

May 25, 2006

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Stop P1-137  
Washington, DC 20555-0001

Ladies and Gentlemen:

ULNRC-05264



**DOCKET NUMBER 50-483  
CALLAWAY PLANT UNIT 1  
UNION ELECTRIC CO.  
APPLICATION FOR TECHNICAL SPECIFICATION  
TO ADD LCO 3.0.8 ON THE INOPERABILITY OF  
SNUBBERS USING THE CONSOLIDATED  
LINE ITEM IMPROVEMENT PROCESS**

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Pursuant to 10 CFR 50.90, Union Electric, d.b.a. AmerenUE hereby requests an amendment to Facility Operating License No. NPF-30 for Callaway Plant. The proposed amendment would modify the Technical Specification, to provide requirements for when snubbers are declared inoperable by adding Limiting Condition for Operation (LCO) 3.0.8. The change is consistent with NRC-approved Revision 4 to Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTS-372, "Addition of LCO 3.0.8, inoperability of Snubbers." The availability of this TS improvement was announced in the Federal Register on May 4, 2005 (70 FR 23252) as part of the consolidated line item improvement process.

Attachments I through IV provide the evaluation, markup of TS pages, retyped TS pages, and proposed TS Bases changes respectively, in support of this amendment request. Final TS Bases pages will be implemented pursuant to TS 5.5.14, "Technical Specifications (TS) Bases Control Program."

Attachment V is a mark up to FSAR Section 16.7.2, "Snubbers," provided for information only. The conclusion of the Safety Evaluation (SE) for Relief Request I3R-03 (NRC letter dated March 7, 2006, TAC NO. MC8176) requires NRC review and approval of any changes to inservice inspection functional testing requirements in FSAR Section 16.7.2. The addition of LCO 3.0.8 requires a change to FSAR Section 16.7.2. However, changes that are proposed do not involve any changes to inservice inspection or functional testing requirements for snubbers, therefore NRC review and approval is not required

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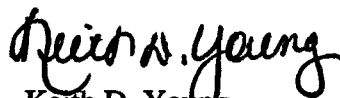
It has been determined that this amendment application does not involve a significant hazard consideration as determined per 10 CFR 50.92. Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of this amendment. This amendment application was reviewed by the Onsite Review Committee and a subcommittee of the Nuclear Safety Review Board. In accordance with 10 CFR 50.91, a copy of this amendment application, with attachments, is being provided to the designated Missouri State official.

AmerenUE requests approval of the proposed amendment by January 2007. It is requested that the license amendment be effective upon issuance, and will be implemented within 90 days from the date of issuance.

No new regulatory commitments have been made or identified pursuant to this letter and its attachments. Please contact Dave Shafer at 314-554-3104 for any questions you may have regarding this application.

Sincerely,

Executed on: May 25, 2006



Keith D. Young  
Manager-Regulatory Affairs

PMB/jdg

- Attachments:
- I - Evaluation
  - II - Markup of Technical Specification pages
  - III - Retyped Technical Specification pages
  - IV - Proposed TS Bases Changes (for information only)
  - V - Mark up of FSAR Section 16.7.2 (for information only)

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**ATTACHMENT I**  
**ULNRC-05264**

**EVALUATION**

## **EVALUATION**

### **1.0 DESCRIPTION**

The proposed license amendment revises the Technical Specifications to provide requirements for when snubbers are declared inoperable, by adding Limiting Condition for Operation (LCO) 3.0.8. The change is consistent with NRC-approved Revision 4 to Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-372, "Addition of LCO 3.0.8, inoperability of Snubbers." The availability of this TS improvement was announced in the Federal Register on May 4, 2005 (70 FR 23252) as part of the consolidated line item improvement process (CLIIP).

### **2.0 PROPOSED CHANGE**

Consistent with NRC-approved Revision 4 of TSTF-372, the proposed change to the Technical Specifications will add a new LCO 3.0.8 to Section 3.0, "Limiting Condition for Operation (LCO) Applicability," to allow a delay time from when it has been determined that a snubber(s) cannot perform its required support function, to the time when the supported system is declared inoperable.

Proposed revisions to the TS Bases are also included in this application. As discussed in the NRC's model safety evaluation, the revised TS Bases associated with TSTF-372, Revision 4, is an integral part of implementing this TS improvement. The changes to the affected TS Bases pages will be incorporated in accordance with TS 5.5.14, "Technical Specifications (TS) Bases Control Program."

### **3.0 BACKGROUND**

The background for this application is adequately addressed by the NRC Notice of Availability published on May 4, 2005, (70 FR 23252) and TSTF-372, Revision 4.

### **4.0 TECHNICAL ANALYSIS**

#### **4.1 Applicability of Published Safety Evaluation**

AmerenUE has reviewed the safety evaluation (SE) published on May 4, 2005 (70 FR 23252) as part of the CLIIP Notice for Comment. This included the NRC staff's SE, the supporting information provided to support TSTF-372, and the changes associated with Revision 4 to TSTF-372. AmerenUE has concluded that the justifications presented in the TSTF proposal and the SE prepared by the NRC staff are applicable to the Callaway Plant and justify this amendment for incorporation of the changes to the Callaway Plant TSs.

## **4.2 Optional Changes and Variations**

AmerenUE 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 (70 FR 23252).

## **5.0 REGULATORY ANALYSIS**

A description of this proposed change and its relationship to applicable regulatory requirements and guidance was provided in the NRC Notice of Availability published on May 4, 2005 (70 FR 23252) and TSTF-372, Revision 4.

### **5.1 No Significant Hazards Consideration**

AmerenUE has reviewed the proposed no significant hazards consideration determination published on May 4, 2005 (70 FR 23252) as part of the CLIP. AmerenUE has concluded that the proposed determination presented in the notice is applicable to Callaway Plant and that the determination is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91 (a).

### **5.2 Applicable Regulatory Requirements/Criteria**

The applicable regulatory requirements and guidance associated with this application are adequately addressed by the NRC Notice of Availability published on May 4, 2005 (70 FR 23252) and TSTF-372, Revision 4.

### **5.3 Verification and Commitments**

As discussed in the NRC Notice of Availability published on May 4, 2005 (70 FR 23252) for this TS improvement, plant-specific verifications were performed as follows:

AmerenUE has established 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 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 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.

When one or more required snubbers are unable to perform their associated support function(s), AmerenUE will perform the required risk assessment, as follows:

- 1) In Modes 1 through 3, an internal events PRA model is used to perform risk assessments pursuant to 10CFR50.65 (a)(4). In order to assess the risk associated with inoperable snubber(s), pursuant to LCO 3.0.8, the affected train(s) will be set to failed (i.e., treated as non-functional) in the (a)(4) configuration-specific internal events PRA calculation. Appropriate risk management actions, following the guidance in NEI 93-01, Section 11, will then be taken.
- 2) In Modes 4 through 6, a defense-in-depth approach is used to comply with 10CFR50.65 (a)(4). In order to assess the risk associated with inoperable snubber(s) in these Modes, pursuant to LCO 3.0.8, the affected train(s) will be treated as non-functional in the (a)(4) defense-in-depth evaluation. Appropriate risk management actions will be taken, based on the evaluation result.
- 3) On a case-by-case basis, should the approaches above, which would normally be used, result in an overly conservative estimate of the risk associated with an inoperable snubber, a more accurate assessment of risk will be made, and appropriate risk management actions taken.

## **6.0 ENVIRONMENTAL CONSIDERATION**

AmerenUE has reviewed the environmental evaluation included in the model SE published on May 4, 2005 (70 FR 23252) as part of the CLIP. AmerenUE has concluded that the staffs findings presented in that evaluation are applicable to WCGS and the evaluation is hereby incorporated by reference for this application.

## **7.0 REFERENCES**

1. 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 Consolidate Line Item Improvement Process, published May 4, 2005 (70 FR 23252)

**ATTACHMENT II**  
**ULNRC-05264**

**MARKUP OF TECHNICAL SPECIFICATION PAGES**



**3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY**

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LCO 3.0.1 LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2 and LCO 3.0.7<sup>e</sup> and 3.0.8.

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LCO 3.0.2 Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required unless otherwise stated.

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LCO 3.0.3 When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS, the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:

- a. MODE 3 within 7 hours;
- b. MODE 4 within 13 hours; and
- c. MODE 5 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.

LCO 3.0.3 is only applicable in MODES 1, 2, 3, and 4.

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(continued)

**3.0 LCO APPLICABILITY (continued)**

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- LCO 3.0.4** When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:
- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time; or
  - b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; exceptions to this Specification are stated in the individual Specifications; or
  - c. When an allowance is stated in the individual value, parameter, or other Specification.

This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

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- LCO 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.
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- LCO 3.0.6** When a supported system LCO is not met solely due to a support system LCO not being met, the Conditions and Required Actions associated with this supported system are not required to be entered. Only the support system LCO ACTIONS are required to be entered. This is an exception to LCO 3.0.2 for the supported system. In this event, an evaluation shall be performed in accordance with Specification 5.5.15, "Safety Function Determination Program (SFDP)." If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

When a support system's Required Action directs a supported system to be declared inoperable or directs entry into Conditions and Required Actions for a supported system, the applicable Conditions and Required Actions shall be entered in accordance with LCO 3.0.2.

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(continued)

**3.0 LCO APPLICABILITY (continued)**

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**LCO 3.0.7**

Test Exception LCO 3.1.8 allows specified Technical Specification (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with a Test Exception LCO is optional. When a Test Exception LCO is desired to be met but is not met, the ACTIONS of the Test Exception LCO shall be met. When a Test Exception LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall be made in accordance with the other applicable Specifications.

See  
Insert 1

**INSERT 1**

**LCO 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.

**ATTACHMENT III**  
**ULNRC-05264**

**RETYPE TECHNICAL SPECIFICATION PAGES**

### 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

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**LCO 3.0.1** LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2, LCO 3.0.7, and 3.0.8.

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**LCO 3.0.2** Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required unless otherwise stated.

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**LCO 3.0.3** When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS, the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:

- a. MODE 3 within 7 hours;
- b. MODE 4 within 13 hours; and
- c. MODE 5 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.

LCO 3.0.3 is only applicable in MODES 1, 2, 3, and 4.

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(continued)

### **3.0 LCO APPLICABILITY (continued)**

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**LCO 3.0.7**            Test Exception LCO 3.1.8 allows specified Technical Specification (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with a Test Exception LCO is optional. When a Test Exception LCO is desired to be met but is not met, the ACTIONS of the Test Exception LCO shall be met. When a Test Exception LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall be made in accordance with the other applicable Specifications.

**LCO 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 with 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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**ATTACHMENT IV**  
**ULNRC-05264**

**PROPOSED TS BASES CHANGES**  
**(for information only)**



## B 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

## BASES

## LCOs

LCO 3.0.1 through LCO 3.0.8 establish the general requirements applicable to all Specifications and apply at all times, unless otherwise stated.

## LCO 3.0.1

LCO 3.0.1 establishes the Applicability statement within each individual Specification as the requirement for when the LCO is required to be met (i.e., when the unit is in the MODES or other specified conditions of the Applicability statement of each Specification).

## LCO 3.0.2

LCO 3.0.2 establishes that upon discovery of a failure to meet an LCO, the associated ACTIONS shall be met. The Completion Time of each Required Action for an ACTIONS Condition is applicable from the point in time that an ACTIONS Condition is entered. The Required Actions establish those remedial measures that must be taken within specified Completion Times when the requirements of an LCO are not met. This Specification establishes that:

- a. Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification; and
- b. Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified.

There are two basic types of Required Actions. The first type of Required Action specifies a time limit in which the LCO must be met. This time limit is the Completion Time to restore an inoperable system or component to OPERABLE status or to restore variables to within specified limits. If this type of Required Action is not completed within the specified Completion Time, a shutdown may be required to place the unit in a MODE or condition in which the Specification is not applicable. (Whether stated as a Required Action or not, correction of the entered Condition is an action that may always be considered upon entering ACTIONS.) The second type of Required Action specifies the remedial measures that permit continued operation of the unit that is not further restricted by the Completion Time. In this case, compliance with the Required Actions provides an acceptable level of safety for continued operation.

(continued)

BASES

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LCO 3.0.6  
(continued)

Cross train checks to identify a loss of safety function for those support systems that support multiple and redundant safety systems are required. The cross train check verifies that the supported systems of the redundant OPERABLE support system are OPERABLE, thereby ensuring safety function is retained. If this evaluation determines that a loss of safety function exists, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

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## LCO 3.0.7

There are certain special tests and operations required to be performed at various times over the life of the unit. These special tests and operations are necessary to demonstrate select unit performance characteristics, to perform special maintenance activities, and to perform special evolutions. Test Exception LCO 3.1.8 allows specified Technical Specification (TS) requirements to be changed to permit performances of these special tests and operations, which otherwise could not be performed if required to comply with the requirements of these TS. Unless otherwise specified, all the other TS requirements remain unchanged. This will ensure all appropriate requirements of the MODE or other specified condition not directly associated with or required to be changed to perform the special test or operation will remain in effect.

The Applicability of a Test Exception LCO represents a condition not necessarily in compliance with the normal requirements of the TS. Compliance with a Test Exception LCO is optional. A special operation may be performed either under the provisions of the Test Exception LCO or under the other applicable TS requirements. If it is desired to perform the special operation under the provisions of the Test Exception LCO, the requirements of the Test Exception LCO shall be followed.

Insert 2 →

## INSERT 2

LCO 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 (i.e. snubbers designed for seismic loading or for seismic and dynamic loading where the seismic loading bounds the dynamic loading), 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 identified and implemented to manage risk under licensee control.

Snubber requirements do not meet the criteria in 10 CFR 50.36(c)(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.

**ATTACHMENT V**  
**ULNRC-05264**

**MARK UP OF FSAR SECTION 16.7.2**  
**(for information only)**

**16.7.2      SNUBBERS****16.7.2.1      LIMITING CONDITION FOR OPERATION**

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All snubbers shall be OPERABLE. The only snubbers excluded from this requirement 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.

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

Insert A

ACTION:

- a. With one or more snubbers removed from service (but not otherwise inoperable), declare the attached system inoperable and follow the appropriate ACTION for that system, unless an engineering design analysis has been performed that supports Operability of the attached system with the snubber(s) removed.
- b. With one or more snubbers inoperable for any system (for reasons other than simple removal, such as for snubbers determined to be inoperable from functional testing), declare the attached system inoperable and follow the appropriate ACTION for that system, until the time when:
  - 1) the inoperable snubber(s) is replaced or restored to OPERABLE status, and
  - 2) an engineering evaluation per Section 16.7.2.1.1.g is performed on the attached component/system.

**16.7.2.1.1      SURVEILLANCE REQUIREMENTS**

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Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program, in lieu of any inservice inspection requirements from the ASME Code.

a.      Inspection Types

As used here, 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

Insert A

ACTION:

- a. With one or more snubbers removed from service (but not otherwise inoperable) perform the following:
  - 1) For snubbers designed only for seismic loading (or for seismic and dynamic loading where the seismic loading bounds the dynamic loading), immediately refer to Technical Specification Limiting Condition for Operation (LCO) 3.0.8, unless an engineering design analysis has been performed that supports the Operability of the attached system with the snubber removed.
  - 2) For snubbers designed for dynamic loading (or for seismic and dynamic loading where the seismic loading does not bound the dynamic loading), declare the attached system inoperable and follow the appropriate ACTION for that system, unless an engineering design analysis has been performed that supports the Operability of the attached system with the snubber removed.
- b. With one or more snubbers inoperable for any system (for reasons other than simple removal, such as for snubbers determined to be inoperable from functional testing), perform the following:
  - 1) For snubbers designed only for seismic loading (or for seismic and dynamic loading where the seismic loading bounds the dynamic loading),
    - a) immediately refer to Technical Specification LCO 3.0.8, and
    - b) perform an engineering evaluation per Section 16.7.2.1.1.g on the attached component/system before expiration of the time limits specified by LCO 3.0.8. If the engineering evaluation for operability is not complete before expiration of the time limits specified by LCO 3.0.8, declare the attached component/system inoperable.
  - 2) For snubbers designed for dynamic loading (or for seismic and dynamic loading where the seismic loading does not bound the dynamic loading), declare the attached system inoperable and follow the appropriate ACTION for that system, until the time when:
    - a) the inoperable snubber(s) is replaced or restored to operable status, and
    - b) an engineering evaluation per Section 16.7.2.1.1.g is performed on the attached component/system.

CALLAWAY - SP

- 2) Snubber bleed, or release rate where required, is present in both tension and compression, within the specified range; and
- 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.

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. Engineering Evaluations

For 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, and to ensure that the components remain operable.

An engineering evaluation shall be made for each snubber failure to meet the functional test acceptance criteria in order to determine the cause of the failure. The results of this evaluation shall be used to identify additional snubbers that may be subject to the same failure mode, irrespective of type. A separate failure mode group (FMG) may be identified, if applicable, for random selection of additional samples, or the additional samples may be randomly selected from the entire snubber plan population based upon the engineering evaluation.

For any snubber failure 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 Section 16.7.2.1.1.e for snubbers not meeting the functional test acceptance criteria.

For any snubber failure caused by a transient/dynamic event, additional functional test samples are not required, although Section 16.7.2.1.1.d requirements shall be met for transient event inspections. An additional snubber, of the same type and size as that which experienced the transient/dynamic event, shall be randomly selected as a substitute for functional testing as part of the respective test sample.

For any failure that may be classified as an isolated failure, where the nature of the failure does not lend other snubbers to be suspect, additional test samples are not required.

h. Functional Testing of Repaired and Replaced Snubbers

Snubbers that fail the visual inspection or the functional test acceptance criteria shall be repaired or replaced. Replacement snubbers and snubbers which have

## Insert B:

For snubbers found inoperable, an engineering evaluation shall be performed on the component to which the inoperable snubber(s) were attached. The purpose of this evaluation shall be to determine if the components to which the inoperable snubbers were attached were adversely affected, and to ensure that the component/system remains operable. This evaluation may be qualitative in nature (such as based on inspection and prompt evaluation) and is the only evaluation required to satisfy the requirements of 16.7.2.1 , Action b. The balance of the requirements of this section (including investigation of common mode failure and extent of condition) shall be completed for all inoperable snubbers, however, they need not be completed to satisfy the requirements of 16.7.2.1 , Action b.



## CALLAWAY - SP

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 snubber 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 established 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.

### LCO Action

The ACTION of Section (LCO) 16.7.2.1 is required to be entered whenever an applicable snubber is removed from the attached component/system or is determined to be inoperable. Removal of a snubber (that is not otherwise inoperable) is addressed by Action "a" of the ACTION, whereas Action "b" is entered when a snubber has been determined to be inoperable for reasons other than merely being removed, such as due to a functional test failure.

In accordance with Action "a," removal of an applicable snubber requires declaring the attached component(s) or system(s) inoperable, unless an engineering design analysis has been done that supports operability of the attached component/system with the snubber removed. Simple removal of a snubber from an attached component/system (such as for testing or maintenance) does not make the snubber otherwise inoperable. Thus, there is no requirement or need to perform the kind of engineering evaluation required by Action "b" and Section 16.7.2.1.1.g for an inoperable snubber.

For a snubber determined to be inoperable (other than by mere removal), whether the snubber is installed or has been removed, Action "b" requires not only the attached system to be declared inoperable, but also the performance of an engineering evaluation pursuant to Section 16.7.2.1.1 to determine the impact of the failed or inoperable snubber on the system or components to which it is (or was) attached. The attached system or components cannot be declared OPERABLE until the inoperable snubber is replaced or restored to OPERABLE status, and the required engineering evaluation is performed. It may be noted that while initial entry into the ACTION is through either Action "a" or Action "b," both Actions could be involved if, for example, a snubber is removed from service for functional testing (but is believed to otherwise be operable) so that action "a" would apply, and then fails its functional test so that action "b" would then apply.

## Insert C:

In accordance with Action "a," removal of an applicable snubber requires declaring the attached system inoperable, unless an engineering design analysis supports operability of the attached component system with the snubber removed or for snubbers designed only for seismic loading (or for seismic and dynamic loading where the seismic loading bounds the dynamic loading), Technical Specification Limiting Condition for Operation (LCO) 3.0.8 is applicable. Simple removal of a snubber from an attached system/component (such as for testing or maintenance) does not make the snubber otherwise inoperable. Thus, there is no requirement or need to perform the kind of engineering evaluation required by Action "b" and Section 16.7.2.1.1.g for an inoperable snubber.

For a snubber determined to be inoperable (other than by mere removal), whether the snubber is installed or has been removed, Action "b" is applicable. The actions specified for Action b depend upon whether the snubber is designed for seismic loading or dynamic loading. For snubbers only designed for seismic loading (or for seismic and dynamic loading where the seismic loading bounds the dynamic loading), Action b.1 refers to LCO 3.0.8, which permits a limited time period before the attached system is required to be declared inoperable. In addition, Action b.2 requires performance of an engineering evaluation per FSAR Section 16.7.2.1.1.g. The engineering evaluation includes determination of the impact of the failed or inoperable snubber on the system or components to which it is (or was) attached. The operability portion of the engineering evaluation is required to be completed prior to expiration of the time limits specified in LCO 3.0.8. If the engineering evaluation for operability is not complete before expiration of the time limits specified by LCO 3.0.8, the attached component/system is required to be declared inoperable.

For snubbers designed for dynamic loading (or for seismic and dynamic loading where the seismic loading does not bound the dynamic loading), LCO 3.0.8 does not apply. The attached system is required to be declared inoperable and the appropriate ACTION for that system is followed. In addition, an engineering evaluation is required to be performed pursuant to Section 16.7.2.1.1.g to determine the impact of the failed or inoperable snubber on the system or components to which it is (or was) attached. The attached system or components cannot be declared OPERABLE until the inoperable snubber is replaced or restored to OPERABLE status, and the required engineering evaluation is performed.