation process at ANO may include this restriction in other procedure or administrative processes upon approval of this amendment, Entergy does not believe further action is required to ensure compliance with Item 1(a) since the aforementioned documents inherently prevent application of LCO 3.0.8.a due to a snubber-related condition which could render both trains of any TS system inoperable and, LCO 3.0.3 entry would be required if both EFW trains were found to be inoperable during associated Modes of Applicability for any reason.
2. Item 1(b) requires either one EFW train or similar core cooling method to be available when one or more snubbers are inoperable that affect two trains of a given system. As described above, there are no instances where both EFW trains, or both trains of any system being relied upon as the only core cooling method would be removed from service at the same time during a Mode of Applicability that requires these systems. Again, such a plant configuration would result in LCO 3.0.3 entry, which prevents the utilization of the 12-hour allowance of LCO 3.0.8.b. Although the TS implementation process at ANO may include this restriction in other procedure or administrative processes upon approval of this amendment, Entergy does not believe further action is required to ensure compliance with Item 1(b).

3. Items 1(c) and 1(d) are only applicable to west coast plants and boiling water reactors and, therefore, are not applicable to ANO-2.
4. The first portion of Item (1e) relates to Items 1(a) and 1(b), discussed above. The statement "LCO 3.0.8 does not apply to non-seismic snubbers" is added to the TS Bases (see markup in Attachment 5 of this submittal). This is a minor deviation from TSTF-372 and is discussed in Section 2.2 above. The remaining portion of Item 1(e) requires a record of the design function of the inoperable snubber (i.e., seismic vs. non-seismic) and implementation of any Tier 2 restrictions to be completed and available for staff inspection. Entergy will ensure, during the relocation of the TS 3.7.8 snubber requirements to the TRM, that the TRM Actions are modified, in accordance with 10 CFR 50.59, to require recognition of the design function of the inoperable snubber (i.e., seismic vs. non-seismic) and implementation of any Tier 2 restrictions each time a required snubber is rendered inoperable. This commitment is included in Attachment 4 of this submittal.
5. Item 2 discusses the availability and use of risk management. ANO-2 has and maintains a Continuous Risk Management Program (CRMP) and associated risk-related tools to meet the intent of 10 CFR 50.65(a)(4) of the Maintenance Rule. Entergy will revise station procedures or administrative process to ensure seismic risks are considered during application of the LCO 3.0.8 delay period when one or more snubbers are inoperable. This commitment is included in Attachment 4 of this submittal.

In addition to the above, Entergy will establish TS Bases for LCO 3.0.8 which provide guidance and details on how to implement the new requirements. This commitment is included in Attachment 4 of this submittal. LCO 3.0.8 requires that risk be managed and assessed. The Bases 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, ANO-2 has a Bases Control Program consistent with Section 5.5 of the STS.

#### **4.0 ENVIRONMENTAL EVALUATION**

Entergy has reviewed the environmental evaluation included in the model safety evaluation dated April 27, 2005, as part of the CLIIP. Entergy has concluded that the staff's findings presented in that evaluation are applicable to ANO-2 and the evaluation is hereby incorporated by reference for this application.

**Attachment 2**

**To**

**2CAN070805**

**Proposed Technical Specification Changes**



## 3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

### 3/4.0 APPLICABILITY

#### LIMITING CONDITION FOR OPERATION

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- 3.0.1 Limiting Conditions for Operation (LCO) and ACTION requirements shall be applicable during the OPERATIONAL MODES or other conditions specified for each specification, [except as provided in LCO 3.0.2 and 3.0.8](#).
- 3.0.2 Adherence to the requirements of the Limiting Condition for Operation and/or associated ACTION within the specified time interval shall constitute compliance with the specification, except as provided in Specification 3.0.6. In the event the Limiting Condition for Operation is restored prior to expiration of the specified time interval, completion of the ACTION statement is not required.
- 3.0.3 In the event a Limiting Condition for Operation and/or associated ACTION requirements cannot be satisfied because of circumstances in excess of those addressed in the specification within 1 hour, action shall be initiated to place the unit in a mode in which the specification does not apply by placing it, as applicable, in at least HOT STANDBY within 6 hours, in at least HOT SHUTDOWN within the next 6 hours, and in at least COLD SHUTDOWN within the following 24 hours unless corrective measures are completed that permit operation under the permissible ACTION statements for the specified time interval as measured from initial discovery or until the reactor is placed in a MODE in which the specification is not applicable. Exceptions to these requirements shall be stated in the individual specification.
- 3.0.4 Entry into an OPERATIONAL MODE or other specified condition shall not be made when the conditions of 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 MODE or other specified condition may be made in accordance with ACTION requirement 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 MODES as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual specifications.
- 3.0.5 When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s), and device(s) are OPERABLE, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied within 2 hours, action shall be initiated to place the unit in a MODE in which the applicable Limiting Condition for Operation does not apply by placing it, as applicable, in at least HOT STANDBY within 6 hours, in at least HOT SHUTDOWN within the next 6 hours, and in at least COLD SHUTDOWN within the following 24 hours. This specification is not applicable in MODES 5 or 6.
- 3.0.6 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.

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next page

## 3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

### 3/4.0 APPLICABILITY (continued)

#### LIMITING CONDITION FOR OPERATION

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3.0.6 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.

3.0.7 To be used later.

3.0.8 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.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS

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4.7.6.1.1 Each control room emergency air conditioning system shall be demonstrated OPERABLE:

- a. At least once per 31 days by:
  - 1. Starting each unit from the control room, and
  - 2. Verifying that each unit operates for at least 1 hour and maintains the control room air temperature  $\leq 84^{\circ}\text{F D.B.}$
- b. At least once per 18 months by verifying a system flow rate of  $9900 \text{ cfm} \pm 10\%$ .

4.7.6.1.2 Each control room emergency air filtration system shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that the system operates for at least 15 minutes.
- b. At least once per 18 months by verifying that on a control room high radiation signal, either actual or simulated, the system automatically isolates the control room and switches into a recirculation mode of operation.
- c. By performing the required Control Room Emergency Ventilation filter testing in accordance with the Ventilation Filter Testing Program (VFTP).
- d. At least once per 18 months verify VSF-9 makeup flow rate is  $\geq 300$  and  $\leq 366 \text{ cfm}$  when supplying the control room with outside air.
- e. At least once per 18 months verify 2VSF-9 makeup flow rate is  $\geq 418.5$  and  $\leq 511.5 \text{ cfm}$  when supplying the control room with outside air.

## PLANT SYSTEMS

### 3/4.7.8 SHOCK SUPPRESSORS (SNUBBERS)

#### LIMITING CONDITION FOR OPERATION

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~~3.7.8 All snubbers shall be OPERABLE. The only snubbers excluded from this requirement are those installed on nonsafety-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.~~

~~APPLICABILITY: MODES 1, 2, 3 and 4. MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES.~~

#### ACTION:

~~With one or more applicable snubber inoperable, within 72 hours either:~~

- ~~a. Replace or restore the inoperable snubber(s) to an OPERABLE status and perform an engineering evaluation of the attached component(s) per Specification 4.7.8.f or,~~
- ~~b. Perform a review and evaluation which justifies continued operation with the inoperable snubber(s) and perform an engineering evaluation of the attached component(s) per Specification 4.7.8.f or,~~
- ~~c. Declare the attached system inoperable and follow the appropriate ACTION statement for that system.~~

#### SURVEILLANCE REQUIREMENTS

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~~4.7.8 Each applicable snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program:~~

~~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 may be 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 4.7.8-1. The visual inspection interval for each category of snubber shall be determined based upon criteria provided in Table 4.7.8-1.~~

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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#### c. ~~Visual Inspection Acceptance Criteria~~

~~Visual inspections shall verify that (1) there are no visible indications of damage or impaired OPERABILITY, and (2) attachments to the foundation or supporting structure are functional and (3) fasteners for the attachment of the snubber to the component and to the snubber anchorage are functional. Snubbers which appear inoperable as a result of visual inspections shall be classified as inoperable and may be reclassified OPERABLE for the purpose of establishing the next visual inspection interval, providing that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Specifications 4.7.8.d or 4.7.8.e, as applicable. However, when the fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be determined inoperable and cannot be determined OPERABLE via functional testing for the purpose of establishing the next visual inspection interval. All snubbers connected to a common hydraulic fluid reservoir shall be evaluated for operability if any snubber connected to that reservoir is determined to be inoperable.~~

#### d. ~~Functional Tests~~

~~At least once each refueling shutdown a representative sample of snubbers shall be tested using the following sample plan.~~

~~At least 10% of the snubbers required by Specification 3.7.8 shall be functionally tested either in place or in bench test. For each snubber that does not meet the functional test acceptance criteria of Specification 4.7.8.e, an additional 10% of the snubbers shall be functionally tested until no more failures are found or until all snubbers have been functionally tested.~~

~~The representative samples for the functional test sample plans shall be randomly selected from the snubbers required by Specification 3.7.8 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 sizes, and capacities. Snubbers placed in the same locations as snubbers which failed the previous functional test shall be retested at the~~

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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~~time of the next functional test but shall not be included in 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.~~

#### ~~e. 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, except that inertia dependent, acceleration limiting mechanical snubbers may be tested to verify only that activation takes place in both directions of travel;~~
- ~~2) Snubber bleed, or release rate where required, is present in both tension and compression, within the specified range;~~
- ~~3) Where required, 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.~~

#### ~~f. Functional Test Failure Analysis~~

~~An 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 OPERABILITY of other snubbers irrespective of type if they 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 snubber in order to ensure that the component remains capable of meeting the designed service.~~

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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~~If any snubber selected for functional testing either fails to activate 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 evaluated in a manner to ensure their OPERABILITY. This requirement shall be independent of the requirements stated in Specification 4.7.8.d for snubbers not meeting the functional test acceptance criteria.~~

#### ~~g. Preservice Testing of Repaired, Replacement and New Snubbers~~

~~Preservice operability testing shall be performed on repaired, replacement or new snubbers prior to installation. Testing may be at the manufacturer's facility. The testing shall verify the functional test acceptance criteria in 4.7.8.e.~~

~~In addition, a preservice inspection shall be performed on each repaired, replacement or new snubber and shall verify that:~~

- ~~1) There are no visible signs of damage or impaired operability as a result of storage, handling or installation;~~
- ~~2) The snubber load rating, location, orientation, position setting and configuration (attachment, extensions, etc.), are in accordance with design;~~
- ~~3) Adequate swing clearance is provided to allow snubber movement;~~
- ~~4) If applicable, fluid is at the recommended level and fluid is not leaking from the snubber system;~~
- ~~5) Structural connections such as pins, bearings, studs, fasteners and other connecting hardware such as lock nuts, tabs, wire, and cotter pins are installed correctly.~~

#### ~~h. Snubber Seal Replacement Program~~

~~The seal service life of hydraulic snubbers shall be monitored to ensure that the service life is not exceeded between surveillance inspections. The expected service life for the various seals, seal materials, and applications shall be determined and established based on engineering information and the seals shall be replaced so that the expected service life will not be exceeded during a period when the snubber is required to be OPERABLE. The seal replacements shall be documented.~~

TABLE 4.7.8-1

SNUBBER VISUAL INSPECTION INTERVAL

NUMBER OF INOPERABLE SNUBBERS

Population per 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)
4		0		0		4
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 category shall be determined based upon the previous inspection interval and the number of inoperable 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, categories must be determined and documented before any inspection and that determination shall be the basis upon which to determine the next inspection interval for that category.~~

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



TABLE 4.7.8-1 (Continued)

SNUBBER VISUAL INSPECTION INTERVAL

~~Note 3: If the number of inoperable 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.~~

~~Note 4: If the number of inoperable 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 inoperable 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 inoperable 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, the previous interval shall be reduced by a factor that is one-third of the ratio of the difference between the number of inoperable snubbers found during the previous interval and the number in Column B to the difference in the numbers in Column B and C.~~

~~Note 6: Specified surveillance intervals may be adjusted plus or minus 25 percent to accommodate normal test and surveillance schedule intervals up to and including 48 months, with the exception that inspection of inaccessible snubbers may be deferred to the next shutdown when plant conditions allow five days for inspection. See Note 7 for definition of interval as applied to snubber visual inspections. The provisions of Specification 4.0.2 regarding surveillance intervals are not applicable.~~

~~Note 7: Interval as defined for the shock suppressors (snubbers) visual inspection surveillance requirements is the period of time starting when the unit went into cold shutdown for refueling, and ending when the unit goes into cold shutdown for its next scheduled refueling. This period of time is nominally considered to be an 18-month period, or a 24-month period based on the type of fuel being used. However, the period of time (interval) could be shorter or longer due to plant operating variables such as fuel life and operating performance.~~

## SAFETY RELATED HYDRAULIC SNUBBERS

(DELETED)

(DELETED)

TABLE 3.7-4a

SAFETY RELATED MECHANICAL SHOCK SUPPRESSORS SNUBBERS

(DELETED)

**Attachment 3**

**To**

**2CAN070805**

**Revised Technical Specification Pages**

## 3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

### 3/4.0 APPLICABILITY

#### LIMITING CONDITION FOR OPERATION

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- 3.0.1 Limiting Conditions for Operation (LCO) and ACTION requirements shall be applicable during the OPERATIONAL MODES or other conditions specified for each specification, except as provided in LCO 3.0.2 and 3.0.8.
- 3.0.2 Adherence to the requirements of the Limiting Condition for Operation and/or associated ACTION within the specified time interval shall constitute compliance with the specification, except as provided in Specification 3.0.6. In the event the Limiting Condition for Operation is restored prior to expiration of the specified time interval, completion of the ACTION statement is not required.
- 3.0.3 In the event a Limiting Condition for Operation and/or associated ACTION requirements cannot be satisfied because of circumstances in excess of those addressed in the specification within 1 hour, action shall be initiated to place the unit in a mode in which the specification does not apply by placing it, as applicable, in at least HOT STANDBY within 6 hours, in at least HOT SHUTDOWN within the next 6 hours, and in at least COLD SHUTDOWN within the following 24 hours unless corrective measures are completed that permit operation under the permissible ACTION statements for the specified time interval as measured from initial discovery or until the reactor is placed in a MODE in which the specification is not applicable. Exceptions to these requirements shall be stated in the individual specification.
- 3.0.4 Entry into an OPERATIONAL MODE or other specified condition shall not be made when the conditions of 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 MODE or other specified condition may be made in accordance with ACTION requirement 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 MODES as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual specifications.
- 3.0.5 When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s), and device(s) are OPERABLE, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied within 2 hours, action shall be initiated to place the unit in a MODE in which the applicable Limiting Condition for Operation does not apply by placing it, as applicable, in at least HOT STANDBY within 6 hours, in at least HOT SHUTDOWN within the next 6 hours, and in at least COLD SHUTDOWN within the following 24 hours. This specification is not applicable in MODES 5 or 6.

### 3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

#### 3/4.0 APPLICABILITY (continued)

##### LIMITING CONDITION FOR OPERATION

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3.0.6 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.

3.0.7 To be used later.

3.0.8 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.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS

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4.7.6.1.1 Each control room emergency air conditioning system shall be demonstrated OPERABLE:

- a. At least once per 31 days by:
  1. Starting each unit from the control room, and
  2. Verifying that each unit operates for at least 1 hour and maintains the control room air temperature  $\leq 84^{\circ}\text{F D.B.}$
- b. At least once per 18 months by verifying a system flow rate of  $9900 \text{ cfm} \pm 10\%$ .

4.7.6.1.2 Each control room emergency air filtration system shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that the system operates for at least 15 minutes.
- b. At least once per 18 months by verifying that on a control room high radiation signal, either actual or simulated, the system automatically isolates the control room and switches into a recirculation mode of operation.
- c. By performing the required Control Room Emergency Ventilation filter testing in accordance with the Ventilation Filter Testing Program (VFTP).
- d. At least once per 18 months verify VSF-9 makeup flow rate is  $\geq 300$  and  $\leq 366 \text{ cfm}$  when supplying the control room with outside air.
- e. At least once per 18 months verify 2VSF-9 makeup flow rate is  $\geq 418.5$  and  $\leq 511.5 \text{ cfm}$  when supplying the control room with outside air.



**Attachment 4**

**To**

**2CAN070805**

**Regulatory Commitments**

### LIST OF REGULATORY COMMITMENTS

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

COMMITMENT	TYPE (Check one)		SCHEDULED COMPLETION DATE
	ONE-TIME ACTION	CONTINUING COMPLIANCE	
Entergy will establish the Technical Specification (TS) Bases for Limiting Condition for Operation (LCO) 3.0.8 as adopted with the applicable license amendment.	✓		To be implemented in conjunction with the amendment
Entergy will ensure, during the relocation of the TS 3.7.8 snubber requirements to the Technical Requirements Manual (TRM) that the TRM Actions are modified, in accordance with 10 CFR 50.59, to require recognition of the design function of the inoperable snubber (i.e., seismic vs. non-seismic) and implementation of any Tier 2 restrictions each time a required snubber is rendered inoperable.	✓		To be implemented in conjunction with the amendment
Entergy will revise station procedures or administrative process to ensure seismic risks are considered during application of the LCO 3.0.8 delay period when one or more snubbers are inoperable.	✓		Prior to or in conjunction with implementation of the amendment

**Attachment 5**

**To**

**2CAN070805**

**Proposed Technical Specification Bases Changes  
(for information only)**

## APPLICABILITY

### BASES (continued)

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3.0.8 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, 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 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 allowed outage time (AOT) 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 AOT 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.

LCO 3.0.8 does not apply to non-seismic snubbers. The provisions of LCO 3.0.8 are not to be applied to supported TS systems unless the supported systems would remain capable of performing their required safety or support functions for postulated design loads other than seismic loads.

## APPLICABILITY

### BASES (continued)

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#### 3.0.8 (continued)

The risk impact of dynamic loadings other than seismic loads was not assessed as part of the development of LCO 3.0.8. These shock-type loads include thrust loads, blowdown loads, water-hammer loads, steam-hammer loads, LOCA loads and pipe rupture loads. However, there are some important distinctions between non-seismic (shock-type) loads and seismic loads which indicate that, in general, the risk impact of the out-of-service snubbers is smaller for non-seismic loads than for seismic loads. First, while a seismic load affects the entire plant, the impact of a non-seismic load is localized to a certain system or area of the plant. Second, although non-seismic shock loads may be higher in total force and the impact could be as much or more than seismic loads, generally they are of much shorter duration than seismic loads. Third, the impact of non-seismic loads is more plant specific, and thus harder to analyze generically, than for seismic loads. For these reasons, every time LCO 3.0.8 is applied, at least one train of each system that is supported by the inoperable snubber(s) should remain capable of performing their required safety or support functions for postulated design loads other than seismic loads.