

## Industry/TSTF Standard Technical Specification Change Traveler

### Addition of LCO 3.0.8, Inoperability of Snubbers

Classification: 1) Technical Change

Priority: 3)High

NUREGs Affected:  1430  1431  1432  1433  1434

### 1.0 DESCRIPTION

The proposed change would add new LCO 3.0.8 to the Section 3.0, LCO and SR Applicability, section of the improved Standard Technical Specifications (ISTS) to allow a delay time for snubbers which cannot perform their require support function before the supported systems are declared inoperable.

### 2.0 PROPOSED CHANGE

The proposed change will add a new LCO to the Section 3.0, LCO and SR Applicability, section of the ISTS. This new LCO, LCO 3.0.8, states:

When a Technical Specification LCO is not met solely due to one or more snubbers being unable to perform its related support function, the Technical Specification LCO is considered to be met for up to [72] hours. This is an exception to LCO 3.0.2 for the Technical Specification supported system. Upon expiration of the [72] hour delay time, the Technical Specification supported system shall be declared inoperable and the applicable Conditions and Required Actions for the Technical Specification supported system shall be entered in accordance with LCO 3.0.2.

Proposed TS Bases for the proposed LCO 3.0.8 states:

LCO 3.0.8 establishes an exception to LCO 3.0.2 for snubbers.. This exception is provided because LCO 3.0.2 would require that the Conditions and Required Actions of the associated inoperable supported system LCO be entered solely due to the inability of one or more snubbers to perform their function. This exception is justified because the actions that are required to ensure the unit is maintained in a safe condition are specified in the snubber requirements, which are located outside of the Technical Specifications (TS) under licensee control. The snubber requirements are located outside of the TS because they have been determined to not meet the criteria for retention in the TS located in 10 CFR 50.36(c)(2)(ii), and, as such, have been determined to be appropriate for control by the licensee.

When one or more snubbers is not capable of providing the required safety function required for OPERABILITY of a supported TS system, a delay time is provided to allow required maintenance, testing, and/or repair. Licensee-controlled documents may also require other compensatory actions to be taken during the delay time. During this delay time, the supported TS system is not considered inoperable and the Conditions and Required Actions of the supported system do not have to be entered. If the delay time expires without the snubber(s) being restored to a condition in which it can perform the safety function required for supported system OPERABILITY, the TS supported system must be declared inoperable and its Conditions and Required Actions followed in accordance with LCO 3.0.2.

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### **3.0 BACKGROUND**

Component standard supports, are those metal supports which are designed to transmit loads from the pressure-retaining boundary of the component to the building structure. Although classified as component standard supports, snubbers require special consideration due to their unique function. Snubbers are designed to provide no transmission of force during normal plant operations, but function as a rigid support when subjected to dynamic transient loadings. Therefore, snubbers are chosen in lieu of rigid supports where restricting thermal growth during normal operation would induce excessive stresses in the piping nozzles or other equipment. The location and size of the snubbers are determined by stress analysis. Depending on the design classification of the particular piping, different combinations of load conditions are established. These conditions combine loading during normal operation, seismic loading and loading due to plant accidents/transients to four different loading sets. These loading sets are designated as: normal, upset, emergency, and faulted condition. The actual loading included in each of the four conditions, depends on the design classification of the piping. The calculated stresses in the piping and other equipment, for each of the four conditions, must be in conformance with established design limits. Supports for pressure-retaining components are designed in accordance with the rules of the ASME Boiler and Pressure Vessel Code, Section III, Division 1 (Ref. 1). The combination of loadings for each support, including the appropriate stress levels, meet the criteria of Regulatory Guide 1.124, "Design Limits and Loading Combinations for Class 1 Linear-Type Component Supports" (Ref. 2), and Regulatory Guide 1.130, "Design Limits and Loading Combinations for Class 1 Plate-and -Shell-Type Component Supports" (Ref. 3).

As part of a plant's conversion to the Improved Standard Technical Specifications (ISTS) or implementation of an amendment prior to conversion, the former TS requirements for snubbers and many other support systems were relocated to a licensee controlled document such as the Technical Requirements Manual (TRM) or a program document. The conversion submittal or split report amendment application identified the snubbers as a candidate for relocation based on the fact that the TS requirements did not meet any of the four criteria in 10 CFR 50.36(c)(2)(ii) for inclusion in the ISTS. The removal of these requirements from the TS was classified as a relocation as opposed to a more restrictive or less restrictive change, and the NRC approved the relocation without placing any restriction on the use of the relocated requirements. Therefore, as is current practice, it was intended that when a snubber could not perform the required safety function for a system that is required to be OPERABLE by the TS, the licensee controlled document requirements for the support system would be invoked before the system TS LCO would become applicable. For example, if a snubber was determined to not meet the licensee controlled documents requirements, it needed to be either restored or replaced with a known working snubber within 72 hours, and an engineering evaluation would also need to be performed for the attached component within that same 72 hour period. If these actions are not completed within the allocated time, the system supported by the snubber would be declared inoperable and the Conditions and Required Actions for that system followed.

#### **4.0 TECHNICAL ANALYSIS**

The purpose of this change is to provide the same level of operational safety and flexibility provided by the snubbers as was provided prior to conversion to ITS or plant specific relocation of the snubber TS requirements. Prior to conversion to the ITS or plant specific relocation of snubber requirements, snubbers were located in the TS. If one or more snubbers were inoperable, the TS action statements for snubbers were taken. Under the pre-ITS conventions and rules, the supported system was not considered inoperable while the snubber action statements were being taken. Only when the snubber action times were expired (or if directed by the snubber action statements) was the supported system considered inoperable and it's the supported system TS action statements followed. This interpretation of the snubber TSs is based on the May 27, 1986 NRC memorandum (Ref. 5) which states, in part:

“Normally snubbers would only be removed from a system for testing/surveillance purposes at a time when the system is not required to be operable. If, however, a snubber is removed from service, for any purpose, for a system which is required to be operable, the action statement for snubbers would apply. The action statement requires that inoperable snubber(s), those removed for testing, be restored to operable service in 72 hours.

The action statement also requires that an engineering evaluation of the attached component be performed in accordance with specification 4.7.9.g or that the attached system be declared inoperable. This specification (4.7.9.g) notes that where snubbers are found inoperable, an engineering evaluation is to determine if the components to which inoperable snubbers are attached were adversely affected to assure that the component remains capable of meeting its designated service. The intent of this requirement is to assure that the system was not adversely affected by the inoperable snubber. This does not relate to the system or components capability to withstand a seismic event. Any degradation in seismic protection due to inoperable snubbers was taken into account in establishing the 72 hour allowed outage time.

When a snubber is removed from service for testing, an engineering evaluation need not be performed. If the snubber is not returned to service in 72 hours, that system would be declared inoperable at this time since the snubber allowable out-of-service time limit would be exceeded.”

Snubbers did not meet the criteria for retention in the TS after ITS conversion or a plant specific relocation amendment and were relocated to a licensee controlled document, such as a Technical Requirements Manual (TRM) or a program document. This relocation did not alter the requirements on the snubbers, but allowed those requirements to be changed under the auspices of 10 CFR 50.59. An unintended consequence of that relocation is to require, under ITS LCO 3.0.2, the supported systems remaining in TS to be immediately declared inoperable and their Conditions and Required Actions taken when one or more snubbers is not capable of performing its required safety function.

This change in operation is not justified by any decrease in plant safety related to the relocation of the snubber requirements but is strictly an administrative consequence of the relocation. The plant design has not changed. The operational actions taken when one or more snubbers does not meet its requirements did not change as a consequence of the relocation. The snubbers continue to perform the function assumed in the safety analysis and the same actions continue to be taken if those snubbers cannot perform that function. However, under the ITS, the supported system must be declared inoperable and its Conditions and Required Actions followed, even to the point of a plant shutdown, even though there has been no change in the design or operation of the plant. This decreases plant safety and operational flexibility.

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The proposed LCO 3.0.8 corrects this unintended consequence and restores the level of plant safety afforded by the snubbers prior to their relocation.

The plant safety analyses assume that the required safety systems are OPERABLE, except for a single failure. The accident analyses do not consider the effect of an accident occurring while relying on Conditions and Required Actions. The purpose of TS Completion Times is to minimize the length of time that equipment can be out of service in order to minimize the probability that an accident could occur while the equipment unavailable. As a result, this change has no effect on the safety analyses. The inoperability of TS supported systems will continue to be limited by the delay time associated with the snubbers and the Conditions and Required Actions of the supported system. These delay times were considered to be consistent with the safety analysis assumptions prior to relocation from the subject TS to the TRM and continue to be consistent with the safety analysis.

Pipe and equipment supports, in general, are not directly considered in developing the accident sequences for theoretical hazard evaluations. Further, some Probabilistic Risk Assessment (PRA) studies have indicated that snubbers are not of prime importance in a risk significant sequence (Refs. 6 and 7). Therefore, the function of the snubbers is not essential in mitigating the consequences of a DBA or transient (Refs. 8 and 9).

## **5.0 Regulatory Analysis**

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

The TSTF has evaluated whether or not a significant hazards consideration is involved with the proposed generic change 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 allows a delay time before declaring supported TS systems inoperable when the associated snubber(s) cannot perform its required safety function. Entrance into Actions is not an initiator of any accident previously evaluated. Consequently, the probability of an accident previously evaluated is not significantly increased. The consequences of an accident while relying on the delay time allowed before declaring a TS supported system inoperable and taking its Conditions and Required Actions are no different than the consequences of an accident under the same plant conditions while relying on the existing TS supported system Conditions and Required Actions. Therefore, the consequences of an accident previously evaluated are not significantly increased by this change. Therefore, this 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 allows a delay time before declaring supported TS systems inoperable when the associated snubber(s) cannot perform its required safety function. The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. Thus, this 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 allows a delay time before declaring supported TS systems inoperable when the associated snubber(s) cannot perform its required safety function. The proposed change restores an allowance in the pre-ISTS conversion TS which was unintentionally eliminated by the conversion. The pre-ISTS TS were considered to provide an adequate margin of safety for plant operation, as does the post-ISTS conversion TS. Therefore, the margin of safety is not significantly reduced by the proposed change. Therefore, this change does not involve a significant reduction in a margin of safety.

Based on the above, the TSTF concludes that the proposed change 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.

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

This change does not alter compliance with any applicable regulatory requirements or criteria, but provides a delay time before declaring supported TS systems inoperable when the associated snubber(s) cannot perform its required function. This delay time, similar to a Completion Time in the TS, does not alter the design or licensing basis of any system.

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

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## 6.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed change 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 change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

## 7.0 REFERENCES

1. ASME Boiler and Pressure Vessel Code, Section III.
2. Regulatory Guide 1.124, "Design Limits and Loading Combinations for Class 1 Linear-Type Component Supports," Revision 1, January 1978.
3. Regulatory Guide 1.130, "Design Limits and Loading Combinations for Class 1 Plate-and Shell-Type Component Supports," Revision 1, October 1978.
4. Letter dated July 9, 1999, from F. Rinaldi, NRC to H. Barron, Duke Energy Corporation, "McGuire Nuclear Station, Units 1 and 2 RE: Licensing Position Regarding Snubbers (TAC NOS. MA5519 and MA5520)."
5. NRC Memorandum dated May 27, 1986, from H. Denton to C. Norelius, "Technical Specification Interpretation on Snubbers."
6. "Zion Probabilistic Safety Study," Commonwealth Edison Company, September 1981.
7. "Millstone Unit 3 Probabilistic Safety Study," North-East Utilities Company, August 1983.
8. NRC Staff Review of Nuclear Steam Supply System Vendor Owners Groups' Application of the Commission's Interim Policy Statement Criteria to Standard Technical Specifications. Attachment to letter dated May 1988 from T. E. Murley, NRC to W. Wilgus, Chairman the B&W Owners Group.
9. WCAP-11618, "MERITS Program-Phase II, Task 5, Criteria Application," including Addendum 1 dated April, 1989, Section 3.7.9.

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Industry Contact:	Wideman, Steve	(316) 364-4037	stwidem@wcnoc.com
NRC Contact:	Gilles, Nan	301-415-1180	nvg@nrc.gov

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### Revision History

**OG Revision 0**

**Revision Status: Closed**

Revision Proposed by: WOG

1/6/2002

**OG Revision 0****Revision Status: Closed**

Revision Description:  
Original Issue

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**Owners Group Review Information**

Date Originated by OG: 21-Jul-00

Owners Group Comments:  
(No Comments)

Owners Group Resolution: Approved Date: 08-Nov-00

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**TSTF Review Information**

TSTF Received Date: 08-Nov-00 Date Distributed for Review: 08-Nov-00

OG Review Completed:  BWOG  WOG  CEOG  BWROG

TSTF Comments:  
(No Comments)

TSTF Resolution: Approved Date: 18-Jan-01

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**NRC Review Information**

NRC Received Date: 10-Apr-01

NRC Comments:  
(No Comments)

Final Resolution: Superseded by Revision Final Resolution Date: 03-Aug-01

**TSTF Revision 1****Revision Status: Active****Next Action: NRC**

Revision Proposed by: TSTF

Revision Description:  
This revision is a complete replacement of Revision 0.

The change has been narrowed in scope to only address snubbers. Other non-Technical Specifications support systems will be addressed in Risk Informed Technical Specifications Task Force (RITSTF) Initiative 7.

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**TSTF Review Information**

TSTF Received Date: 13-Dec-01 Date Distributed for Review: 13-Dec-01

OG Review Completed:  BWOG  WOG  CEOG  BWROG

TSTF Comments:  
(No Comments)

TSTF Resolution: Approved Date: 20-Dec-01

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**NRC Review Information**

1/6/2002

**TSTF Revision 1**

**Revision Status: Active**

**Next Action: NRC**

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NRC Received Date: 11-Jan-02

NRC Comments:  
(No Comments)

Final Resolution: NRC Action Pending

Final Resolution Date:

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**Incorporation Into the NUREGs**

File to BBS/LAN Date:

TSTF Informed Date:

TSTF Approved Date:

NUREG Rev Incorporated:

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**Affected Technical Specifications**

LCO 3.0 LCO and SR Applicability

LCO 3.0.2 LCO and SR Applicability

LCO 3.0.8 LCO and SR Applicability  
Change Description: Adds LCO 3.0.8

LCO 3.0.8 Bases LCO and SR Applicability  
Change Description: Adds LCO 3.0.8

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INSERT 1

LCO 3.0.8 When a Technical Specification LCO is not met solely due to one or more snubbers being unable to perform its related support function, the Technical Specification LCO is considered to be met for up to [72] hours. This is an exception to LCO 3.0.2 for the Technical Specification supported system. Upon expiration of the [72] hour delay time, the Technical Specification supported system shall be declared inoperable and the applicable Conditions and Required Actions for the Technical Specification supported system shall be entered in accordance with LCO 3.0.2.

INSERT 2

LCO 3.0.8 LCO 3.0.8 establishes an exception to LCO 3.0.2 for snubbers. This exception is provided because LCO 3.0.2 would require that the Conditions and Required Actions of the associated inoperable supported system LCO be entered solely due to the inability of one or more snubbers to perform their function. This exception is justified because the actions that are required to ensure the unit is maintained in a safe condition are specified in the snubber requirements, which are located outside of the Technical Specifications (TS) under licensee control. The snubber requirements are located outside of the TS because they have been determined to not meet the criteria for retention in the TS located in 10 CFR 50.36(c)(2)(ii), and, as such, have been determined to be appropriate for control by the licensee.

When one or more snubbers is not capable of providing the required safety function required for OPERABILITY of a supported TS system, a delay time is provided to allow required maintenance, testing, and/or repair. Licensee-controlled documents may also require other compensatory actions to be taken during the delay time. During this delay time, the supported TS system is not considered inoperable and the Conditions and Required Actions of the supported system do not have to be entered. If the delay time expires without the snubber(s) being restored to a condition in which it can perform the safety function required for supported system OPERABILITY, the TS supported system must be declared inoperable and its Conditions and Required Actions followed in accordance with LCO 3.0.2.

**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.

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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, and LCO 3.0.8.

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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**LCO 3.0.4** When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall not be made except 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. 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.

Exceptions to this Specification are stated in the individual Specifications.

LCO 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, 3, and 4.

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### 3.0 LCO Applicability

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#### LCO 3.0.7 (continued)

all other TS requirements remain unchanged. Compliance with Test Exception LCOs 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.

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Insert 1

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

## BASES

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LCOs	LCO 3.0.1 through LCO 3.0.2 establish the general requirements applicable to all Specifications and apply at all times, unless otherwise stated.
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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).
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LCO 3.0.2	<p>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:</p> <ol style="list-style-type: none"> <li>a. Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification and</li> <li>b. Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified.</li> </ol>
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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.

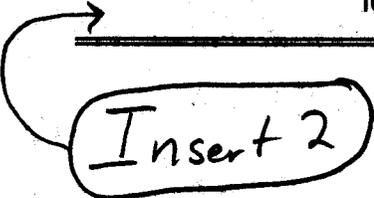
**BASES****LCO 3.0.6 (continued)**

the support system. The ACTIONS for a support system LCO adequately addresses the inoperabilities of that system without reliance on entering its supported system LCO. When the loss of function is the result of multiple support systems, the appropriate LCO is the LCO for the support system.

**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 exact unit performance characteristics, to perform special maintenance activities, and to perform special evolutions. Test Exception LCOs [3.1.8, 3.1.9, and 3.4.19] allow 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 Test Exception LCOs is optional. A special operation may be performed either under the provisions of the appropriate 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.



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### 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.

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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 and LCO 3.0.8.

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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LCO 3.0.4 When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall not be made except 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. 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.

Exceptions to this Specification are stated in the individual Specifications.

LCO 3.0.4 is only applicable for entry into a MODE or others specified condition in the Applicability in MODES 1, 2, 3, and 4.

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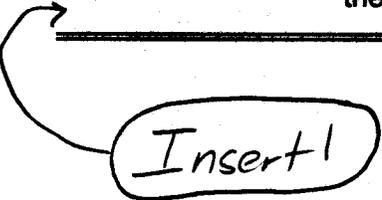
### 3.0 LCO Applicability

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#### LCO 3.0.7 (continued)

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.

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Insert 1

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

### BASES

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LCOs	LCO 3.0.1 through LCO 3.0.2 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	<p>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:</p> <ol style="list-style-type: none"><li>Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification and</li><li>Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified.</li></ol>

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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.

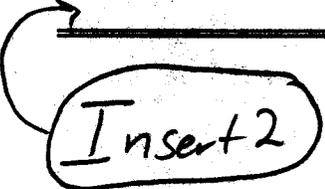
**BASES****LCO 3.0.6 (continued)**

the support system. The **ACTIONS** for a support system LCO adequately addresses the inoperabilities of that system without reliance on entering its supported system LCO. When the loss of function is the result of multiple support systems, the appropriate LCO is the LCO for the support system.

**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 LCOs [3.1.8 and 3.4.10] allow 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 Test Exception LCOs is optional. A special operation may be performed either under the provisions of the appropriate 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

### 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.

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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 *and LCO 3.0.8.*

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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LCO 3.0.4 When an LCO is not met, entry into a ~~MODE~~ or other specified condition in the Applicability shall not be made except 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. 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.

Exceptions to this Specification are stated in the individual Specifications.

LCO 3.0.4 is only applicable for entry into a ~~MODE~~ or other specified condition in the Applicability in MODES 1, 2, 3, and 4.

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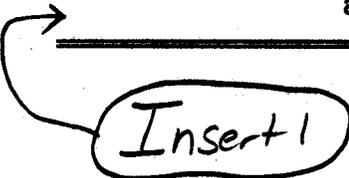
### 3.0 LCO Applicability

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#### LCO 3.0.7 (continued)

STE LCOs is optional. When an STE LCO is desired to be met but is not met, the ACTIONS of the STE LCO shall be met. When an STE LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with the other applicable Specifications.

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Insert 1

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

### BASES

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LCOs	LCO 3.0.1 through LCO 3.0.2 establish the general requirements applicable to all Specifications and apply at all times unless otherwise stated.
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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).
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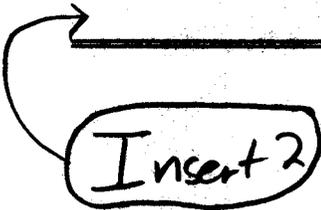
LCO 3.0.2	<p>LCO 3.0.2 establishes that upon discovery of a failure to meet an LCO, the associated ACTIONS shall be met. The Completion Time of each Required Action for an ACTIONS Condition is applicable from the point in time that an ACTIONS Condition is entered. The Required Actions establish those remedial measures that must be taken within specified Completion Times when the requirements of an LCO are not met. This Specification establishes that:</p> <ol style="list-style-type: none"><li>Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification and</li><li>Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified.</li></ol> <p>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.</p>
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**BASES****LCO 3.0.7 (continued)**

conduct of the special test, those Surveillances need not be performed unless specified by the ACTIONS or SRs of the STE LCO.

ACTIONS for STE LCOs provide appropriate remedial measures upon failure to meet the STE LCO. Upon failure to meet these ACTIONS, suspend the performance of the special test and enter the ACTIONS for all LCOs that are then not met. Entry into LCO 3.0.3 may possibly be required, but this determination should not be made by considering only the failure to meet the ACTIONS of the STE LCO.



Insert 2

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

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.
LCO 3.0.2	<p>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, <u>and</u> LCO 3.0.6, <u>and LCO 3.0.8.</u></p> <p>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.</p>
LCO 3.0.3	<p>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:</p> <ol style="list-style-type: none"> <li>MODE 2 within [7] hours,</li> <li>MODE 3 within 13 hours, and</li> <li>MODE 4 within 37 hours.</li> </ol> <p>Exceptions to this Specification are stated in the individual Specifications.</p> <p>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.</p> <p>LCO 3.0.3 is only applicable in MODES 1, 2, and 3.</p>
<p><b>- REVIEWER'S NOTE -</b></p> <p>The brackets around the time provided to reach MODE 2 allow a plant to extend the time from 7 hours to a plant specific time. Before the time can be changed, plant specific data must be provided to support the extended time.</p>	
LCO 3.0.4	<p>When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall not be made except 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. This Specification shall not prevent changes in MODES or other specified</p>

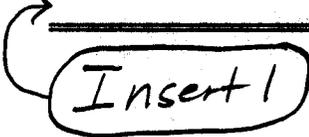
## LCO Applicability

## LCO 3.0.6 (continued)

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.

## LCO 3.0.7

Special Operations LCOs in Section 3.10 allow specified Technical Specifications (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with Special Operations LCOs is optional. When a Special Operations LCO is desired to be met but is not met, the ACTIONS of the Special Operations LCO shall be met. When a Special Operations LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with the other applicable Specifications.



Insert 1

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

## BASES

LCOs	<p style="text-align: center;">③</p> <p>LCO 3.0.1 through LCO 3.0.2 establish the general requirements applicable to all Specifications and apply at all times, unless otherwise stated.</p>
LCO 3.0.1	<p>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).</p>
LCO 3.0.2	<p>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:</p> <ol style="list-style-type: none"> <li>a. Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification and</li> <li>b. Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified.</li> </ol>

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.

## BASES

## LCO 3.0.6 (continued)

the support system. The ACTIONS for a support system LCO adequately addresses the inoperabilities of that system without reliance on entering its supported system LCO. When the loss of function is the result of multiple support systems, the appropriate LCO is the LCO for the support system.

## 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. Special Operations LCOs in Section 3.10 allow specified 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 Special Operations LCO represents a condition not necessarily in compliance with the normal requirements of the TS. Compliance with Special Operations LCOs is optional. A special operation may be performed either under the provisions of the appropriate Special Operations LCO or under the other applicable TS requirements. If it is desired to perform the special operation under the provisions of the Special Operations LCO, the requirements of the Special Operations LCO shall be followed. When a Special Operations LCO requires another LCO to be met, only the requirements of the LCO statement are required to be met regardless of that LCO's Applicability (i.e., should the requirements of this other LCO not be met, the ACTIONS of the Special Operations LCO apply, not the ACTIONS of the other LCO). However, there are instances where the Special Operations LCO ACTIONS may direct the other LCOs' ACTIONS be met. The Surveillances of the other LCO are not required to be met, unless specified in the Special Operations LCO. If conditions exist such that the Applicability of any other LCO is met, all the other LCO's requirements (ACTIONS and SRs) are required to be met concurrent with the requirements of the Special Operations LCO.



Insert 2

### 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 LGO 3.0.7.

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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, *and LCO 3.0.8.*

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 2** within 7 hours,
- b. **MODE 3** within 13 hours, and
- c. **MODE 4** 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, and 3.**

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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 not be made except 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. 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.

Exceptions to this Specification are stated in the individual Specifications.

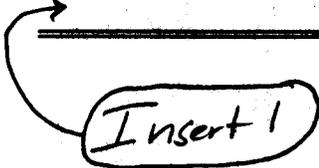
LCO 3.0.4 is only applicable for entry into a **MODE** or other specified condition in the Applicability in **MODES 1, 2, and 3.**

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## LCO Applicability

## LCO 3.0.7 (continued)

Operations LCOs is optional. When a Special Operations LCO is desired to be met but is not met, the ACTIONS of the Special Operations LCO shall be met. When a Special Operations LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with the other applicable Specifications.



Insert 1

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

### BASES

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LCOs	LCO 3.0.1 through LCO 3.0.2 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	<p>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:</p> <ol style="list-style-type: none"><li>Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification and</li><li>Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified.</li></ol>

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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.

**BASES**

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**LCO 3.0.6 (continued)**

the support system. The **ACTIONS** for a support system LCO adequately addresses the inoperabilities of that system without reliance on entering its supported system LCO. When the loss of function is the result of multiple support systems, the appropriate LCO is the LCO for the support system.

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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. Special Operations LCOs in Section 3.10 allow specified 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 Special Operations LCO represents a condition not necessarily in compliance with the normal requirements of the TS. Compliance with Special Operations LCOs is optional. A special operation may be performed either under the provisions of the appropriate Special Operations LCO or under the other applicable TS requirements. If it is desired to perform the special operation under the provisions of the Special Operations LCO, the requirements of the Special Operations LCO shall be followed. When a Special Operations LCO requires another LCO to be met, only the requirements of the LCO statement are required to be met regardless of that LCO's Applicability (i.e., should the requirements of this other LCO not be met, the **ACTIONS** of the Special Operations LCO apply, not the **ACTIONS** of the other LCO). However, there are instances where the Special Operations LCO **ACTIONS** may direct the other LCOs' **ACTIONS** be met. The **Surveillances** of the other LCO are not required to be met, unless specified in the Special Operations LCO. If conditions exist such that the Applicability of any other LCO is met, all the other LCO's requirements (**ACTIONS** and **SRs**) are required to be met concurrent with the requirements of the Special Operations LCO.

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Insert 2