

January 14, 2014

TSTF-14-02
PROJ0753

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

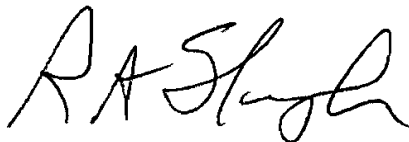
SUBJECT: Transmittal of TSTF-529, Revision 2, "Clarify Use and Application Rules"

Enclosed for NRC review is Revision 2 of TSTF-529, "Clarify Use and Application Rules."
TSTF-529 is applicable to all plant types.

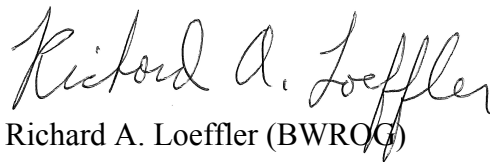
TSTF-529 was revised to reflect the discussions between the NRC and the TSTF at the July 18, 2013 public meeting.

The TSTF requests that the NRC bill the Boiling Water Reactor Owners' Group and the Pressurized Water Reactor Owners Group for the review of this Traveler.

Should you have any questions, please do not hesitate to contact us.



Robert Slough (PWROG/W)



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Otto W. Gustafson (PWROG/CE)



Wendy E. Croft (PWROG/B&W)

Enclosure

cc: Michelle Honcharik, Licensing Processes Branch, NRC
Robert Elliott, Technical Specifications Branch, NRC

Technical Specifications Task Force Improved Standard Technical Specifications Change Traveler

Clarify Use and Application Rules

NUREGs Affected: ☒ 1430 ☒ 1431 ☒ 1432 ☒ 1433 ☒ 1434

Classification: 1) Technical Change

Recommended for CLIIP?: Yes

Correction or Improvement: Improvement

NRC Fee Status: Not Exempt

Changes Marked on ISTS Rev 4.0

See attached justification.

Revision History

OG Revision 0

Revision Status: Closed

Revision Proposed by: TSTF

Revision Description:

Original Issue

Owners Group Review Information

Date Originated by OG: 27-May-10

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 17-Jun-11

TSTF Review Information

TSTF Received Date: 25-Aug-11 Date Distributed for Review 25-Aug-11

OG Review Completed: ☒ BWOG ☒ WOG ☒ CEOG ☒ BWROG

TSTF Comments:
(No Comments)

TSTF Resolution: Approved Date: 21-Sep-11

NRC Review Information

NRC Received Date: 21-Sep-11

NRC Comments:
See the Revision 1 description.

Final Resolution: NRC Requests Changes: TSTF Will Revise Final Resolution Date: 16-Oct-12

TSTF Revision 1

Revision Status: Closed

Revision Proposed by: TSTF

14-Jan-14

TSTF Revision 1**Revision Status: Closed**

Revision Description:

At an October 16, 2012 TSTF/NRC meeting to discuss TSTF-529, the TSTF agreed to revise TSTF-529, Revision 0. The following changes are made to the indicated changes numbered in justification:

1. Revision 0 changed Section 1.3 and the LCO 3.0.2 Bases to define and give an example of "time of discovery." The NRC pointed out that LCO 3.0.2 uses the term "discovery" instead of "time of discovery." Revision 1 proposes to revise Section 1.3 to use the term "discovery" instead of "time of discovery," and to reference two NRC documents that clarify this concept in the Section 3.0 Bases, which together resolve the issue.
 2. Revision 0 changed Section 1.3 for NUREG-1432 (Westinghouse plants) to discuss application of Completion Times for certain existing I&C Notes. In Revision 1, the insert is revised and made applicable to all ISTS NUREGs to explain the exception "unless otherwise specified" in the Section 1.3 statement that Completion Times are referenced to the discovery of a situation that requires entering an ACTIONS Condition unless otherwise specified.
 3. No change.
 4. No change.
 5. Revision 1 replaces the proposed LCO 3.0.5 and associated Bases change to address the NRC concern that the Revision 0 proposal was not focused on testing to restore Operability.
 6. Revision 0 revised the Bases of LCO 3.0, LCO 3.0.2, and SR 3.0 to state that the LCO and SR usage rules were applicable to Section 3.0 of the TS and to Chapter 5 when invoked. Enforcement Guidance Memorandum (EGM) 12-001, "Dispositioning Noncompliance with Administrative Controls Technical Specifications Programmatic Requirements that Extend Test Frequencies and Allow Performance of Missed Tests," issued by the NRC on February 24, 2012, and Regulatory Issue Summary 2012-10, "NRC Staff Position on Applying Surveillance Requirements 3.0.2 and 3.0.3 to Administrative Controls Program Tests," issued August 23, 2012, stated the NRC position that the Section 3.0 rules were not applicable to Chapter 5 requirements. The proposed change is removed from Revision 1 and any necessary clarifications to the Bases will be included in a Traveler that addresses the EGM and RIS.
 7. Revision 0 replaced the phrase "operational convenience" in the TS Bases in four locations (LCO 3.0.2, LCO 3.0.3, SR 3.0.2 and SR 3.0.3). As agreed by the TSTF and NRC, Revision 1 focuses the change on removing the phrase from SR 3.0.2 and SR 3.0.3. The TSTF and NRC will hold a public meeting to discuss replacement, definition, or clarification of the term "operational convenience" in LCO 3.0.2 and LCO 3.0.3.
 8. No change.
 9. No change.
 10. No change.
 11. No change.
 12. No change.
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TSTF Revision 1**Revision Status: Closed**

Owners Group Review Information

Date Originated by OG: 24-Jan-13

Owners Group Comments
(No Comments)Owners Group Resolution: Approved Date: 13-Feb-13

TSTF Review Information

TSTF Received Date: 13-Feb-13 Date Distributed for Review 13-Feb-13

OG Review Completed: ☒ BWOG ☒ WOG ☒ CEOG ☒ BWROGTSTF Comments:
(No Comments)TSTF Resolution: Approved Date: 28-Feb-13

NRC Review Information

NRC Received Date: 28-Feb-13

NRC Comments:

NRC accepted for review on 6/20/2013.

Final Resolution: NRC Requests Changes: TSTF Will Revise Final Resolution Date: 18-Jul-13

TSTF Revision 2**Revision Status: Active**

Revision Proposed by: NRC

Revision Description:

At the July 18, 2013 TSTF/NRC public meeting, the TSTF agreed to make the following changes to address NRC concerns:

Item 1: Removed the proposed references and added the following to Section 1.3, "The Completion Time begins when a senior licensed operator on the operating shift crew with responsibility for plant operations makes the declaration that an LCO is not met and an ACTIONS Condition is entered, unless otherwise specified."

Item 2: Revised the inserted paragraph to address NRC comments

Item 3: The TSTF removed the change to LCO 3.0.4 and revised the LCO 3.0.4 Bases.

Item 4: No changes made in Revision 2.

Item 5: The TSTF agreed to not revise LCO 3.0.5 and to include the clarification in the Bases.

Item 6: No changes made in Revision 2.

Item 7: No changes made in Revision 2.

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TSTF Revision 2**Revision Status: Active**

Item 8: The TSTF revised the paragraph to use consistent terminology.

Item 9: No changes made in Revision 2.

Item 10: No changes made in Revision 2.

Item 11: The justification and markup were revised to reflect the removal of the LCO 3.0.5 rewrite in Change Number 5, while retaining the proposed Revision 1 Bases changes.

Item 12: The proposed Bases insert was revised based on the NRC comments.

Owners Group Review Information

Date Originated by OG: 26-Aug-13

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 16-Sep-13

TSTF Review Information

TSTF Received Date: 16-Sep-13

Date Distributed for Review 18-Sep-13

OG Review Completed: ☒ BWOG ☒ WOG ☒ CEOG ☒ BWROG

TSTF Comments:
(No Comments)

TSTF Resolution: Approved

Date: 18-Nov-13

NRC Review Information

NRC Received Date: 14-Jan-14

Affected Technical Specifications

1.3	Completion Times
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LCO 3.0.2 Bases	LCO Applicability
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SR 3.0.2 Bases	LCO Applicability
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LCO 3.0.3 Bases	LCO Applicability
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SR 3.0.3 Bases	LCO Applicability
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LCO 3.0.4	LCO Applicability
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LCO 3.0.4 Bases	LCO Applicability
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LCO 3.0.5 Bases	LCO Applicability
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1.0 Description

The proposed change will revise Sections 1.3, "Completion Times," and Section 3.0, "LCO Applicability" of the Technical Specifications (TS) and the TS Bases for Section 3.0, "LCO Applicability" and "SR Applicability," to clarify the use and application of the existing TS usage rules. The proposed change clarifies issues that have resulted in NRC Task Interface Agreement requests, a licensee request for an interpretation of the TS, licensee violations, and many licensee and NRC inspector questions.

2.0 Proposed Change

The following changes to the TS and Bases are proposed:

1. Section 1.3 is modified to clarify "discovery."
2. Revisions are made to Section 1.3 to discuss exceptions to starting the Completion Time at condition entry.
3. Limiting Condition for Operation (LCO) 3.0.4.a Bases are modified to clarify that Required Actions must be followed after entry into the Modes and other specified conditions in the Applicability. An example is added to the Bases.
4. An editorial change is made to LCO 3.0.4.b to clarify that LCO 3.0.4.a, LCO 3.0.4.b, and LCO 3.0.4.c are independent options. The LCO 3.0.4.a Bases are revised to support the clarification.
5. The LCO 3.0.5 Bases are revised to clarify its application.
6. This change was removed in Revision 1.
7. The Bases of Surveillance Requirement (SR) 3.0.2 and SR 3.0.3 are revised to remove the term "Operational Convenience."
8. Changes are made to the Bases of LCO 3.0.3 and SR 3.0.3 to use consistent terminology.
9. The LCO 3.0.3 Bases are corrected to state that a unit shutdown may be terminated and LCO 3.0.3 exited if the LCO is no longer applicable.
10. The LCO 3.0.4.c Bases are modified to replace a misleading TS reference.
11. The LCO 3.0.5 Bases are modified to clarify that LCO 3.0.5 should not be used if there are other alternatives to demonstrate that an LCO is met and maintain compliance with Actions. The LCO 3.0.5 Bases examples are revised.

12. The SR 3.0.3 Bases are modified to clarify when SR 3.0.3 may be applied and to state expectations for applying SR 3.0.3 when an SR has not been performed for an extended period.

A model application is included in the proposed change. The model may be used by licensees desiring to adopt TSTF-529 following publication by the NRC of the Notice of Availability in the Federal Register.

The model application requests NRC review and approval of the changes to the TS Bases. The TSTF has taken the conservative position that changes to the LCO 3.0 and SR 3.0 Bases have the potential to alter the application of the TS. In accordance with Paragraphs b.1 and d of the TS Bases Control Program, the proposed Bases changes must be reviewed and approved by the NRC prior to implementation. Following approval of the plant-specific license amendment request to adopt the Traveler, licensees will issue the revised Bases pages in accordance with the licensee TS Bases Control Program.

3.0 Background

In January and February 2009, the Technical Specifications Task Force (TSTF) and NRC met to discuss questions and possible ambiguities on the application of the Improved Standard Technical Specifications (ISTS). The topics for discussion were gathered from both the NRC and the industry. In all, ten areas of ambiguity were discussed. In almost all cases, the TSTF and the NRC reached agreement on the application of the ISTS or agreed on a process to reach agreement.

The TSTF agreed to prepare a TSTF Traveler for NRC review to clarify the TS use and application rules in LCO 3.0 and SR 3.0, to document areas of agreement in the TS and Bases, and present proposed resolutions for the remaining areas under question. The TSTF queried the industry and identified several areas in Section 1.3, LCO 3.0 and SR 3.0 that would benefit from clarification. These clarifications are generally minor or editorial, but routinely generate questions from licensee and NRC staff and are, therefore, worthy of correction.

Revision 0 of the Traveler was submitted on September 21, 2011. In September 2012, the NRC provided to the TSTF a draft of a letter giving reasons why the Traveler could not be accepted for review. A public meeting was held between the TSTF and the NRC on October 16, 2012, to discuss the NRC concerns. The Traveler was revised to address those concerns.

At a July 18, 2013 public meeting, the NRC provided comments on Revision 1 of the Traveler. This revision addresses those comments.

4.0 Technical Analysis

4.1 Revise Section 1.3 to Clarify "Discovery"

LCO 3.0.2 states, "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."

The LCO 3.0.2 Bases state, "LCO 3.0.2 establishes that upon discovery of a failure to meet an LCO, the associated ACTIONS shall be met." Section 1.3 states that the Completion Time is "referenced to the time of discovery of a situation (e.g., inoperable equipment or variable not within limits)." Understanding the term "discovery" is fundamental in applying Required Actions and associated Completion Times.

There sometimes is confusion by both NRC and industry staff on the meaning of the term "discovery." Much of this confusion results from differing guidance depending on whether one is considering TS compliance or reportability. Except in Section 1.3, the TS use the term "discovery," but Section 1.3 uses the phrase "time of discovery." This creates confusion because the reportability regulations, 10 CFR 50.72 and 10 CFR 50.73, and their associated guidance use the phrase "time of discovery" with a different meaning. Therefore, it is worthwhile to revise Section 1.3 to use the term "discovery" instead of "time of discovery" consistent with LCO 3.0.2 and the remainder of the TS and Bases.

The proposed change makes the following revision to the "Description" section of Section 1.3:

The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the ~~time of~~ discovery of a situation (e.g., inoperable equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO.

Unless otherwise specified, the Completion Time begins when a senior licensed operator on the operating shift crew with responsibility for plant operations makes the declaration that an LCO is not met and an ACTIONS Condition is entered. ...

If situations are discovered that require entry into more than one Condition at a time within a single LCO (multiple Conditions), the Required Actions for each Condition must be performed within the associated Completion Time. When in multiple Conditions, separate Completion Times are tracked for each Condition starting from the ~~time of~~ discovery of the situation that required entry into the Condition.

(The text in italics is added, and struck-out text is removed.)

The inserted text is taken from the NRC guidance in NRC Inspection Manual, Part 9900: Technical Guidance, "Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety" (Reference 2). Section 4.8, "Operator Awareness and Responsibilities," states:

"A senior licensed operator on the operating shift crew with responsibility for plant operations makes the declaration of operability, i.e., 'makes the call' on whether an SSC described in TSs is operable or inoperable."

This position is also consistent with the historical NRC position. For example, in a memorandum from H. L. Thompson, Director, Division of Licensing, to R. Starostecki, Director, Division of Reactor Projects, Region 1, dated August 9, 1985 (Reference 1 and Attachment 1), Mr. Thompson stated, "It is NRR's position that the time limitation of action requirements are applicable from the point in time that it is recognized that the requirements of a limiting condition of operation are not met. This is as noted by your example and proposed interpretation. It was also noted in your memo that this issue is further complicated by recent trends in NRC enforcement which cite the historical inoperability of equipment as a factor in determining the significance of loss of function violations."

This Section 1.3 revision in conjunction with the LCO 3.0.2 Bases makes it clear that discovery is when a senior licensed operator on the operating shift crew with responsibility for plant operations declares an LCO not met and a Condition is entered.

To our knowledge, the proposed change does not represent a point of disagreement between the NRC and the industry.

4.2 Revise Section 1.3 to Discuss Exceptions to Starting the Completion Time at Condition Entry

Section 1.3 states:

The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., inoperable equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO. (emphasis added.)

The phrase, "unless otherwise specified," is not explained in Section 1.3 or in the LCO 3.0.2 Bases. (Note that Section 4.1, above, describes a proposed change to the above paragraph that does not affect this change.)

There are a number of examples of specifying a different reference point for the start of the Completion Time other than discovery.

- All ISTS 3.8.1, "AC Sources - Operating," Required Action B.2, requires declaring required feature(s) supported by an inoperable diesel generator, inoperable when the redundant required feature(s) are inoperable. The Completion Time states, "4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)." In this case, the Completion Time does not begin until the conditions in the Completion Time are satisfied.
- BWR/4 and BWR/6 ISTS 3.3.1.1A and 3.3.1.1B, "Reactor Protection System Instrumentation," Table 3.3.1.1, contains a Note which states, "When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours provided the associated Function maintains RPS trip capability." It is

recognized that performing the required testing makes the channel inoperable, but entering the Required Actions and starting the Completion Time is deferred.

- Similar Notes appear in the BWR/4 and BWR/6 SR tables for Control Rod Block Instrumentation, BWR/4 Feedwater and Main Turbine High Water Level Trip Instrumentation, EOC-RPT Instrumentation, ATWS-RPT Instrumentation, ECCS Instrumentation, RCIC System Instrumentation, Primary Containment Isolation Instrumentation, Secondary Containment Isolation Instrumentation, BWR/6 RHR Containment Spray System Instrumentation, BWR/6 SPMU System Instrumentation, BWR/4 LLS Instrumentation, BWR/6 Relief and LLS Instrumentation, BWR/4 ISTS [MCREC] System Instrumentation, BWR/6 ISTS [CRFA] System Instrumentation, and LOP Instrumentation.
- Westinghouse ISTS 3.3.1A and 3.3.1B, "Reactor Trip System Instrumentation," Conditions D, E, K, L, M, N, O, and P, contain Notes similar to, "One channel may be bypassed for up to 12 hours for surveillance testing and setpoint adjustment." It is recognized that placing the train in bypass renders the train inoperable, but starting the Completion Time is deferred in accordance with the Notes.
- Westinghouse ISTS 3.3.2A and 3.3.2B, "Engineered Safety Feature Actuation System (ESFAS) Instrumentation," Conditions C, D, E, G, H, I, and K, contain Notes similar to, "One channel may be bypassed for up to 12 hours for surveillance testing and setpoint adjustment." It is recognized that placing the train in bypass renders the train inoperable, but starting the Completion Time is deferred in accordance with the Notes.
- Many BWR Actions in Section 3.3, "Instrumentation," have Completion Times similar to, "[1] hour from discovery of loss of initiation capability for features in both divisions." It is recognized that the Completion Time starts, not on Condition entry, but on meeting the condition in the Completion Time.

The lack of explanation has resulted in questions by licensees and inspectors. For example, if a clause that provides a delayed start time is no longer applicable or the time period in the clause has expired, it is unclear if the Completion Time is referenced to entry into the Condition or to the point at which the clause is exited. To address these questions, a paragraph is added to Section 1.3:

Unless otherwise specified, the Completion Time begins when a senior licensed operator on the operating shift crew with responsibility for plant operations makes the declaration that an LCO is not met and an ACTIONS Condition is entered. The "otherwise specified" exceptions are varied, such as a Required Action Note or Surveillance Requirement Note which provides an alternative time to perform specific tasks, such as testing, without starting the Completion Time. While utilizing the Note, should a Condition be applicable for any reason not addressed by the Note, the Completion Time begins. Should the time allowance in the Note be exceeded, the Completion Time begins at that point. The exceptions may also

be incorporated into the Completion Time. For example, LCO 3.8.1, "AC Sources - Operating," Required Action B.2, requires declaring required feature(s) supported by an inoperable diesel generator, inoperable when the redundant required feature(s) are inoperable. The Completion Time states, "4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)." In this case, the Completion Time does not begin until the conditions in the Completion Time are satisfied.

The first sentence in the added paragraph is discussed in Section 4.1.

Two other sentences in Section 1.3 are revised to establish internal consistency:

When in multiple Conditions, separate Completion Times are tracked for each Condition starting from the time of discovery of the situation that required entry into the Condition, *unless otherwise specified*.

and

The Required Actions of the Condition continue to apply to each additional failure, with Completion Times based on initial entry into the Condition, *unless otherwise specified*.

In a complementary change, the Bases of LCO 3.0.2 are revised to eliminate a minor discrepancy between the TS (Section 1.3) and the Bases. Section 1.3 states that a Completion Time is referenced to the time of discovery of a situation that requires entering an ACTIONS Condition unless otherwise specified (emphasis added). LCO 3.0.2 makes a similar statement but without the qualifier, "unless otherwise specified." Therefore, the LCO 3.0.2 Bases are revised to state:

The Completion Time of each Required Action for an ACTIONS Condition is applicable from the point in time that an ACTIONS Condition is entered, *unless otherwise specified*.

The changes are needed to be consistent with existing ISTS, as discussed above.

4.3 Clarifications to LCO 3.0.4.a Bases

LCO 3.0.4.a states:

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; ...

In the memorandum "Final Task Interface Agreement - Reevaluation of Implementation of Limiting Condition for Operation 3.0.4a, 'Mode Change Limitations,' At Palisades Nuclear Plant (TIA 2009-005)," dated September 17, 2009 (NRC Agencywide Document Access and Management System (ADAMS) Accession Number ML092540032), the

NRC issued a response to a Task Interface Agreement (TIA) request documenting the Staff position regarding the application of Technical Specification LCO 3.0.4.a. The NRC's stated position in the response to TIA 2009-005, was " ...while...completing the TS required actions to be entered before conducting a mode transition with inoperable equipment establishes the basis for continued operation, the completion of those actions is not a requirement for compliance with LCO 3.0.4a."

The Bases of LCO 3.0.4 are revised to clarify the intent of LCO 3.0.4.a, as described in the TIA response, as follows:

LCO 3.0.4.a allows entry into a MODE or other specified condition in the Applicability with the LCO not met when the associated ACTIONS to be entered *following entry into* ~~permit continued operation in~~ the MODE or other specified condition in the Applicability *will permit continued operation within the MODE or other specified condition* for an unlimited period of time. Compliance with ~~ACTIONS Required Actions~~ that permit continued operation of the unit for an unlimited period of time in a MODE or other specified condition provides an acceptable level of safety for continued operation. This is without regard to the status of the unit before or after the MODE change. Therefore, in such cases, entry into a MODE or other specified condition in the Applicability may be made *and the Required Actions followed after entry into the Applicability* ~~in accordance with the provisions of the Required Actions~~.

The LCO 3.0.4 Bases are also revised to add an example of the application of LCO 3.0.4.a. The example addresses a frequent question by clarifying that it is not necessary that every possible set of Required Actions allow continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time, only that a set of Required Actions allow continued operation. For example, it is not necessary to assume that the licensee does not perform the Required Actions, such as placing a channel in trip or starting a piece of equipment. The proposed Bases insert states:

For example, LCO 3.0.4.a may be used when the Required Action to be entered states that an inoperable instrument channel must be placed in the trip condition within the Completion Time. Transition into a MODE or other specified in condition in the Applicability may be made in accordance with LCO 3.0.4 and the channel is subsequently placed in the tripped condition within the Completion Time, which begins when the Applicability is entered. If the instrument channel cannot be placed in the tripped condition and the subsequent default ACTION ("Required Action and associated Completion Time not met") allows the OPERABLE train to be placed in operation, use of LCO 3.0.4.a is acceptable because the subsequent ACTIONS to be entered following entry into the MODE include ACTIONS (place the OPERABLE train in operation) that permit safe plant operation for an unlimited period of time in the MODE or other specified condition to be entered.

4.4 Editorial Clarification to LCO 3.0.4.b

LCO 3.0.4 contains three options, labeled paragraphs a, b, and c. Paragraph a ends with a semicolon and Paragraph b ends with ", or". This presentation is consistent with the ordered list format as described TSTF-GG-05-01, "Writers Guide for Plant-Specific Improved Technical Specifications," except that Paragraph b should end with a semicolon, such as "; or".

LCO 3.0.4.b states:

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

The separation of the majority of the text from the "or" conjunction by the phrase regarding exceptions has misled some readers to interpret the "or" statement to only apply to the phrase regarding exceptions and to believe that LCO 3.0.4.a, b, and c apply concurrently. The sentence is clarified by placing the statement regarding exceptions in parenthesis and to replace the ending comma with a semicolon:

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

The Bases are also revised to clarify this point. The introductory paragraph of LCO 3.0.4 is revised to insert the word "either" as follows: "in accordance with *either* LCO 3.0.4.a, LCO 3.0.4.b, or LCO 3.0.4.c" (Added text is in italics).

4.5 Revise the LCO 3.0.5 Bases to Clarify its Application

LCO 3.0.5 states:

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.

LCO 3.0.5 provides a necessary flexibility to facilitate restoring equipment to Operability (or to perform Surveillances required to verify Operability).

LCO 3.0.5 discusses equipment removed from service which is to be returned to service. This addresses the majority of situations, however, it does not address all situations in

which LCO 3.0.5 could be used. In some TS, ACTIONS involve the placement of redundant or alternate equipment or trains into service, or the repositioning (opening or closing) of components. An example is the Pressurizer Power Operated Relief Valves (PORVs) for Pressurized Water Reactors (PWRs). If a PORV is inoperable, the Required Action is to close the associated block valve in order to isolate the inoperable PORV. Once the PORV is repaired, it may be necessary to stroke the PORV in order to demonstrate its Operability. The closed block valve must be opened so that system pressure is restored to the PORV, allowing the PORV to be stroked. The Required Action to close the block valve does not clearly fall under the LCO 3.0.5 allowance because it does not involve "equipment removed from service or declared inoperable."

In a letter dated May 18, 2011, Calvert Cliffs Nuclear Power Plant LLC (CCNPP) requested a written interpretation from the NRC staff on the application of LCO 3.0.5 to six Required Actions in which use of LCO 3.0.5 would not involve restoring the component to service to perform required testing (NRC ADAMS Accession No. ML11145A085). The NRC responded on December 20, 2011 (NRC ADAMS Accession No. ML112940645). The NRC stated:

"The NRC staff concludes that CCNPP TS Required Action 3.3.7.B.1, 3.3.8.A.1, 3.4.11.A.1, 3.4.11.C.1, 3.7.3.A.1, and 3.7.8.A.1 are within the scope of the administrative controls applied by LCO 3.0.5 for the purpose of realignment of components needed for conducting the operability testing on equipment, so long as the testing could not be conducted while relying on TS Required Actions. This includes the repositioning of redundant or alternate equipment or trains previously manipulated to comply with the TS Required Action. The staff further concludes that LCO 3.0.5 would apply in all cases to systems or components in Section 3 of the licensee's TSs."

The LCO 3.0.5 Bases are revised to reflect the NRC staff interpretation of LCO 3.0.5 by adding the following paragraph:

In an interpretation dated December 20, 2012 (NRC Agencywide Document Access and Management System (ADAMS) Accession No, ML11145A085), the NRC concluded that the administrative controls in LCO 3.0.5 would apply in all cases to systems or components in Chapter 3 of the Technical Specifications, as long as the testing could not be conducted while complying with the Required Actions. This includes the realignment or repositioning of redundant or alternate equipment or trains previously manipulated to comply with ACTIONS, as well as equipment removed from service or declared inoperable to comply with ACTIONS.

4.6 This change was removed in Revision 1 of the Traveler.

4.7 Revise the Bases of SR 3.0.2 and SR 3.0.3 to Remove the Term "Operational Convenience"

The term "operational convenience" appears four times in the Bases of each ISTS NUREG: in the Bases of LCO 3.0.2, LCO 3.0.3, SR 3.0.2, and SR 3.0.3. It does not appear in the Specifications.

The ISTS LCO 3.0.2 Bases state:

The Completion Times of the Required Actions are also applicable when a system or component is removed from service intentionally. The reasons for intentionally relying on the ACTIONS include, but are not limited to, performance of Surveillances, preventive maintenance, corrective maintenance, or investigation of operational problems. Entering ACTIONS for these reasons must be done in a manner that does not compromise safety. Intentional entry into ACTIONS should not be made for operational convenience. Additionally, if intentional entry into ACTIONS would result in redundant equipment being inoperable, alternatives should be used instead. Doing so limits the time both subsystems/divisions of a safety function are inoperable and limits the time conditions exist which may result in LCO 3.0.3 being entered. (emphasis added).

The ISTS LCO 3.0.3 Bases state:

This Specification delineates the time limits for placing the unit in a safe MODE or other specified condition when operation cannot be maintained within the limits for safe operation as defined by the LCO and its ACTIONS. It is not intended to be used as an operational convenience that permits routine voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable. (emphasis added).

The ISTS SR 3.0.2 Bases state:

The provisions of SR 3.0.2 are not intended to be used repeatedly merely as an operational convenience to extend Surveillance intervals (other than those consistent with refueling intervals) or periodic Completion Time intervals beyond those specified. (emphasis added).

The ISTS SR 3.0.3 Bases state:

Failure to comply with specified Frequencies for SRs is expected to be an infrequent occurrence. Use of the delay period established by SR 3.0.3 is a flexibility, which is not intended to be used as an operational convenience to extend Surveillance intervals. While up to 24 hours or the limit of the specified Frequency is provided to perform the missed Surveillance, it is expected that the

missed Surveillance will be performed at the first reasonable opportunity. The determination of the first reasonable opportunity should... (Emphasis added).

Use of the term "operational convenience" in the Bases of the TS has changed and been expanded from its original use and intent, and the revised Bases have created difficulty in interpreting and applying the current guidance. Bases revisions are proposed to replace this term in SR 3.0.2 and SR 3.0.3 with information reflecting its original intent.

The term "operational convenience" first appeared in several 1987-era documents. Its first use is in the model Bases markups attached to Generic Letter (GL) 87-09, "Sections 3.0 and 4.0 of the Standard Technical Specifications (STS) on the Applicability of Limiting Conditions for Operation and Surveillance Requirements," dated June 4, 1987 (Reference 3). Copies of the applicable Model PWR Bases pages from GL 87-09, Enclosure 3, are included as Attachment 2 for reference. In the two GL 87-09 Bases sections where the term "operational convenience" is used, it is equated with "(routine) voluntary removal of a system(s) or component(s) from service in lieu of other alternatives that would not result in redundant systems or components being inoperable." Also, the operational convenience concept is only linked to intentional entries into Actions that directly contain a shutdown requirement. As stated, "It is not intended that the shutdown ACTION requirements be used as an operational convenience which permits (routine) voluntary removal of a system(s) or component(s) from service in lieu of other alternatives that would not result in redundant systems or components being inoperable" (emphasis added). The term "operational convenience" was not utilized in the Bases for Surveillance Requirement 4.0.2 (now called SR 3.0.2) or in the Bases for SR 4.0.3 (now SR 3.0.3).

The question of potential misinterpretation of the proposed words in GL 87-09 was raised almost immediately by the industry. For example, in a meeting held with Carolina Power & Light on September 17, 1987 (Reference 4 and Attachment 3), when the intent of the GL words were still fresh, the NRC clarified that the term was only intended to limit intentional entry into ACTIONS when the situation involves redundant systems being out of service. The NRC staff stated that, for both Bases sentences, "...the point of clarification is that the last echelon of defense should not be removed from service such that this would invoke a prompt shutdown action requirement, in lieu of other alternatives that would not result in redundant systems being out of service simultaneously."

The third 1987 document (Reference 5 and Attachment 4) is an Inspection Manual Part 9900 Technical Guidance document, "Standard Technical Specifications (STS) Section 3.0.3 Limiting Conditions for Operation." Similar to the above, the operational convenience words are linked to situations in which redundant safety systems would be out of service, and it explains that the concern is for situations in which entry into ACTIONS would show a disregard for plant safety.

In the 1991 time frame, during the development of Revision 0 of the ISTS NUREGs, the above described concept was broken down into several separate sentences in the LCO 3.0.2 Bases. Additional changes made during the development of the ISTS (some at the request of the industry) resulted in the term "operational convenience" becoming

separated from the concept of "(routine) voluntary removal of a system(s) or component(s) from service in lieu of other alternatives that would not result in redundant systems or components being inoperable." It was also separated from the link to Actions that directly involve a shutdown requirement. In addition, the term was introduced into the SR 3.0.2 Bases in circumstances in which the GL 87-09 intent was not applicable. The June 1992 "Proof and Review" version of the ISTS NUREGs also added the term to the SR 3.0.3 Bases, again in circumstances that are not consistent with the original intent, as the SR usage rules are not related to entry into ACTIONS.

The TSTF is not proposing to remove the term "operational convenience" in LCO 3.0.2 or LCO 3.0.3 at this time. At the October 16, 2012 public meeting between the TSTF and the NRC regarding TSTF-529, the NRC and TSTF agreed to hold a public meeting to discuss the concept of operational convenience in LCO 3.0.2 and LCO 3.0.3 and to discuss needed changes or clarifications.

The proposed change revises the Bases of SR 3.0.2 and SR 3.0.3 to restore the original intent and to eliminate the incorrect application of the term "operational convenience."

The Bases of SR 3.0.2 are revised to state:

The provisions of SR 3.0.2 are not intended to be used repeatedly ~~merely as an operational convenience~~ to extend Surveillance intervals (other than those consistent with refueling intervals) or periodic Completion Time intervals beyond those specified.

This change does not alter the intent, while eliminating the inconsistent use of the term "operational convenience."

The Bases of SR 3.0.3 are revised to state:

Failure to comply with specified Frequencies for SRs is expected to be an infrequent occurrence. Use of the delay period established by SR 3.0.3 is a flexibility which is not intended to be used ~~as an operational convenience repeatedly~~ to extend Surveillance intervals.

This change does not alter the intent, while eliminating the inconsistent use of the term "operational convenience." The term "repeatedly" is added for consistency with SR 3.0.2 and to avoid the Bases being in apparent conflict with the allowance in SR 3.0.3.

4.8 Revise the Bases of LCO 3.0.3 and SR 3.0.3 to Improve Terminology

The LCO 3.0.3 Bases uses the term "reaching" when describing a transition to a lower MODE. The term "entering" is more accurate and is the commonly used term in the TS for MODE transitions. The term is ambiguous as it's not clear whether the MODE conditions in Table 1.1 are met. In seven locations in the LCO 3.0.3 Bases, the term "reaching" a MODE is replaced with the term "entering" a MODE.

The SR 3.0.3 Bases use the term "completing" with respect to an SR four times. Specification SR 3.0.3 uses the term "performing" a Surveillance. The term "performed" is defined in the "Description" section of Specification 1.4, "Use and Application, Frequency," as specifically determining the ability to meet the acceptance criteria. While the terms (complete and perform) have the same meaning in this context, the terms "perform" or "performance" are substituted in the Bases for "complete" or "completion" to improve consistency between the Specifications and the Bases.

These changes do not represent any change in intent, but are made for consistency within the ISTS.

4.9 Correct LCO 3.0.3 Bases to Acknowledge a Unit Shutdown may be Terminated and LCO 3.0.3 Exited if the LCO is No Longer Applicable

The LCO 3.0.3 Bases state:

A unit shutdown required in accordance with LCO 3.0.3 may be terminated and LCO 3.0.3 exited if any of the following occurs:

- a. The LCO is now met,
- b. A Condition exists for which the Required Actions have now been performed, or
- c. ACTIONS exist that do not have expired Completion Times. These Completion Times are applicable from the point in time that the Condition is initially entered and not from the time LCO 3.0.3 is exited.

This list is incomplete. As stated in LCO 3.0.2, "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." The list in the LCO 3.0.3 Bases does not acknowledge that a unit shutdown may be terminated and LCO 3.0.3 exited if the LCO is no longer applicable (i.e., the LCO that was not met which lead to entry into LCO 3.0.3).

The proposed change adds to the list a new paragraph b which states, "The LCO is no longer applicable," and the subsequent list items are renumbered.

This change does not represent any change in intent, but is made for consistency within the ISTS.

4.10 Modify the LCO 3.0.4.c Bases to Correct a Misleading TS Reference

The Bases to LCO 3.0.4.c state:

The risk assessments performed to justify the use of LCO 3.0.4.b usually only consider systems and components. For this reason, LCO 3.0.4.c is typically applied to Specifications which describe values and parameters (e.g., [Containment Air Temperature, Containment Pressure, MCPR, Moderator

Temperature Coefficient]), and may be applied to other Specifications based on NRC plant specific approval.

Although the list of specifications to which LCO 3.0.4.c is typically applied is in brackets (i.e., plant specific), the parenthetical phrase is misleading. In the ISTS, LCO 3.0.4.c is only applied to one specification, "RCS Specific Activity." This specification is not listed in the Bases and the listed specifications in the ISTS allow application of LCO 3.0.4.c. For consistency within the ISTS, the bracketed list of Specifications is replaced with "(e.g., RCS Specific Activity)."

4.11 Modify the LCO 3.0.5 Bases to Clarify that LCO 3.0.5 Should Not be Used if there are Other Alternatives that Maintain Compliance with Actions.

Many specifications contain provisions which allow Required Actions to not be followed to facilitate repair or testing. For example, the instrumentation specifications may allow channels to be placed in bypass, the containment air lock specification contains an Actions Note which allows entry and exit to perform repairs, and the containment isolation valve specification contains an Actions Note which allows isolated penetration flow paths to be unisolated under administrative control. In these cases, the risks and benefits of not following the Required Action were generically evaluated and accepted and, in some cases, additional restrictions are applied (such as a time limit for keeping an instrument channel in bypass).

When the specification does not provide an allowance to not follow a Required Action in order to establish equipment is Operable, LCO 3.0.5 may be used.

LCO 3.0.5 states:

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.

Because LCO 3.0.5 applies in many circumstances, it's not possible to generically evaluate every possible application and, therefore, its use should be minimized. As stated in the LCO 3.0.5 Bases,

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the required testing to demonstrate OPERABILITY.

In cases in which the Specification's ACTIONS or SRs contain allowances that permit testing to establish an LCO is met, licensees should use those features instead of LCO 3.0.5 as those features have been specifically evaluated and are consistent with LCO 3.0.2. In order to clarify this point, the LCO 3.0.5 Bases are modified by adding the following:

LCO 3.0.5 should not be used in lieu of other practicable alternatives that comply with Required Actions and that do not require changing the MODE or other specified conditions in the Applicability in order to demonstrate equipment is OPERABLE. LCO 3.0.5 is not intended to be used repeatedly.

The proposed change is consistent with the intent of LCO 3.0.5 and provides additional guidance to licensees to avoid misinterpretation.

In a related change, an incorrect example in the LCO 3.0.5 Bases is replaced. In NUREG-1431, -1432, -1433, and -1434 (Westinghouse, Combustion Engineering (CE), Boiling Water Reactor (BWR)/4 and BWR/6 plants), the existing example cites the containment isolation valve specification. As noted above, the containment isolation valve specification contains an Actions Note which eliminates the need to use LCO 3.0.5 to unisolate a penetration to perform Operability testing. Therefore, the example is removed. A new example is added to all of the ISTS NUREGs that describes manual valves closed to isolate Reactor Coolant System Pressure Isolation Valve leakage. The other existing examples in the LCO 3.0.5 Bases regarding instrument channels are revised and retained. The example recognizes that NUREG-1431 (Westinghouse plants) contains Required Actions Notes which allow channel testing in lieu of using LCO 3.0.5.

4.12 Modify the SR 3.0.3 Bases to Clarify when SR 3.0.3 May be Applied

As stated in SR 3.0.1, SR 3.0.3 is an exception to the requirement that a Surveillance be performed within the specified Frequency. SR 3.0.3 states, "If it is discovered that a Surveillance was not performed..." SR 3.0.3 is not an exception to the requirement for SRs to be met during the Modes or other specified conditions in the Applicability. This is a key consideration in the application of SR 3.0.3.

The terms "met" and "performed" are defined in Section 1.4, "Use and Application, Frequency" of the ISTS. It states:

The use of "met" or "performed" in these instances conveys specific meanings. A Surveillance is 'met' only when the acceptance criteria are satisfied. Known failure of the requirements of a Surveillance, even without a Surveillance specifically being 'performed,' constitutes a Surveillance not 'met.' 'Performance' refers only to the requirement to specifically determine the ability to meet the acceptance criteria.

The Bases of SR 3.0.3 also state that SR 3.0.3 is an exception to performing the SR within the specified Frequency, not to the requirement an SR be met. The Bases state;

The basis for this delay period includes ... the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the requirements.

The Bases of SR 3.0.3 also state:

If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Therefore, if an SR has not been performed within the specified Frequency and it is known that the acceptance criteria of the SR are not met, then the equipment is inoperable and SR 3.0.3 cannot be applied.

NRC Inspection Manual, Part 9900: Technical Guidance, "Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety," Section 3.9 states:

The discovery of a degraded or nonconforming condition may call the operability of one or more SSCs [structures, systems, or components] into question. A subsequent determination of operability should be based on the licensee's 'reasonable expectation,' from the evidence collected, that the SSCs are operable and that the operability determination will support that expectation. Reasonable expectation does not mean absolute assurance that the SSCs are operable. The SSCs may be considered operable when there is evidence that the possibility of failure of an SSC has increased, but not to the point of eroding confidence in the reasonable expectation that the SSC remains operable. The supporting basis for the reasonable expectation of SSC operability should provide a high degree of confidence that the SSCs remain operable. It should be noted that the standard of 'reasonable expectation' is a high standard, and that there is no such thing as an indeterminate state of operability; an SSC is either operable or inoperable.

This concept of "reasonable expectation" is directly applicable to the question of whether a licensee may apply SR 3.0.3 to an SR that has not been performed within its specified Frequency because in both cases the question to be addressed is whether the associated equipment is believed to be Operable or that variables are within limits. If the licensee has a reasonable expectation (a high standard) that performance of the SR will confirm that the equipment is Operable or a variable to be verified is within limits, then SR 3.0.3 may be applied to the SR which has not been performed. If the licensee does not have this reasonable expectation, then under SR 3.0.1 the SR is not met and the associated LCO is not met.

In most cases, discovery of an SR that has not been performed within the specified Frequency occurs when a single performance has been missed. In that case, a review of

the surveillance history and equipment performance may be sufficient to provide a reasonable expectation that the Surveillance will be met when performed.

However, in some cases an SR, or portions of an SR, may not have been performed for more than one Frequency period, or may not have ever been performed. In that case, establishing a reasonable expectation that the SR is met is more difficult. The licensee will consider other indications, tests, or activities for an indication of whether the SR will be met when performed. These indications must be on the affected components and not inferred from the performance of similar components. The rigor of determining whether there is a reasonable expectation an SR will be met when performed should increase based on the length of time since the last successful performance. For long delays or for SRs that have never been performed, a more rigorous evaluation, documented in sufficient detail to explain the basis for the determination, should be performed.

The preceding discussion is proposed to be captured in the SR 3.0.3 Bases with the following addition:

SR 3.0.3 is only applicable if there is a reasonable expectation the associated equipment is OPERABLE or that variables are within limits, and it is expected that the Surveillance will be met when performed. Many factors should be considered, such as the period of time since the Surveillance was last performed, or whether the Surveillance, or a portion thereof, has ever been performed, and any other indications, tests, or activities that might support the expectation that the Surveillance will be met when performed. An example of the use of SR 3.0.3 would be a relay contact that was not tested as required in accordance with a particular SR, but previous successful performances of the SR included the relay contact; the adjacent, physically connected relay contacts were tested during the SR performance; the subject relay contact has been tested by another SR; or historical operation of the subject relay contact has been successful. It is not sufficient to infer the behavior of the associated equipment from the performance of similar equipment. The rigor of determining whether there is a reasonable expectation a Surveillance will be met when performed should increase based on the length of time since the last performance of the Surveillance. If the Surveillance has been performed recently, a review of the Surveillance history and equipment performance may be sufficient to support a reasonable expectation that the Surveillance will be met when performed. For Surveillances that have not been performed for a long period or that have never been performed, a rigorous evaluation based on objective evidence should provide a high degree of confidence that the equipment is OPERABLE. The evaluation should be documented in sufficient detail to allow a knowledgeable individual to understand the basis for the determination.

The proposed Bases wording is consistent with the existing requirements of SR 3.0.3 and the philosophy of "met" and "performed" SRs as described in Section 1.4 of the TS.

The proposed Bases are also consistent with the intent of SR 3.0.3 as stated in GL 87-09. It states, "It is overly conservative to assume that systems or components are inoperable

when a surveillance has not been performed because the vast majority of surveillances do in fact demonstrate that systems or components are operable. When a surveillance is missed, it is primarily a question of operability that has not been verified by the performance of a Surveillance Requirement." The fact that SRs must be met in order to apply SR 3.0.3 to SRs that have not been performed within their specified Frequency implements the assumption that systems or components are operable.

Conclusion

The proposed changes are consistent with the current intent of Section 1.3, and LCO 3.0 and SR 3.0 and their associated Bases and will increase the clarity and allow consistent application of the ISTS.

5.0 Regulatory Analysis

5.1 No Significant Hazards Consideration

The Technical Specifications Task Force (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 revises Section 1.3, "Completion Times," and Section 3.0, "LCO Applicability" of the Technical Specifications (TS) and the TS Bases for Section 3.0, "LCO Applicability" and "SR Applicability," to clarify the use and application of the TS usage rules. Section 1.3 is modified to clarify the concept of "discovery" that a Limiting Condition for Operation (LCO) is not met and to describe existing exceptions to the start of Completion Times in the TS. An editorial change is made to LCO 3.0.4.b to clarify that LCO 3.0.4.a, LCO 3.0.4.b, and LCO 3.0.4.c are independent options. The Bases of LCO 3.0.4.a are modified to clarify that Required Actions must be followed after entry into the Modes and other specified conditions in the Applicability. The SR 3.0.2 and SR 3.0.3 Bases are revised to remove the term "operational convenience," and the LCO 3.0.3 and SR 3.0.3 Bases are revised to use terminology consistent with the corresponding TS. The LCO 3.0.5 Bases are modified to clarify its applicability to all TS Section 3 Required Actions, and that LCO 3.0.5 should not be used if there are other alternatives to demonstrate Operability that maintain compliance with Actions. An inaccurate example in the LCO 3.0.5 Bases is replaced and another example is revised. The SR 3.0.3 Bases are modified to clarify when SR 3.0.3 may be applied and to state expectations for applying SR 3.0.3 when an SR has not been performed for an extended period.

The changes to Section 1.3 and LCO 3.0.4 have no effect on the requirement for systems to be Operable and have no effect on the application of TS actions. The proposed Bases changes clarify the appropriate application of the existing TS requirements. Since the proposed change does not significantly affect system Operability, the proposed change will have no significant effect on the initiating events for accidents previously evaluated and will have no significant effect on the ability of the systems to mitigate accidents previously evaluated.

Therefore, it is concluded that 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 to the TS usage rules does not affect the design or function of any plant systems. The proposed change does not change the Operability requirements for plant systems or the actions taken when plant systems are not operable. The proposed change clarifies the current application of the specifications. The clarification of the term "discovery" in Section 1.3 does not change the current timing or actions to be taken when LCOs are not met. The changes to the TS Bases clarify the application of the existing requirements.

Therefore, it is concluded that 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 clarifies the application of Section 1.3 and LCO 3.0.4 and does not result in changes in plant operation. As a result, plant safety is either improved or unaffected. The proposed changes to the Bases clarify the application of the existing TS requirements and, as a result, have no significant effect on a margin of safety.

Therefore, it is concluded that 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 considerations under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.2 Applicable Regulatory Requirements/Criteria

Title 10 of the Code of Federal Regulations, Paragraph 50.36, requires TS and describes LCOs and SRs. The proposed change clarifies the implementation of the TS required by 10 CFR 50.36.

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.

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 effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change 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 change.

7.0 References

1. Memorandum from H. L. Thompson (NRC) to R. Starostecki (NRC), "Technical Specification Interpretation," dated August 9, 1985 (Attachment 4).
2. NRC Inspection Manual, Part 9900: Technical Guidance, "Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety".
3. Generic Letter 87-09, "Sections 3.0 And 4.0 of Standard Tech Specs on Limiting Conditions For Operation And Surveillance Requirements," dated June 6, 1987 (Attachment 2).
4. NRC memorandum, "Summary of Meeting Held on September 17, 1987 Relating to Generic Letter 87-09," dated October 20, 1987 (Attachment 3).
5. Inspection Manual Part 9900 Technical Guidance document, "Standard Technical Specifications (STS) Section 3.0.3 Limiting Conditions for Operation" (Attachment 4).

Attachment 1

Memorandum from H. L. Thompson (NRC) to R. Starostecki (NRC), dated
August 9, 1985



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

August 9, 1985

MEMORANDUM FOR: Richard W. Starostecki, Director
Division of Reactor Projects, Region I

FROM: Hugh L. Thompson, Jr., Director
Division of Licensing, NRR

SUBJECT: TECHNICAL SPECIFICATION INTERPRETATION

Your memorandum dated July 15, 1985 requested an interpretation with regard to the point in time that the time limitations of Technical Specification action requirements are applicable. Also, a proposed interpretation related to this matter was provided for consideration as an enclosure.

It is NRR's position that the time limitation of action requirements are applicable from the point in time that it is recognized that the requirements of a limiting condition of operation are not met. This is as noted by your example and proposed interpretation. It was also noted in your memo that this issue is further complicated by recent trends in NRC enforcement which cite the historical inoperability of equipment as a factor in determining the significance of loss of function violations. In the example provided the cause for inoperability was due to maintenance that occurred prior to the time it was recognized that the component was inoperable. We agree that in such a case the basis for determining the safety significance in an enforcement action should not be limited to consideration of when it was recognized that the component was inoperable but rather on the actual total time that the requirements of the limiting condition of operation were not met. In the example you cited, the licensee should have taken appropriate measures to assure that the maintenance was performed correctly including testing to assure that components were operable.

As a final comment with regard to the proposed interpretation enclosed to your inquiry, the Technical Specification Review Group is preparing additional guidance on the application of Section 3/4.0 of the Standard

CONTACT:
T. Dunning, TSRG
x29457

Richard W. Starostecki

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August 9, 1985

Technical Specifications. This guidance will provide further clarification of time limitations related to limiting conditions of operation and surveillance requirements. This guidance should be available for use by Resident Inspectors and Regional personnel in the near future. -

Frank J. Miraglia
for Hugh L. Thompson, Jr., Director
Division of Licensing

Attachment 2

Enclosure 3 to Generic Letter 87-09, "Sections 3.0 and 4.0 of Standard Tech Specs on Limiting Conditions For Operation And Surveillance Requirements," dated June 6, 1987



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

June 4, 1987

TO ALL LIGHT WATER REACTOR LICENSEES AND APPLICANTS

Gentlemen:

SUBJECT: SECTIONS 3.0 AND 4.0 OF THE STANDARD TECHNICAL SPECIFICATIONS (STS)
ON THE APPLICABILITY OF LIMITING CONDITIONS FOR OPERATION AND
SURVEILLANCE REQUIREMENTS (Generic Letter 87-09)

As a part of recent initiatives to improve Technical Specifications (TS), the NRC, in cooperation with the Atomic Industrial Forum (AIF), has developed a program for TS improvements. One of the elements of this program is the implementation of short-term improvements to resolve immediate concerns that have been identified in investigations of TS problems by both NRC and AIF. The guidance provided in this generic letter addresses three specific problems that have been encountered with the general requirements on the applicability of Limiting Conditions for Operation (LCO) and Surveillance Requirements in Sections 3.0 and 4.0 of the STS.

There are five enclosures to this Generic Letter. Enclosure 1 applies to both PWR and BWR STS and provides a complete discussion of the three problems and the staff's position on acceptable modifications of the TS to resolve them. These modifications should result in improved TS for all plants and are consistent with the recommendations of NUREG-1024, "Technical Specifications -- Enhancing the Safety Impact" and the Commission Policy Statement on Technical Specification Improvements. Enclosures 2 and 4 provide Sections 3.0 and 4.0 of the PWR and BWR STS, respectively, which incorporate the modifications being made by this Generic Letter. Enclosures 3 and 5: (a) provide the staff's update of the bases for the PWR and BWR STS, respectively; (b) reflect the modifications of Sections 3.0 and 4.0 of the STS; and (c) include improved bases for the unchanged requirements in these sections.

The staff concludes that these modifications will result in improved TS for all plants. Licensees and applicants are encouraged to propose changes to their TS that are consistent with the guidance provided in the enclosures; however, these changes are voluntary for all licensees and current OL applicants.

The staff would like to point out three important points connected with the present TS effort. First, it is aware that the TS can be clarified, simplified, and streamlined both as a whole and with respect to the specifications that are the subject of this Generic Letter. Nonetheless, in keeping with its short-term and purposefully narrow focus, it decided to keep these proposed modifications: (a) focused on the three problems; (b) relatively simple; and (c) consistent with the phrasing of existing TS. Second, after the resolution of these and other identified TS problems, the staff will notify licensees and applicants of its conclusions and resulting proposals for additional short-term TS improvements. Finally, the staff is not proposing to formally amend the STS at this time. Instead the changes will be factored into the development of the new STS anticipated as a part of the implementation of the Commission's Policy Statement on Technical Specification Improvements.

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The following is a summary of the three problems covered by the enclosures. The first problem involves unnecessary restrictions on mode changes by Specification 3.0.4 and inconsistent application of exceptions to it. The practical solution is to change this specification to define the conditions under which its requirements apply. With respect to unnecessary mode changes, Specification 3.0.4 unduly restricts facility operation when conformance with Action Requirements provides an acceptable level of safety for continued operation. For an LCO that has Action Requirements permitting continued operation for an unlimited period of time, entry into an operation mode or other specified condition of operation should be permitted in accordance with the Action Requirements. The solution also resolves the problem of inconsistent application of exceptions to Specification 3.0.4: (a) which delays startup under conditions in which conformance to the Action Requirements establishes an acceptable level of safety for unlimited continued operation of the facility; and (b) which delays a return to power operation when the facility is required to be in a lower mode of operation as a consequence of other Action Requirements.

The second problem involves unnecessary shutdowns caused by Specification 4.0.3 when surveillance intervals are inadvertently exceeded. The solution is to clarify the applicability of the Action Requirements, to specify a specific acceptable time limit for completing a missed surveillance in certain circumstances, and to clarify when a missed surveillance constitutes a violation of the Operability Requirements of an LCO. It is overly conservative to assume that systems or components are inoperable when a surveillance has not been performed because the vast majority of surveillances do in fact demonstrate that systems or components are operable. When a surveillance is missed, it is primarily a question of operability that has not been verified by the performance of a Surveillance Requirement. Because the allowable outage time limits of some Action Requirements do not provide an appropriate time for performing a missed surveillance before Shutdown Requirements apply, the TS should include a time limit that allows a delay of required actions to permit the performance of the missed surveillance based on consideration of plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance, and, of course, the safety significance of the delay in completing the surveillance. The staff has concluded that 24 hours is an acceptable time limit for completing a missed surveillance when the allowable outage times of the Action Requirements are less than this limit, or when time is needed to obtain a temporary waiver of the Surveillance Requirement.

The third problem involves two possible conflicts between Specifications 4.0.3 and 4.0.4. The first conflict arises because Specification 4.0.4 prohibits entry into an operational mode or other specified condition when Surveillance Requirements have not been performed within the specified surveillance interval. A conflict with this requirement exists when a mode change is required as a consequence of Action Requirements and when the Surveillance Requirements that become applicable have not been performed within the specified surveillance interval. Specification 4.0.4 should not be used to prevent passage through or to operational modes as required to comply with Action Requirements because to do so: (a) would increase the potential for a plant

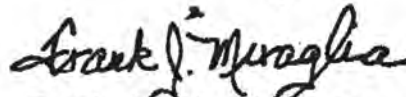
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upset; and (b) would challenge safety systems. Also, certain surveillances should be allowed to be performed during a shutdown to comply with Action Requirements. Along with the modification of Specification 4.0.3 to permit a delay of up to 24 hours in the applicability of Action Requirements, Specification 4.0.4 has been clarified to allow passage through or to operational modes as required to comply with Action Requirements.

A second conflict could arise because, when Surveillance Requirements can only be completed after entry into a mode or specified condition for which the Surveillance Requirements apply, an exception to the requirements of Specification 4.0.4 is allowed. However, upon entry into this mode or condition, the requirements of Specification 4.0.3 may not be met because the Surveillance Requirements may not have been performed within the allowed surveillance interval. Therefore, to avoid any conflict between Specifications 4.0.3 and 4.0.4, the staff wants to make clear: (a) that it is not the intent of Specification 4.0.3 that the Action Requirements preclude the performance of surveillances allowed under any exception to Specification 4.0.4; and (b) that the delay of up to 24 hours in Specification 4.0.3 for the applicability of Action Requirements now provides an appropriate time limit for the completion of those Surveillance Requirements that become applicable as a consequence of allowance of any exception to Specification 4.0.4.

If you have any questions on this matter, please contact your project manager.

Sincerely,



Frank J. Miraglia, Associate Director
for Projects
Office of Nuclear Reactor Regulation

Enclosures:
As stated

Enclosure 1 to Generic Letter 87-09

ALTERNATIVES TO THE STS REQUIREMENTS TO RESOLVE
THREE SPECIFIC PROBLEMS WITH LIMITING CONDITIONS
FOR OPERATION AND SURVEILLANCE REQUIREMENTS

INTRODUCTION

Generic Letter 87-09 discusses three problems regarding the general requirements of Sections 3.0 and 4.0 of the STS on the applicability of Limiting Conditions for Operation (LCO) and Surveillance Requirements. The guidance provided in this enclosure addresses alternatives to the Standard Technical Specifications (STS) to resolve these problems.

Problem #1 -- UNNECESSARY RESTRICTIONS ON MODE CHANGES (Specification 4.0.3)

° BACKGROUND

The definition of an LCO is given in 10 CFR 50.36 as the lowest functional capability or performance level of equipment required for safe operation of the facility. Further, it is stated that when an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TS until the condition can be met.

Consistent with NRC's regulatory requirements for an LCO, the TS include two basic types of Action Requirements that are applicable when the LCO is not met. The first specifies the remedial actions that permit continued operation of the facility not restricted by the time limits of Action Requirements. In this case, conformance to the Action Requirements provides an acceptable level of safety for continued operation of the facility, and operation may proceed indefinitely as long as the remedial Action Requirements are met. The second type of Action Requirement specifies a time limit in which the LCO must be met. This time limit is the time allowed to restore an inoperable system or component to operable status or to restore parameters within specified limits. If these actions are not completed within the allowable outage time limits, action must be taken to shut down the facility by placing it in a mode or condition of operation in which the LCO does not apply.

Specification 3.0.4 of the STS states that entry into an operational mode¹ or other specified condition shall not be made unless the LCO is met without reliance on the provisions of the Action Requirements. Its intent is to ensure that a higher mode of operation is not entered when equipment is inoperable or when parameters exceed their specified limits. This precludes a plant startup when actions are being taken to satisfy an LCO, which -- if not completed within the time limits of the Action Requirements -- would result in a plant shutdown to comply with the Action Requirements.

¹The BWR STS use the term "operational condition" instead of the term "operational mode" that is used in PWR STS. As used here, "operational mode" means "operational condition" for BWRs.

Specification 3.0.4 also precludes entering a mode or specified condition if an LCO is not met, even if the Action Requirements would permit continued operation of the facility for an unlimited period of time. Generally, the individual specifications that have Action Requirements which allow continued operation note that Specification 3.0.4 does not apply. However, exceptions to Specification 3.0.4 have not been consistently applied and their bases are not well documented. For example, approximately two-thirds of the actions which permit continued operation in the Westinghouse STS are exempt from Specification 3.0.4. Although the staff encourages the maintenance of all plant systems and components in an operable condition as a good practice, the TS generally have not precluded entering a mode with inoperable equipment when the Action Requirements include remedial measures that provide an acceptable level of safety for continued operation.

° STATEMENT OF THE PROBLEM

Inconsistent application of exceptions to Specification 3.0.4 impacts the operation of the facility in two ways. First, it delays startup under conditions in which conformance to the Action Requirements establishes an acceptable level of safety for unlimited continued operation of the facility. Second, it delays a return to power operation when the facility is required to be in a lower mode of operation as a consequence of other Action Requirements. In this case, the LCO must be met without reliance on the Action Requirements before returning the facility to that operational mode or other specified condition for which unlimited continued operation was previously permitted in accordance with the Action Requirements.

° STAFF POSITION

Specification 3.0.4 unduly restricts facility operation when conformance to the Action Requirements provides an acceptable level of safety for continued operation. For an LCO that has Action Requirements permitting continued operation for an unlimited period of time, entry into an operational mode or other specified condition of operation should be permitted in accordance with those Action Requirements. This is consistent with NRC's regulatory requirements for an LCO. The restriction on a change in operational modes or other specified conditions should apply only where the Action Requirements establish a specified time interval in which the LCO must be met or a shutdown of the facility would be required. However, nothing in this staff position should be interpreted as endorsing or encouraging a plant startup with inoperable equipment. The staff believes that good practice should dictate that the plant startup should normally be initiated only when all required equipment is operable and that startup with inoperable equipment must be the exception rather than the rule.

° CHANGE TO SPECIFICATION 3.0.4

The practical solution to this problem is not the modification of TS to note that Specification 3.0.4 does not apply, but rather a change to Specification 3.0.4 to define the conditions under which its requirements do apply. Therefore, Specification 3.0.4 will be revised to state:

"Entry into an OPERATIONAL MODE or other specified condition shall not be made when the conditions for the Limiting Conditions for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL MODE or specified condition may be made in accordance with ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time."

° CHANGES TO INDIVIDUAL SPECIFICATIONS EXEMPT FROM SPECIFICATION 3.0.4

As a consequence of the modification described above to Specification 3.0.4, individual specifications with Action Requirements permitting continued operation no longer need to indicate that Specification 3.0.4 does not apply. They should be revised to delete the noted exception to avoid confusion about the applicability of Specification 3.0.4. However, exceptions to Specification 3.0.4 should not be deleted for individual specifications if a mode change would be precluded by Specification 3.0.4 as revised. For example, some specifications would not satisfy the provisions under which mode changes are permitted by the revision to Specification 3.0.4 and, therefore, the exception to Specification 3.0.4 need not be deleted. It is not the staff's intent that the revision of Specification 3.0.4 should result in more restrictive requirements for individual specifications.

Problem #2 -- UNNECESSARY SHUTDOWNS CAUSED BY INADVERTENT SURPASSING OF SURVEILLANCE INTERVALS (Specification 4.0.3)

° BACKGROUND

Surveillance Requirements are defined in 10 CFR 50.36 as those requirements relating to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained, that the facility will be within the safety limits, and that the LCO will be met.

Consistent with the NRC's regulatory framework for Surveillance Requirements, Specification 4.0.3 states that the failure to perform a surveillance within the specified time interval shall constitute a failure to meet the LCO's Operability Requirements. Therefore, if a Surveillance Requirement is not met as a result of the failure to schedule the performance of the surveillance, the LCO would not be met. Consequently, the LCO's Action Requirements must be met as when a surveillance verifies that a system or component is inoperable.

Generally, the Action Requirements include a specified time interval (i.e., allowable outage time limit) that permits corrective action to be taken to satisfy the LCO. When such a specified time interval is included in the Action Requirements, the completion of a missed surveillance within this time interval satisfies Specification 4.0.3.

° STATEMENT OF PROBLEM

Some Action Requirements have allowable outage time limits of only one or two hours and do not establish a practical time limit for the completion of a missed Surveillance Requirement. If surveillances cannot be completed within these

time limits, a plant shutdown would usually be required. Even if the Action Requirements include remedial measures that would permit continued operation, they may be stated in such a way that they could prevent the performance of the required surveillance. A plant shutdown would also be required if the missed surveillance applies to more than the minimum number of systems or components required to be operable for operation under the allowable outage time limits of the Action Requirements. In this case, the individual specification or Specification 3.0.3 would require a shutdown.

If a plant shutdown is required before a missed surveillance is completed, it is likely that it would be conducted when the plant is being shut down because completion of a missed surveillance would terminate the shutdown requirement. This is undesirable since it increases the risk to the plant and public safety for two reasons. First, the plant would be in a transient state involving changing plant conditions that offer the potential for an upset that could lead to a demand for the system or component being tested. This would occur when the system or component is either out of service to allow performance of the surveillance test or there is a lower level of confidence in its operability because the normal surveillance interval was exceeded. If the surveillance did demonstrate that the system or component was inoperable, it usually would be preferable to restore it to operable status before making a major change in plant operating conditions. Second, a shutdown would increase the pressure on the plant staff to expeditiously complete the required surveillance so that the plant could be returned to power operation. This would further increase the potential for a plant upset when both the shutdown and surveillance activities place a demand on the plant operators.

° STAFF POSITION

It is overly conservative to assume that systems or components are inoperable when a surveillance requirement has not been performed. The opposite is in fact the case; the vast majority of surveillances demonstrate that systems or components in fact are operable. When a surveillance is missed, it is primarily a question of operability that has not been verified by the performance of the required surveillance. Because the allowable outage time limits of some Action Requirements do not provide an appropriate time limit for performing a missed surveillance before shutdown requirements may apply, the TS should include a time limit that would allow a delay of the required actions to permit the performance of the missed surveillance.

This time limit should be based on considerations of plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance, as well as the safety significance of the delay in completion of the surveillance. After reviewing possible limits, the staff has concluded that, based on these considerations, 24 hours would be an acceptable time limit for completing a missed surveillance when the allowable outage times of the Action Requirements are less than this time limit or when shutdown Action Requirements apply. The 24-hour time limit would balance the risks associated with an allowance for completing the surveillance within this period against the risks associated with the potential for a plant upset and challenge to safety systems when the alternative is a shutdown to comply with Action Requirements before the surveillance can be completed.

Although a missed surveillance would generally be completed in less time than this 24-hour limit allows, special circumstances may require additional time to ensure that the surveillance can be conducted in a safe manner. The time limits of Action Requirements for surveillances should start when it is identified that Surveillance Requirements have not been performed, except when the 24-hour delay is allowed in the implementation of the Action Requirements. Where the 24-hour time limit is allowed, the time limits of the Action Requirements are applicable either at the end of the 24-hour limit if the surveillance has not been completed or at the time the surveillance is performed if the system or component is found to be inoperable.

Several issues need to be clarified regarding the additional 24-hour time limit. First, this limit does not waive compliance with Specification 4.0.3. Under Specification 4.0.3, the failure to perform a Surveillance Requirement will continue to constitute noncompliance with the Operability Requirements of an LCO and to bring into play the applicable Action Requirements.

Second, Specifications 3.0.2 and 4.0.3 should not be misinterpreted. Specification 3.0.2 notes that a TS is being complied with when the Action Requirements are met within the specified time intervals. Although Specification 4.0.2 provides an allowance for extending the surveillance interval and allows for the completion of the surveillance within this time interval without violation of this Specification, under Specification 4.0.3 nonperformance of a Surveillance Requirement, within the allowed surveillance interval defined by Specification 4.0.2, constitutes a violation of the Operability Requirements of an LCO, as defined by Specification 4.0.3, and is subject to enforcement action.

To avoid any conflict among or misreading of Specifications 3.0.2, 4.0.3, and 4.0.2, the staff wishes to make clear (1) that Specification 3.0.2 shall not be construed to imply that the completion of a missed surveillance within the allowable outage time limits of the Action Requirements -- whether or not the additional 24-hour time limit is included -- negates the violation of Specification 4.0.3, and (2) that the failure to perform a surveillance within the allowable surveillance interval defined by Specification 4.0.2 constitutes a reportable event under 10 CFR 50.73(a)(2)(i)(B) because it is a condition prohibited by the plant's TS.

Third, even though an additional 24-hour time limit may apply for missed surveillances, another consideration is the possibility that plant conditions may preclude the performance of the specified requirements. The provision of a 24-hour delay in the application of the Action Requirements for the completion of a missed surveillance would provide time to obtain a temporary waiver of a Surveillance Requirement that could not otherwise be completed because of current plant conditions. If a surveillance can be performed only when the plant is shut down, there are only two options available to licensees when a missed surveillance is discovered during power operation and continued operation is not allowed under the Action Requirements. The first is to shut down the plant and perform the required surveillance. The other option is to seek relief from the Surveillance Requirement. Such relief would result in the processing of a TS amendment. As a matter of existing policy, a temporary waiver of compliance with a TS that would unnecessarily require a shutdown or

delay startup absence of some relief may be granted by NRC. A temporary waiver of compliance may be granted if the licensee has demonstrated in a written submittal, provided before the TS LCO expired, that the facility can safely continue to operate without compliance with the TS during the time it will take to process the TS amendment request.

° **CHANGE TO SPECIFICATION 4.0.3**

Specification 4.0.3 will be revised as follows to clarify when a missed surveillance constitutes a violation of the Operability Requirements of an LCO and to clarify the applicability of the Action Requirements and the time during which the limits apply:

"Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation. The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours."

Specification 4.0.3 previously included the statement that exceptions to it are stated in individual specifications. This statement is deleted because Specification 4.0.3 is always applicable, i.e., the implied exceptions for individual specifications do not exist.

**Problem #3 -- CONFLICTS BETWEEN SPECIFICATIONS 4.0.3 AND 4.0.4
RELATED TO MODE CHANGES (Specification 4.0.4)**

There are two parts of the general problem of conflicts between Specifications 4.0.3 and 4.0.4 related to mode changes. Each of these parts is discussed separately below.

Part 1 -- SURVEILLANCE REQUIREMENTS THAT BECOME APPLICABLE DUE TO ACTION REQUIREMENTS

° **STATEMENT OF THE PROBLEM**

Specification 4.0.4 prohibits entry into an operational mode or other specified condition when Surveillance Requirements have not been performed within the specified surveillance interval. First, a conflict with this TS exists when a mode change is required as a consequence of shutdown Action Requirements and when the Surveillance Requirements that become applicable have not been performed within the specified surveillance interval. For instance, the plant could previously have been in a mode for which the Surveillance Requirements were not applicable and, therefore, the surveillance may not have been performed within the specified time interval. Consequently, the Action Requirements of the LCO associated with these Surveillance Requirements apply and the unit may have to be placed in a lower mode of operation than that required by the original shutdown Action Requirements, or other remedial actions may have to be

taken, if the surveillance cannot be completed within the time limits for these actions. This is a second problem that may be encountered.

The first problem arises because conformance with Specification 4.0.4 would require the performance of these surveillances before entering a mode for which they apply. Source and intermediate range nuclear instrumentation and cold overpressure protection systems in PWRs are examples of systems for which Surveillance Requirements may become applicable as a consequence of mode changes to comply with shutdown Action Requirements. The second problem has been mitigated by the change in Specification 4.0.3 to permit a delay of up to 24 hours in the applicability of the Action Requirements, thereby placing an appropriate time limit on the completion of Surveillance Requirements that become applicable as a consequence of mode changes to comply with Action Requirements. However, the first problem can be further resolved by a change to Specification 4.0.4.

° STAFF POSITION

The potential for a plant upset and challenge to safety systems is heightened if surveillances are performed during a shutdown to comply with Action Requirements. It is not the intent of Specification 4.0.4 to prevent passage through or to operational modes to comply with Action Requirements and it should not apply when mode changes are imposed by Action Requirements. Accordingly, Specification, 4.0.4 should be modified to note that its provisions shall not prevent passage through or to operational modes as required to comply with Action Requirements. A similar provision is included in Specification 3.0.4.

° CHANGE TO SPECIFICATION 4.0.4

The following will clarify Specification 4.0.4 for mode changes as a consequence of Action Requirements:

"This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION Requirements."

Part 2 -- SURVEILLANCE REQUIREMENTS FOR EXCEPTIONS TO SPECIFICATION 4.0.4

° STATEMENT OF THE PROBLEM

An exception to Specification 4.0.4 is allowed when Surveillance Requirements can be completed only after entry into a mode or specified condition for which they apply. For example, the TS on power distribution limits are generally exempt from Specification 4.0.4. However, upon entry into the mode or specified condition, Specification 4.0.3 may not be met because the Surveillance Requirements may not have been performed within the allowed surveillance interval. Generally, these Surveillance Requirements apply to redundant systems, and Specification 3.0.3 would apply because they are treated as inoperable under Specification 4.0.3. Therefore, allowance of an exception to Specification 4.0.4 can create a conflict with Specification 4.0.3.

° STAFF POSITION

It is not the intent of Specification 4.0.3 that the Action Requirements should preclude the performance of surveillances when an exception to Specification 4.0.4 is allowed. However, since Specification 4.0.3 has been changed to permit a delay of up to 24 hours in the applicability of the Action Requirements, an appropriate time limit now exists for the completion of those Surveillance Requirements that become applicable when an exception to Specification 4.0.4 is allowed.

Enclosure 2 to Generic Letter 87-09

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS3/4.0 APPLICABILITY

[NOTE: Only Specifications 3.0.4, 4.0.3, and 4.0.4 are being modified, as shown in the underlined provisions. The other specifications are shown for information only.]

LIMITING CONDITIONS FOR OPERATION

3.0.1 Compliance with the Limiting Conditions for Operation contained in the succeeding specifications is required during the OPERATIONAL MODES or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met.

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

3.0.3 When a Limiting Condition for Operation is not met, except as provided in the associated ACTION requirements, within 1 hour action shall be initiated to place it, as applicable, in:

- a. At least HOT STANDBY within the next 6 hours,
- b. At least HOT SHUTDOWN within the following 6 hours, and
- c. At least COLD SHUTDOWN within the subsequent 24 hours.

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

This specification is not applicable in MODES 5 or 6.

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

APPLICABILITYSURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the OPERATIONAL MODES or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement.

4.0.2 Each Surveillance Requirement shall be performed within the specified time interval with:

- a. A maximum allowable extension not to exceed 25% of the surveillance interval, but
- b. The combined time interval for any three consecutive surveillance intervals shall not exceed 3.25 times the specified surveillance interval.

4.0.3 Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation. The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours. Surveillance Requirements do not have to be performed on inoperable equipment.

4.0.4 Entry into an OPERATIONAL MODE or other specified condition shall not be made unless the Surveillance Requirement(s) associated with a Limiting Condition of Operation has been performed within the stated surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION requirements.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2, and 3 components shall be applicable as follows:

- a. Inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).
- b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and

APPLICABILITY**SURVEILLANCE REQUIREMENTS**

Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

<u>ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice inspection and testing activities</u>	<u>Required frequencies for performing inservice inspection and testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

Enclosure 3 to Generic Letter 87-09

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS3/4.0 APPLICABILITY

[NOTE: This enclosure provides revised Bases for all specifications in Sections 3.0 and 4.0.]

BASES

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

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

Specification 3.0.1 establishes the Applicability statement within each individual specification as the requirement for when (i.e., in which OPERATIONAL MODES or other specified conditions) conformance to the Limiting Conditions for Operation is required for safe operation of the facility. The ACTION requirements establish those remedial measures that must be taken within specified time limits when the requirements of a Limiting Condition for Operation are not met.

There are two basic types of ACTION requirements. The first specifies the remedial measures that permit continued operation of the facility which is not further restricted by the time limits of the ACTION requirements. In this case, conformance to the ACTION requirements provides an acceptable level of safety for unlimited continued operation as long as the ACTION requirements continue to be met. The second type of ACTION requirement specifies a time limit in which conformance to the conditions of the Limiting Condition for Operation must be met. This time limit is the allowable outage time to restore an inoperable system or component to OPERABLE status or for restoring parameters within specified limits. If these actions are not completed within the allowable outage time limits, a shutdown is required to place the facility in a MODE or condition in which the specification no longer applies. It is not intended that the shutdown ACTION requirements be used as an operational convenience which permits (routine) voluntary removal of a system(s) or component(s) from service in lieu of other alternatives that would not result in redundant systems or components being inoperable.

The specified time limits of the ACTION requirements are applicable from the point in time it is identified that a Limiting Condition for Operation is not met. The time limits of the ACTION requirements are also applicable when a system or component is removed from service for surveillance testing or investigation of operational problems. Individual specifications may include a specified time limit for the completion of a Surveillance Requirement when equipment is removed from service. In this case, the allowable outage time

3/4.0 APPLICABILITYBASES (Con't)

Limits of the ACTION requirements are applicable when this limit expires if the surveillance has not been completed. When a shutdown is required to comply with ACTION requirements, the plant may have entered a MODE in which a new specification becomes applicable. In this case, the time limits of the ACTION requirements would apply from the point in time that the new specification becomes applicable if the requirements of the Limiting Condition for Operation are not met.

Specification 3.0.2 establishes that noncompliance with a specification exists when the requirements of the Limiting Condition for Operation are not met and the associated ACTION requirements have not been implemented within the specified time interval. The purpose of this specification is to clarify that (1) implementation of the ACTION requirements within the specified time interval constitutes compliance with a specification and (2) completion of the remedial measures of the ACTION requirements is not required when compliance with a Limiting Condition of Operation is restored within the time interval specified in the associated ACTION requirements.

Specification 3.0.3 establishes the shutdown ACTION requirements that must be implemented when a Limiting Condition for Operation is not met and the condition is not specifically addressed by the associated ACTION requirements. The purpose of this specification is to delineate the time limits for placing the unit in a safe shutdown MODE when plant operation cannot be maintained within the limits for safe operation defined by the Limiting Conditions for Operation and its ACTION requirements. It is not intended to be used as an operational convenience which permits (routine) voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable. One hour is allowed to prepare for an orderly shutdown before initiating a change in plant operation. This time permits the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to reach lower MODES of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the cooldown capabilities of the facility assuming only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the primary coolant system and the potential for a plant upset that could challenge safety systems under conditions for which this specification applies.

If remedial measures permitting limited continued operation of the facility under the provisions of the ACTION requirements are completed, the shutdown may be terminated. The time limits of the ACTION requirements are applicable from the point in time there was a failure to meet a Limiting Condition for Operation. Therefore, the shutdown may be terminated if the ACTION requirements have been met or the time limits of the ACTION requirements have not expired, thus providing an allowance for the completion of the required actions.

3/4.0 APPLICABILITYBASES (Con't)

The time limits of Specification 3.0.3 allow 37 hours for the plant to be in the COLD SHUTDOWN MODE when a shutdown is required during the POWER MODE of operation. If the plant is in a lower MODE of operation when a shutdown is required, the time limit for reaching the next lower MODE of operation applies. However, if a lower MODE of operation is reached in less time than allowed, the total allowable time to reach COLD SHUTDOWN, or other applicable MODE, is not reduced. For example, if HOT STANDBY is reached in 2 hours, the time allowed to reach HOT SHUTDOWN is the next 11 hours because the total time to reach HOT SHUTDOWN is not reduced from the allowable limit of 13 hours. Therefore, if remedial measures are completed that would permit a return to POWER operation, a penalty is not incurred by having to reach a lower MODE of operation in less than the total time allowed.

The same principle applies with regard to the allowable outage time limits of the ACTION requirements, if compliance with the ACTION requirements for one specification results in entry into a MODE or condition of operation for another specification in which the requirements of the Limiting Condition for Operation are not met. If the new specification becomes applicable in less time than specified, the difference may be added to the allowable outage time limits of the second specification. However, the allowable outage time limits of ACTION requirements for a higher MODE of operation may not be used to extend the allowable outage time that is applicable when a Limiting Condition for Operation is not met in a lower MODE of operation.

The shutdown requirements of Specification 3.0.3 do not apply in MODES 5 and 6, because the ACTION requirements of individual specifications define the remedial measures to be taken.

Specification 3.0.4 establishes limitations on MODE changes when a Limiting Condition for Operation is not met. It precludes placing the facility in a higher MODE of operation when the requirements for a Limiting Condition for Operation are not met and continued noncompliance to these conditions would result in a shutdown to comply with the ACTION requirements if a change in MODES were permitted. The purpose of this specification is to ensure that facility operation is not initiated or that higher MODES of operation are not entered when corrective action is being taken to obtain compliance with a specification by restoring equipment to OPERABLE status or parameters to specified limits. Compliance with ACTION requirements that permit continued operation of the facility for an unlimited period of time provides an acceptable level of safety for continued operation without regard to the status of the plant before or after a MODE change. Therefore, in this case, entry into an OPERATIONAL MODE or other specified condition may be made in accordance with the provisions of the ACTION requirements. The provisions of this specification should not, however, be interpreted as endorsing the failure to exercise good practice in restoring systems or components to OPERABLE status before plant startup.

3/4.0 APPLICABILITY

BASES (Con't)

When a shutdown is required to comply with ACTION requirements, the provisions of Specification 3.0.4 do not apply because they would delay placing the facility in a lower MODE of operation.

Specifications 4.0.1 through 4.0.5 establish the general requirements applicable to Surveillance Requirements. These requirements are based on the Surveillance Requirements stated in the Code of Federal Regulations, 10 CFR 50.36(c)(3):

"Surveillance requirements are requirements relating to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions of operation will be met."

Specification 4.0.1 establishes the requirement that surveillances must be performed during the OPERATIONAL MODES or other conditions for which the requirements of the Limiting Conditions for Operation apply unless otherwise stated in an individual Surveillance Requirement. The purpose of this specification is to ensure that surveillances are performed to verify the operational status of systems and components and that parameters are within specified limits to ensure safe operation of the facility when the plant is in a MODE or other specified condition for which the associated Limiting Conditions for Operation are applicable. Surveillance Requirements do not have to be performed when the facility is in an OPERATIONAL MODE for which the requirements of the associated Limiting Condition for Operation do not apply unless otherwise specified. The Surveillance Requirements associated with a Special Test Exception are only applicable when the Special Test Exception is used as an allowable exception to the requirements of a specification.

Specification 4.0.2 establishes the conditions under which the specified time interval for Surveillance Requirements may be extended. Item a. permits an allowable extension of the normal surveillance interval to facilitate surveillance scheduling and consideration of plant operating conditions that may not be suitable for conducting the surveillance; e.g., transient conditions or other ongoing surveillance or maintenance activities. Item b. limits the use of the provisions of item a. to ensure that it is not used repeatedly to extend the surveillance interval beyond that specified. The limits of Specification 4.0.2 are based on engineering judgment and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the Surveillance Requirements. These provisions are sufficient to ensure that the reliability ensured through surveillance activities is not significantly degraded beyond that obtained from the specified surveillance interval.

Specification 4.0.3 establishes the failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by the provisions of Specification 4.0.2, as a condition that constitutes a failure to meet the OPERABILITY requirements for a Limiting Condition for Operation. Under the

3/4.0 APPLICABILITYBASES (Con't)

provisions of this specification, systems and components are assumed to be OPERABLE when Surveillance Requirements have been satisfactorily performed within the specified time interval. However, nothing in this provision is to be construed as implying that systems or components are OPERABLE when they are found or known to be inoperable although still meeting the Surveillance Requirements. This specification also clarifies that the ACTION requirements are applicable when Surveillance Requirements have not been completed within the allowed surveillance interval and that the time limits of the ACTION requirements apply from the point in time it is identified that a surveillance has not been performed and not at the time that the allowed surveillance interval was exceeded. Completion of the Surveillance Requirement within the allowable outage time limits of the ACTION requirements restores compliance with the requirements of Specification 4.0.3. However, this does not negate the fact that the failure to have performed the surveillance within the allowed surveillance interval, defined by the provisions of Specification 4.0.2, was a violation of the OPERABILITY requirements of a Limiting Condition for Operation that is subject to enforcement action. Further, the failure to perform a surveillance within the provisions of Specification 4.0.2 is a violation of a Technical Specification requirement and is, therefore, a reportable event under the requirements of 10 CFR 50.73(a)(2)(i)(B) because it is a condition prohibited by the plant's Technical Specifications.

If the allowable outage time limits of the ACTION requirements are less than 24 hours or a shutdown is required to comply with ACTION requirements, e.g., Specification 3.0.3, a 24-hour allowance is provided to permit a delay in implementing the ACTION requirements. This provides an adequate time limit to complete Surveillance Requirements that have not been performed. The purpose of this allowance is to permit the completion of a surveillance before a shutdown is required to comply with ACTION requirements or before other remedial measures would be required that may preclude completion of a surveillance. The basis for this allowance includes consideration for plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance, and the safety significance of the delay in completing the required surveillance. This provision also provides a time limit for the completion of Surveillance Requirements that become applicable as a consequence of MODE changes imposed by ACTION requirements and for completing Surveillance Requirements that are applicable when an exception to the requirements of Specification 4.0.4 is allowed. If a surveillance is not completed within the 24-hour allowance, the time limits of the ACTION requirements are applicable at that time. When a surveillance is performed within the 24-hour allowance and the Surveillance Requirements are not met, the time limits of the ACTION requirements are applicable at the time that the surveillance is terminated.

Surveillance Requirements do not have to be performed on inoperable equipment because the ACTION requirements define the remedial measures that apply. However, the Surveillance Requirements have to be met to demonstrate that inoperable equipment has been restored to OPERABLE status.

3/4.0 APPLICABILITYBASES (Con't)

Specification 4.0.4 establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL MODE or other condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into a MODE or condition for which these systems and components ensure safe operation of the facility. This provision applies to changes in OPERATIONAL MODES or other specified conditions associated with plant shutdown as well as startup.

Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.

When a shutdown is required to comply with ACTION requirements, the provisions of Specification 4.0.4 do not apply because this would delay placing the facility in a lower MODE of operation.

Specification 4.0.5 establishes the requirement that inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. These requirements apply except when relief has been provided in writing by the Commission.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout the Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. The requirements of Specification 4.0.4 to perform surveillance activities before entry into an OPERATIONAL MODE or other specified condition takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows pumps and valves to be tested up to one week after return to normal operation. The Technical Specification definition of OPERABLE does not allow a grace period before a component, that is not capable of performing its specified function, is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.

Enclosure 4 to Generic Letter 87-09

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS3/4.0 APPLICABILITY

[NOTE: Only Specifications 3.0.4, 4.0.3, and 4.0.4 are being modified, as shown in the underlined provisions. The other specifications are shown for information only.]

LIMITING CONDITIONS FOR OPERATION

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

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

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

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

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

This specification is not applicable in OPERATIONAL CONDITION 4 or 5.

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

APPLICABILITYSURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the OPERATIONAL CONDITIONS or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement.

4.0.2 Each Surveillance Requirement shall be performed within the specified time interval with:

- a. A maximum allowable extension not to exceed 25% of the surveillance interval, but
- b. The combined time interval for any 3 consecutive surveillance intervals shall not exceed 3.25 times the specified surveillance interval.

4.0.3 Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation. The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours. Surveillance Requirements do not have to be performed on inoperable equipment.

4.0.4 Entry into an OPERATIONAL CONDITION or other specified applicable condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the applicable surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL CONDITIONS as required to comply with ACTION requirements.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2, and 3 components shall be applicable as follows:

- a. Inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).
- b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and

APPLICABILITY**SURVEILLANCE REQUIREMENTS**

Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

ASME Boiler and Pressure Vessel
Code and applicable Addenda
terminology for inservice
inspection and testing activities

Weekly
Monthly
Quarterly or every 3 months
Semiannually or every 6 months
Every 9 months
Yearly or annually

Required frequencies
for performing inservice
inspection and testing
activities

At least once per 7 days
At least once per 31 days
At least once per 92 days
At least once per 184 days
At least once per 276 days
At least once per 366 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

Enclosure 5 to Generic Letter 87-09

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS3/4.0 APPLICABILITY

[NOTE: This enclosure provides revised Bases for all specifications in Sections 3.0 and 4.0.]

BASES

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

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

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

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

The specified time limits of the ACTION requirements are applicable from the point in time it is identified that a Limiting Condition for Operation is not met. The time limits of the ACTION requirements are also applicable when a system or component is removed from service for surveillance testing or investigation of operational problems. Individual specifications may include a specified time limit for the completion of a Surveillance Requirement when

Attachment 3

NRC Memorandum, "Summary of Meeting Held on September 17, 1987 Relating to
Generic Letter 87-09," dated October 20, 1987

TSTF-529, Rev. 0
NRC 6 147

Seck Specs



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

OCT 20 1987

DOCKET NOS: 50-325/324 & 50-400

LICENSEE: Carolina Power & Light Company

FACILITY: Shearon Harris, Unit 1

SUBJECT: SUMMARY OF MEETING HELD ON SEPTEMBER 17, 1987 RELATING TO GENERIC LETTER 87-09

A meeting was held with representatives of the Carolina Power & Light Company (CP&L) in Bethesda, MD. on September 17, 1987 to discuss Generic Letter 87-09, "Sections 3.0 and 4.0 of the Standard Technical Specifications (STS) on the applicability of Limiting Conditions for Operation and Surveillance Requirements" dated June 4, 1987, as it relates to the Shearon Harris Unit 1 and the Brunswick Units 1 & 2 nuclear power plants. A list of attendees is attached.

CP&L expressed concern about the potential for misinterpretation of the sentence underlined below, for ease of reference, and which appears on page 8 3/4.0-1 of enclosure 3 to Generic Letter 87-09.

"Specification 3.0.1

...It is not intended that the shutdown ACTION requirements be used as an operational convenience which permits (routine) voluntary removal of a system(s) or component(s) from service in lieu of other alternatives that would not result in redundant systems or components being inoperable."

The concern expressed is that it could prohibit CP&L from going voluntarily into a Limiting Condition for Operation (LCO) in certain justifiable instances. An example of such an instance would be if a small leak developed in a pump seal which in itself would not render the pump inoperable but had the potential for rendering the pump inoperable at a future date. CP&L would like the option of voluntarily entering a LCO by isolating the pump and making the required repairs without being cited for such action. The NRC staff noted that the underlined section of the Bases for Specification 3.0.1, noted above, would not apply to the example cited by CP&L since it is not a case in which redundant systems would be out of service. The staff noted that in addition to the two basic types of action requirements that are noted in the second paragraph of the Bases for Specification 3.0.1, a third type would define time limits for directly placing the plant in a shutdown condition. It was noted that the sentence in question, underlined above, that was a concern to CP&L was intended to apply to this type of shutdown action requirement. The staff noted that a similar sentence is included in the Bases for Specification 3.0.3. In both cases the point of clarification is that the last echelon of defense should not be removed from service such that this would invoke a prompt shutdown action requirement, in lieu of other alternatives that would not result in redundant systems being out of service simultaneously.

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CP&L asked for a clarification of when a missed surveillance is reported under the LER Rule. The staff stated that if a missed surveillance is not performed within the allowance for extending the surveillance interval as provided by Specification 4.0.2, it would be reportable. This is consistent with the clarification of the LER Rule that is provided in NUREG-1022, Supplement #1.

CP&L asked if there was any significance between the words "failure to meet" and the words "noncompliance with" which is currently in Specification 4.0.3 of Generic letter 87-09. The staff stated they both mean the same and that it does not impose any new requirement.

Bart C. Buckley, Senior Project Manager
Project Directorate 11-1
Division of Reactor Projects 1/11

cc: See next page

DISTRIBUTION:
See attached list

PM:PP21:DRPR
BBuckley/sh

10/8/87

10/8/87
EAdensam

10/9/87

Attachment 4

Inspection Manual Part 9900 Technical Guidance document, "Standard Technical Specifications (STS) Section 3.0.3 Limiting Conditions for Operation"



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20546

NRC INSPECTION MANUAL

ILRB

PART 9900: TECHNICAL GUIDANCE

STANDARD TECHNICAL SPECIFICATIONS STS SECTION 3.0.3 LIMITING CONDITIONS FOR OPERATION

A. PURPOSE

To provide guidance on Standard Technical Specifications (STS) Section 3.0.3 as it relates to limiting conditions for operation (LCO).

B. BACKGROUND

Regions III and V have reported the incorrect use of the provisions of STS Section 3.0.3 by licensees. As an example, Technical Specification 3.7.A.5.b for Dresden and Quad Cities, and similar specifications for other plants, establish the containment oxygen concentration requirements during the 24 hours prior to a shutdown, and after the reactor mode switch has been placed in the run position on startup. If the oxygen-allowable concentration exceeds the technical specification limit for more than 24 hours prior to shutdown or for more than 24 hours after the reactor mode switch has been placed in the run position on startup, the plant is in violation of the LCO and should be shut down in accordance with the LCO. However, the licensee proposed to enter LCO 3.0.3 at the end of the 24-hour period and use the requirements of LCO 3.0.3 to have an additional 12 hours to shut down the plant. Technical Specification 3.7.A.5.b, defines the two conditions for which oxygen concentration can be exceeded. For either condition, an explicit 24-hour time limit for shutting down is provided. There are no other circumstances which are not accounted for, and STS 3.0.3 does not apply.

The basic information provided to Regions III and V concerning the use of STS 3.0.3 is discussed in the section below.

C. DISCUSSION

LCO as defined in STS 3.0.3 is not intended to be used as an operational convenience which permits redundant safety systems to be out of service for a limited period of time. Its intended purpose is to provide guidance on the time limits for an "orderly" shutdown when the individual LCO or ACTION statements in other specifications cannot be complied with. Voluntary entry into LCO 3.0.3 deliberately removes the last line of defense against potentially harmful events. Doing so allows removal of a system from service when the redundant system is already inoperable. An action like this would show a disregard for plant safety and is unacceptable. It also should be emphasized that removal of a system from service is justified only for test, maintenance, or repair purposes.

Issue Date: 08/31/87

Model Application for Adoption of TSTF-529

[DATE]

10 CFR 50.90

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

SUBJECT: PLANT NAME
DOCKET NO. 50-[xxx]
APPLICATION TO REVISE TECHNICAL SPECIFICATIONS TO
ADOPT TSTF-529, "CLARIFY USE AND APPLICATION RULES"

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, [LICENSEE] is submitting a request for an amendment to the Technical Specifications (TS) for [PLANT NAME, UNIT NOS.].

The proposed amendment would modify TS requirements in Section 1.3 and Section 3.0 regarding LCO usage, and the TS Bases for Section 3.0 regarding Limiting Condition for Operation (LCO) usage and Surveillance Requirement (SR) usage. These changes are consistent with NRC-approved Technical Specifications Task Force (TSTF) Traveler TSTF-529, "Clarify Use and Application Rules." The availability of this TS improvement was announced in the Federal Register on [Date] ([] FR []) as part of the consolidated line item improvement process (CLIIP).

Attachment 1 provides a description and assessment of the proposed changes.

Attachment 2 provides the existing TS pages marked up to show the proposed changes.

Attachment 3 provides revised (clean) TS pages.

Attachment 4 provides existing TS Bases pages marked to show the proposed changes.

Approval of the proposed amendment is requested by [date]. Once approved, the amendment shall be implemented within [] days.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated [STATE] Official.

[In accordance with 10 CFR 50.30(b), a license amendment request must be executed in a signed original under oath or affirmation. This can be accomplished by attaching a notarized affidavit confirming the signature authority of the signatory, or by including the following statement in the cover letter: "I declare under penalty of perjury that the foregoing is true and correct. Executed on (date)." The alternative statement is pursuant to 28 USC 1746. It does not require notarization.]

If you should have any questions regarding this submittal, please contact [NAME, TELEPHONE NUMBER].

Sincerely,

[Name, Title]

Attachments:

1. Description and Assessment
2. Proposed Technical Specifications Changes (Mark-Up)
3. Revised Technical Specifications Pages
4. Proposed Technical Specifications Bases Changes (Mark-Up)

[The model application does not include these attachments, which will be added by the licensee.]

cc: NRC Project Manager
NRC Regional Office
NRC Resident Inspector
State Contact

ATTACHMENT 1 - DESCRIPTION AND ASSESSMENT

1.0 DESCRIPTION

The proposed change revises Section 1.3, "Completion Times," and Section 3.0, "LCO Applicability" of the Technical Specifications (TS) and the TS Bases for Section 3.0, "LCO Applicability" and "SR Applicability," to clarify the use and application of the TS usage rules, as described below:

- Section 1.3 is modified to clarify "discovery."
- Revisions are made to Section 1.3 to discuss exceptions to starting the Completion Time at Condition entry.
- An editorial change is made to LCO 3.0.4.b to clarify that LCO 3.0.4.a, LCO 3.0.4.b, and LCO 3.0.4.c are independent options. The LCO 3.0.4.a Bases are revised to support the clarification.
- LCO 3.0.4.a Bases are modified to clarify that Required Actions must be followed after entry into the Modes and other specified conditions in the Applicability. An example is added to the Bases.
- The LCO 3.0.5 Bases are revised to clarify its application.
- The Bases of SR 3.0.2 and SR 3.0.3 are revised to remove the term "Operational Convenience."
- Changes are made to the Bases of LCO 3.0.3 and SR 3.0.3 to use consistent terminology.
- The LCO 3.0.3 Bases are corrected to state that a unit shutdown may be terminated and LCO 3.0.3 exited if the LCO is no longer applicable.
- The LCO 3.0.4.c Bases are modified to replace a misleading TS reference.
- The LCO 3.0.5 Bases are modified to clarify that LCO 3.0.5 should not be used if there are other alternatives to demonstrate that an LCO is met and maintain compliance with Actions. The LCO 3.0.5 Bases examples are revised.
- The SR 3.0.3 Bases are modified to clarify when SR 3.0.3 may be applied and to state expectations for applying SR 3.0.3 when an SR has not been performed for an extended period.

[LICENSEE] requests NRC review and approval of the changes to the TS Bases. The proposed changes to the LCO 3.0 and SR 3.0 Bases have the potential to alter the application of the TS. In accordance with Paragraphs b.1 and d of the TS Bases Control Program, the proposed Bases changes must be reviewed and approved by the NRC prior

to implementation. Following approval of the license amendment request, [LICENSEE] will issue the revised Bases pages in accordance with the TS Bases Control Program.

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

[LICENSEE] has reviewed the model safety evaluation dated [DATE] as part of the Federal Register Notice of Availability. This review included a review of the NRC staff's evaluation, as well as the information provided in TSTF-529. [As described in the subsequent paragraphs,][LICENSEE] has concluded that the justifications presented in the TSTF-529 proposal and the model safety evaluation prepared by the NRC staff are applicable to [PLANT, UNIT NOS.] and justify this amendment for the incorporation of the changes to the [PLANT] TS.

2.2 Optional Changes and Variations

[LICENSEE is not proposing any variations or deviations from the TS changes described in the TSTF-529 or the applicable parts of the NRC staff's model safety evaluation dated [DATE].] [LICENSEE is proposing the following variations from the TS changes described in the TSTF-529 or the applicable parts of the NRC staff's model safety evaluation dated [DATE].]

----- REVIEWER'S NOTE-----
 Omission of one or more changes proposed in TSTF-529 is an acceptable variation from the Traveler.

[The [PLANT] TS utilize different [numbering][and][titles] than the Standard TS on which TSTF-529 was based. Specifically, [describe differences between the plant-specific TS numbering and/or titles and the TSTF-529 numbering and titles.] These differences are administrative and do not affect the applicability of TSTF-529 to the [PLANT] TS.]

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Determination

[LICENSEE] requests adoption of TSTF-529, "Clarify Use and Application Rules," which is an approved change to the standard technical specifications (STS), into the [PLANT NAME, UNIT NOS] technical specifications (TS).

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

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

Response: No.

The proposed change revises Section 1.3, "Completion Times," and Section 3.0, "LCO Applicability" of the TS and the TS Bases for Section 3.0, "LCO Applicability" and "SR Applicability," to clarify the use and application of the TS usage rules. Section 1.3 is modified to clarify the concept of "discovery" that an LCO is not met and to describe existing exceptions to the start of Completion Times in the TS. An editorial change is made to LCO 3.0.4.b to clarify that LCO 3.0.4.a, LCO 3.0.4.b, and LCO 3.0.4.c are independent options. The Bases of LCO 3.0.4.a are modified to clarify that Required Actions must be followed after entry into the Modes and other specified conditions in the Applicability. The SR 3.0.2 and SR 3.0.3 Bases are revised to remove the term "operational convenience," and the LCO 3.0.3 and SR 3.0.3 Bases are revised to use terminology consistent with the corresponding TS. The LCO 3.0.5 Bases are modified to clarify its applicability to all TS Section 3 Required Actions, and that LCO 3.0.5 should not be used if there are other alternatives to demonstrate Operability that maintain compliance with Actions. An inaccurate example in the LCO 3.0.5 Bases is replaced and another example is revised. The SR 3.0.3 Bases are modified to clarify when SR 3.0.3 may be applied and to state expectations for applying SR 3.0.3 when an SR has not been performed for an extended period.

The changes to Section 1.3 and LCO 3.0.4 have no effect on the requirement for systems to be Operable and have no effect on the application of TS actions. The proposed Bases changes clarify the appropriate application of the existing TS requirements. Since the proposed change does not significantly affect system Operability, the proposed change will have no significant effect on the initiating events for accidents previously evaluated and will have no significant effect on the ability of the systems to mitigate accidents previously evaluated.

Therefore, it is concluded that 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 to the TS usage rules does not affect the design or function of any plant systems. The proposed change does not change the Operability requirements for plant systems or the actions taken when plant systems are not operable. The proposed change clarifies the current application of the specifications. The clarification of "discovery" in Section 1.3 does not change the current timing or actions to be taken when LCOs are not met. The changes to the TS Bases clarify the application of the existing requirements.

Therefore, it is concluded that 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 clarifies the application of Section 1.3 and LCO 3.0.4 and does not result in changes in plant operation. As a result, plant safety is either improved or unaffected. The proposed changes to the Bases clarify the application of the existing TS requirements and, as a result, have no significant effect on a margin of safety.

Therefore, it is concluded that this change does not involve a significant reduction in a margin of safety.

Based on the above, [LICENSEE] 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.

4.0 ENVIRONMENTAL EVALUATION

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 effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change 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 change.

Improved Technical Specifications Mark-Up

1.0 USE AND APPLICATION

1.3 Completion Times

PURPOSE	The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.
BACKGROUND	Limiting Conditions for Operation (LCOs) specify minimum requirements for ensuring safe operation of the unit. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Time(s).
DESCRIPTION	<p>The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., inoperable equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO.</p> <p><i>Unless otherwise specified, the Completion Time begins when a senior licensed operator on the operating shift crew with responsibility for plant operations makes the declaration that an LCO is not met and an ACTIONS Condition is entered. The "otherwise specified" exceptions are varied, such as a Required Action Note or Surveillance Requirement Note which provides an alternative time to perform specific tasks, such as testing, without starting the Completion Time. While utilizing the Note, should a Condition be applicable for any reason not addressed by the Note, the Completion Time begins. Should the time allowance in the Note be exceeded, the Completion Time begins at that point. The exceptions may also be incorporated into the Completion Time. For example, LCO 3.8.1, "AC Sources - Operating," Required Action B.2, requires declaring required feature(s) supported by an inoperable diesel generator, inoperable when the redundant required feature(s) are inoperable. The Completion Time states, "4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)." In this case, the Completion Time does not begin until the conditions in the Completion Time are satisfied.</i></p> <p>Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability.</p> <p>If situations are discovered that require entry into more than one Condition at a time within a single LCO (multiple Conditions), the Required Actions for each Condition must be performed within the associated Completion Time. When in multiple Conditions, separate Completion Times are tracked for each Condition starting from the time of</p>

discovery of the situation that required entry into the Condition, *unless otherwise specified*.

Once a Condition has been entered, subsequent trains, subsystems, components, or variables expressed in the Condition, discovered to be inoperable or not within limits, will not result in separate entry into the Condition, unless specifically stated. The Required Actions of the Condition continue to apply to each additional failure, with Completion Times based on initial entry into the Condition, *unless otherwise specified*.

However, when a subsequent train, subsystem, component, or variable, expressed in the Condition, is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability:

- a. Must exist concurrent with the first inoperability and
- b. Must remain inoperable or not within limits after the first inoperability is resolved.

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, LCO 3.0.7, LCO 3.0.8, and LCO 3.0.9.
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 and LCO 3.0.6.</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> <ul style="list-style-type: none"> a. MODE 3 within 7 hours, b. MODE 4 within 13 hours, and c. MODE 5 within 37 hours. <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, 3, and 4.</p>
LCO 3.0.4	<p>When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:</p> <ul style="list-style-type: none"> 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; 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

B 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

BASES

LCOs	LCO 3.0.1 through LCO 3.0.9 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, <i>unless otherwise specified</i>. 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">Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification andCompletion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified. <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> <p>Completing the Required Actions is not required when an LCO is met or is no longer applicable, unless otherwise stated in the individual Specifications.</p>

BASES

LCO 3.0.2 (continued)

The nature of some Required Actions of some Conditions necessitates that, once the Condition is entered, the Required Actions must be completed even though the associated Conditions no longer exist. The individual LCO's ACTIONS specify the Required Actions where this is the case. An example of this is in LCO 3.4.3, "RCS Pressure and Temperature (P/T) Limits."

The Completion Times of the Required Actions are also applicable when a system or component is removed from service intentionally. Reasons for intentionally relying on the ACTIONS include, but are not limited to, performance of Surveillances, preventive maintenance, corrective maintenance, or investigation of operational problems. Entering ACTIONS for these reasons must be done in a manner that does not compromise safety. Intentional entry into ACTIONS should not be made for operational convenience. Additionally, if intentional entry into ACTIONS would result in redundant equipment being inoperable, alternatives should be used instead. Doing so limits the time both subsystems/trains of a safety function are inoperable and limits the time conditions exist which may result in LCO 3.0.3 being entered. Individual Specifications may specify a time limit for performing an SR when equipment is removed from service or bypassed for testing. In this case, the Completion Times of the Required Actions are applicable when this time limit expires, if the equipment remains removed from service or bypassed.

When a change in MODE or other specified condition is required to comply with Required Actions, the unit may enter a MODE or other specified condition in which another Specification becomes applicable. In this case, the Completion Times of the associated Required Actions would apply from the point in time that the new Specification becomes applicable and the ACTIONS Condition(s) are entered.

LCO 3.0.3

LCO 3.0.3 establishes the actions that must be implemented when an LCO is not met and either:

- a. An associated Required Action and Completion Time is not met and no other Condition applies or
- b. The condition of the unit is not specifically addressed by the associated ACTIONS. This means that no combination of Conditions stated in the ACTIONS can be made that exactly corresponds to the actual condition of the unit. Sometimes, possible combinations of Conditions are such that entering LCO 3.0.3 is warranted; in such cases, the ACTIONS specifically state a Condition corresponding to such combinations and also that LCO 3.0.3 be entered immediately.

BASES

LCO 3.0.3 (continued)

This Specification delineates the time limits for placing the unit in a safe MODE or other specified condition when operation cannot be maintained within the limits for safe operation as defined by the LCO and its ACTIONS. It is not intended to be used as an operational convenience that permits routine voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable.

Upon entering LCO 3.0.3, 1 hour is allowed to prepare for an orderly shutdown before initiating a change in unit operation. This includes time to permit the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to ~~enter reach~~ lower MODES of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the capabilities of the unit, assuming that only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the Reactor Coolant System and the potential for a plant upset that could challenge safety systems under conditions to which this Specification applies. The use and interpretation of specified times to complete the actions of LCO 3.0.3 are consistent with the discussion of Section 1.3, Completion Times.

A unit shutdown required in accordance with LCO 3.0.3 may be terminated and LCO 3.0.3 exited if any of the following occurs:

- a. The LCO is now met,
- b. The LCO is no longer applicable,*
- ~~bc.~~ A Condition exists for which the Required Actions have now been performed, or
- ~~cd.~~ ACTIONS exist that do not have expired Completion Times. These Completion Times are applicable from the point in time that the Condition is initially entered and not from the time LCO 3.0.3 is exited.

The time limits of LCO 3.0.3 allow 37 hours for the unit to be in MODE 5 when a shutdown is required during MODE 1 operation. If the unit is in a lower MODE of operation when a shutdown is required, the time limit for ~~entering reaching~~ the next lower MODE applies. If a lower MODE is ~~reached-entered~~ in less time than allowed, however, the total allowable time to ~~reach-enter~~ MODE 5, or other applicable MODE, is not reduced. For example, if MODE 3 is ~~reached-entered~~ in 2 hours, then the time

allowed for ~~reaching~~*entering* MODE 4 is the next 11 hours, because the
total time for ~~reaching~~*entering*

BASES

LCO 3.0.3 (continued)

MODE 4 is not reduced from the allowable limit of 13 hours. Therefore, if remedial measures are completed that would permit a return to MODE 1, a penalty is not incurred by having to ~~reach~~*enter* a lower MODE of operation in less than the total time allowed.

In MODES 1, 2, 3, and 4, LCO 3.0.3 provides actions for Conditions not covered in other Specifications. The requirements of LCO 3.0.3 do not apply in MODES 5 and 6 because the unit is already in the most restrictive Condition required by LCO 3.0.3. The requirements of LCO 3.0.3 do not apply in other specified conditions of the Applicability (unless in MODE 1, 2, 3, or 4) because the ACTIONS of individual Specifications sufficiently define the remedial measures to be taken.

Exceptions to LCO 3.0.3 are provided in instances where requiring a unit shutdown, in accordance with LCO 3.0.3, would not provide appropriate remedial measures for the associated condition of the unit. An example of this is in LCO 3.7.14, "Fuel Storage Pool Water Level." LCO 3.7.14 has an Applicability of "During movement of irradiated fuel assemblies in fuel storage pool." Therefore, this LCO can be applicable in any or all MODES. If the LCO and the Required Actions of LCO 3.7.14 are not met while in MODE 1, 2, 3, or 4, there is no safety benefit to be gained by placing the unit in a shutdown condition. The Required Action of LCO 3.7.14 of "Suspend movement of irradiated fuel assemblies in fuel storage pool" is the appropriate Required Action to complete in lieu of the actions of LCO 3.0.3. These exceptions are addressed in the individual Specifications.

LCO 3.0.4

LCO 3.0.4 establishes limitations on changes in MODES or other specified conditions in the Applicability when an LCO is not met. It allows placing the unit in a MODE or other specified condition stated in that Applicability (e.g., the Applicability desired to be entered) when unit conditions are such that the requirements of the LCO would not be met, in accordance with *either* LCO 3.0.4.a, LCO 3.0.4.b, or LCO 3.0.4.c.

LCO 3.0.4.a allows entry into a MODE or other specified condition in the Applicability with the LCO not met when the associated ACTIONS to be entered ~~following entry into permit continued operation in~~ the MODE or other specified condition in the Applicability *will permit continued operation within the MODE or other specified condition* for an unlimited period of time. Compliance with ~~ACTIONS Required Actions~~ that permit continued operation of the unit for an unlimited period of time in a MODE or other specified condition provides an acceptable level of safety for continued operation. This is without regard to the status of the unit before or after the MODE change. Therefore, in such cases, entry into a MODE or other specified condition in the Applicability may be made *and the*

*Required Actions followed after entry into the Applicability in accordance
with the provisions of the Required Actions.*

BASES

LCO 3.0.4 (continued)

For example, LCO 3.0.4.a may be used when the Required Action to be entered states that an inoperable instrument channel must be placed in the tripped condition within the Completion Time. Transition into a MODE or other specified in condition in the Applicability may be made in accordance with LCO 3.0.4 and the channel is subsequently placed in the tripped condition within the Completion Time, which begins when the Applicability is entered. If the instrument channel cannot be placed in the tripped condition and the subsequent default ACTION ("Required Action and associated Completion Time not met") allows the OPERABLE train to be placed in operation, use of LCO 3.0.4.a is acceptable because the subsequent ACTIONS to be entered following entry into the MODE include ACTIONS (place the OPERABLE train in operation) that permit safe plant operation for an unlimited period of time in the MODE or other specified condition to be entered.

LCO 3.0.4.b allows entry into a MODE or other specified condition in the Applicability with the LCO not met 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.

The risk assessment may use quantitative, qualitative, or blended approaches, and the risk assessment will be conducted using the plant program, procedures, and criteria in place to implement 10 CFR 50.65(a)(4), which requires that risk impacts of maintenance activities to be assessed and managed. The risk assessment, for the purposes of LCO 3.0.4.b, must take into account all inoperable Technical Specification equipment regardless of whether the equipment is included in the normal 10 CFR 50.65(a)(4) risk assessment scope. The risk assessments will be conducted using the procedures and guidance endorsed by Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." Regulatory Guide 1.182 endorses the guidance in Section 11 of NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." These documents address general guidance for conduct of the risk assessment, quantitative and qualitative guidelines for establishing risk management actions, and example risk management actions. These include actions to plan and conduct other activities in a manner that controls overall risk, increased risk awareness by shift and management personnel, actions to reduce the duration of the condition, actions to minimize the magnitude of risk increases (establishment of backup success paths or compensatory measures), and determination that the proposed MODE change is acceptable. Consideration should also be given to the probability of completing restoration such that the

requirements of the LCO would be met prior to the expiration of ACTIONS Completion Times that would require exiting the Applicability.

LCO 3.0.4.b may be used with single, or multiple systems and components unavailable. NUMARC 93-01 provides guidance relative to consideration of simultaneous unavailability of multiple systems and components.

The results of the risk assessment shall be considered in determining the acceptability of entering the MODE or other specified condition in the Applicability, and any corresponding risk management actions. The LCO 3.0.4.b risk assessments do not have to be documented.

BASES

LCO 3.0.4 (continued)

The Technical Specifications allow continued operation with equipment unavailable in MODE 1 for the duration of the Completion Time. Since this is allowable, and since in general the risk impact in that particular MODE bounds the risk of transitioning into and through the applicable MODES or other specified conditions in the Applicability of the LCO, the use of the LCO 3.0.4.b allowance should be generally acceptable, as long as the risk is assessed and managed as stated above. However, there is a small subset of systems and components that have been determined to be more important to risk and use of the LCO 3.0.4.b allowance is prohibited. The LCOs governing these systems and components contain Notes prohibiting the use of LCO 3.0.4.b by stating that LCO 3.0.4.b is not applicable.

LCO 3.0.4.c allows entry into a MODE or other specified condition in the Applicability with the LCO not met based on a Note in the Specification which states LCO 3.0.4.c is applicable. These specific allowances permit entry into MODES or other specified conditions in the Applicability when the associated ACTIONS to be entered do not provide for continued operation for an unlimited period of time and a risk assessment has not been performed. This allowance may apply to all the ACTIONS or to a specific Required Action of a Specification. The risk assessments performed to justify the use of LCO 3.0.4.b usually only consider systems and components. For this reason, LCO 3.0.4.c is typically applied to Specifications which describe values and parameters (e.g., [*RCS Specific Activity*](#)~~[Containment Air Temperature, Containment Pressure, MCPR, Moderator Temperature Coefficient]~~), and may be applied to other Specifications based on NRC plant specific approval.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

The provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown. In this context, a unit shutdown is defined as a change in MODE or other specified condition in the Applicability associated with transitioning from MODE 1 to MODE 2, MODE 2 to MODE 3, MODE 3 to MODE 4, and MODE 4 to MODE 5.

BASES

LCO 3.0.4 (continued)

Upon entry into a MODE or other specified condition in the Applicability with the LCO not met, LCO 3.0.1 and LCO 3.0.2 require entry into the applicable Conditions and Required Actions until the Condition is resolved, until the LCO is met, or until the unit is not within the Applicability of the Technical Specification.

Surveillances do not have to be performed on the associated inoperable equipment (or on variables outside the specified limits), as permitted by SR 3.0.1. Therefore, utilizing LCO 3.0.4 is not a violation of SR 3.0.1 or SR 3.0.4 for any Surveillances that have not been performed on inoperable equipment. However, SRs must be met to ensure OPERABILITY prior to declaring the associated equipment OPERABLE (or variable within limits) and restoring compliance with the affected LCO.

LCO 3.0.5

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

- a. The OPERABILITY of the equipment being returned to service or
- b. The OPERABILITY of other equipment.

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the required testing to demonstrate OPERABILITY. This Specification does not provide time to perform any other preventive or corrective maintenance. *LCO 3.0.5 should not be used in lieu of other practicable alternatives that comply with Required Actions and that do not require changing the MODE or other specified conditions in the Applicability in order to demonstrate equipment is OPERABLE. LCO 3.0.5 is not intended to be used repeatedly.*

An example of demonstrating equipment is OPERABLE with the Required Actions not met is opening a manual valve that was closed to comply with Required Actions to isolate a flowpath with excessive Reactor Coolant System (RCS) Pressure Isolation Valve (PIV) leakage in order to perform testing to demonstrate that RCS PIV leakage is now within limit.

Examples of demonstrating equipment OPERABILITY include instances in which it is necessary to take an inoperable channel or trip system out of a tripped condition that was directed by a Required Action, if there is no Required Action Note for this purpose. An example of verifying OPERABILITY of equipment removed from service is taking a tripped

channel out of the tripped condition to permit the logic to function and indicate the appropriate response during performance of required testing on the inoperable channel. Examples ~~An example~~ of demonstrating the OPERABILITY of other equipment ~~are~~ *is* taking an inoperable channel or trip system out of the tripped condition *1)* to prevent the trip function from occurring during the performance of required testing on another channel in the other trip system, *or 2).* ~~A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition~~ to permit the logic to function and indicate the appropriate response during the performance of required testing on another channel in the same trip system.

In an interpretation dated December 20, 2012 (NRC Agencywide Document Access and Management System (ADAMS) Accession No. ML11145A085), the NRC concluded that the administrative controls in LCO 3.0.5 would apply in all cases to systems or components in Chapter 3 of the Technical Specifications, as long as the testing could not be conducted while complying with the Required Actions. This includes the realignment or repositioning of redundant or alternate equipment or trains previously manipulated to comply with ACTIONS, as well as equipment removed from service or declared inoperable to comply with ACTIONS.

BASES

SR 3.0.2 (continued)

The 25% extension does not significantly degrade the reliability that results from performing the Surveillance at its specified Frequency. This is based on the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the SRs. The exceptions to SR 3.0.2 are those Surveillances for which the 25% extension of the interval specified in the Frequency does not apply. These exceptions are stated in the individual Specifications. The requirements of regulations take precedence over the TS. An example of where SR 3.0.2 does not apply is in the Containment Leakage Rate Testing Program. This program establishes testing requirements and Frequencies in accordance with the requirements of regulations. The TS cannot in and of themselves extend a test interval specified in the regulations.

As stated in SR 3.0.2, the 25% extension also does not apply to the initial portion of a periodic Completion Time that requires performance on a "once per ..." basis. The 25% extension applies to each performance after the initial performance. The initial performance of the Required Action, whether it is a particular Surveillance or some other remedial action, is considered a single action with a single Completion Time. One reason for not allowing the 25% extension to this Completion Time is that such an action usually verifies that no loss of function has occurred by checking the status of redundant or diverse components or accomplishes the function of the inoperable equipment in an alternative manner.

The provisions of SR 3.0.2 are not intended to be used repeatedly ~~merely as an operational convenience~~ to extend Surveillance intervals (other than those consistent with refueling intervals) or periodic Completion Time intervals beyond those specified.

SR 3.0.3

SR 3.0.3 establishes the flexibility to defer declaring affected equipment inoperable or an affected variable outside the specified limits when a Surveillance has not been ~~completed-performed~~ within the specified Frequency. A delay period of up to 24 hours or up to the limit of the specified Frequency, whichever is greater, applies from the point in time that it is discovered that the Surveillance has not been performed in accordance with SR 3.0.2, and not at the time that the specified Frequency was not met.

BASES

SR 3.0.3 (continued)

This delay period provides an adequate time to ~~perform complete~~ Surveillances that have been missed. This delay period permits the ~~completion-performance~~ of a Surveillance before complying with Required Actions or other remedial measures that might preclude ~~performance completion~~ of the Surveillance.

The basis for this delay period includes consideration of unit conditions, adequate planning, availability of personnel, the time required to perform the Surveillance, the safety significance of the delay in completing the required Surveillance, and the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the requirements.

When a Surveillance with a Frequency based not on time intervals, but upon specified unit conditions, operating situations, or requirements of regulations (e.g., prior to entering MODE 1 after each fuel loading, or in accordance with 10 CFR 50, Appendix J, as modified by approved exemptions, etc.) is discovered to not have been performed when specified, SR 3.0.3 allows for the full delay period of up to the specified Frequency to perform the Surveillance. However, since there is not a time interval specified, the missed Surveillance should be performed at the first reasonable opportunity.

SR 3.0.3 provides a time limit for, and allowances for the performance of, Surveillances that become applicable as a consequence of MODE changes imposed by Required Actions.

SR 3.0.3 is only applicable if there is a reasonable expectation the associated equipment is OPERABLE or that variables are within limits, and it is expected that the Surveillance will be met when performed. Many factors should be considered, such as the period of time since the Surveillance was last performed, or whether the Surveillance, or a portion thereof, has ever been performed, and any other indications, tests, or activities that might support the expectation that the Surveillance will be met when performed. An example of the use of SR 3.0.3 would be a relay contact that was not tested as required in accordance with a particular SR, but previous successful performances of the SR included the relay contact; the adjacent, physically connected relay contacts were tested during the SR performance; the subject relay contact has been tested by another SR; or historical operation of the subject relay contact has been successful. It is not sufficient to infer the behavior of the associated equipment from the performance of similar equipment. The rigor of determining whether there is a reasonable expectation a Surveillance will be met when performed should increase based on the length of time since the last performance of the Surveillance. If the Surveillance has been performed recently, a review of the Surveillance

history and equipment performance may be sufficient to support a reasonable expectation that the Surveillance will be met when performed. For Surveillances that have not been performed for a long period or that have never been performed, a rigorous evaluation based on objective evidence should provide a high degree of confidence that the equipment is OPERABLE. The evaluation should be documented in sufficient detail to allow a knowledgeable individual to understand the basis for the determination.

Failure to comply with specified Frequencies for SRs is expected to be an infrequent occurrence. Use of the delay period established by SR 3.0.3 is a flexibility which is not intended to be used ~~repeatedly as an operational convenience~~ to extend Surveillance intervals. While up to 24 hours or the limit of the specified Frequency is provided to perform the missed Surveillance, it is expected that the missed Surveillance will be performed at the first reasonable opportunity. The determination of the first reasonable opportunity should include consideration of the impact on plant risk (from delaying the Surveillance as well as any plant configuration changes required or shutting the plant down to perform the Surveillance) and impact on any analysis assumptions, in addition to unit conditions, planning, availability of personnel, and the time required to perform the Surveillance. This risk impact should be managed through the program in place to implement 10 CFR 50.65(a)(4) and its implementation guidance, NRC Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." This Regulatory Guide addresses consideration of temporary and

BASES

SR 3.0.3 (continued)

aggregate risk impacts, determination of risk management action thresholds, and risk management action up to and including plant shutdown. The missed Surveillance should be treated as an emergent condition as discussed in the Regulatory Guide. The risk evaluation may use quantitative, qualitative, or blended methods. The degree of depth and rigor of the evaluation should be commensurate with the importance of the component. Missed Surveillances for important components should be analyzed quantitatively. If the results of the risk evaluation determine the risk increase is significant, this evaluation should be used to determine the safest course of action. All missed Surveillances will be placed in the licensee's Corrective Action Program.

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Completion Time of the ACTIONS, restores compliance with SR 3.0.1.

SR 3.0.4

SR 3.0.4 establishes the requirement that all applicable SRs must be met before entry into a MODE or other specified condition in the Applicability.

This Specification ensures that system and component OPERABILITY requirements and variable limits are met before entry into MODES or other specified conditions in the Applicability for which these systems and components ensure safe operation of the unit. The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

A provision is included to allow entry into a MODE or other specified condition in the Applicability when an LCO is not met due to a Surveillance not being met in accordance with LCO 3.0.4.

1.0 USE AND APPLICATION

1.3 Completion Times

PURPOSE	The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.
BACKGROUND	Limiting Conditions for Operation (LCOs) specify minimum requirements for ensuring safe operation of the unit. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Time(s).
DESCRIPTION	<p>The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., inoperable equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO.</p> <p><i>Unless otherwise specified, the Completion Time begins when a senior licensed operator on the operating shift crew with responsibility for plant operations makes the declaration that an LCO is not met and an ACTIONS Condition is entered. The "otherwise specified" exceptions are varied, such as a Required Action Note or Surveillance Requirement Note which provides an alternative time to perform specific tasks, such as testing, without starting the Completion Time. While utilizing the Note, should a Condition be applicable for any reason not addressed by the Note, the Completion Time begins. Should the time allowance in the Note be exceeded, the Completion Time begins at that point. The exceptions may also be incorporated into the Completion Time. For example, LCO 3.8.1, "AC Sources - Operating," Required Action B.2, requires declaring required feature(s) supported by an inoperable diesel generator, inoperable when the redundant required feature(s) are inoperable. The Completion Time states, "4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)." In this case, the Completion Time does not begin until the conditions in the Completion Time are satisfied.</i></p> <p>Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability.</p> <p>If situations are discovered that require entry into more than one Condition at a time within a single LCO (multiple Conditions), the Required Actions for each Condition must be performed within the associated Completion Time. When in multiple Conditions, separate Completion Times are tracked for each Condition starting from the time of</p>

discovery of the situation that required entry into the Condition, *unless otherwise specified*.

Once a Condition has been entered, subsequent trains, subsystems, components, or variables expressed in the Condition, discovered to be inoperable or not within limits, will not result in separate entry into the Condition, unless specifically stated. The Required Actions of the Condition continue to apply to each additional failure, with Completion Times based on initial entry into the Condition, *unless otherwise specified*.

However, when a subsequent train, subsystem, component, or variable expressed in the Condition is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability:

- a. Must exist concurrent with the first inoperability and

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, LCO 3.0.7, LCO 3.0.8, and LCO 3.0.9.
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 and LCO 3.0.6.</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> <ul style="list-style-type: none"> a. MODE 3 within 7 hours, b. MODE 4 within 13 hours, and c. MODE 5 within 37 hours. <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, 3, and 4.</p>
LCO 3.0.4	<p>When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:</p> <ul style="list-style-type: none"> 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; 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

B 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

BASES

LCOs	LCO 3.0.1 through LCO 3.0.9 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, <i>unless otherwise specified</i>. 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"> Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification and Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified. <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> <p>Completing the Required Actions is not required when an LCO is met or is no longer applicable, unless otherwise stated in the individual Specifications.</p>

BASES

LCO 3.0.2 (continued)

The nature of some Required Actions of some Conditions necessitates that, once the Condition is entered, the Required Actions must be completed even though the associated Conditions no longer exist. The individual LCO's ACTIONS specify the Required Actions where this is the case. An example of this is in LCO 3.4.3, "RCS Pressure and Temperature (P/T) Limits."

The Completion Times of the Required Actions are also applicable when a system or component is removed from service intentionally. The reasons for intentionally relying on the ACTIONS include, but are not limited to, performance of Surveillances, preventive maintenance, corrective maintenance, or investigation of operational problems. Entering ACTIONS for these reasons must be done in a manner that does not compromise safety. Intentional entry into ACTIONS should not be made for operational convenience. Additionally, if intentional entry into ACTIONS would result in redundant equipment being inoperable, alternatives should be used instead. Doing so limits the time both subsystems/trains of a safety function are inoperable and limits the time conditions exist which may result in LCO 3.0.3 being entered. Individual Specifications may specify a time limit for performing an SR when equipment is removed from service or bypassed for testing. In this case, the Completion Times of the Required Actions are applicable when this time limit expires, if the equipment remains removed from service or bypassed.

When a change in MODE or other specified condition is required to comply with Required Actions, the unit may enter a MODE or other specified condition in which another Specification becomes applicable. In this case, the Completion Times of the associated Required Actions would apply from the point in time that the new Specification becomes applicable, and the ACTIONS Condition(s) are entered.

LCO 3.0.3

LCO 3.0.3 establishes the actions that must be implemented when an LCO is not met and:

- a. An associated Required Action and Completion Time is not met and no other Condition applies or
- b. The condition of the unit is not specifically addressed by the associated ACTIONS. This means that no combination of Conditions stated in the ACTIONS can be made that exactly corresponds to the actual condition of the unit. Sometimes, possible combinations of Conditions are such that entering LCO 3.0.3 is warranted; in such cases, the ACTIONS specifically state a Condition corresponding to such combinations and also that LCO 3.0.3 be entered immediately.

BASES

LCO 3.0.3 (continued)

This Specification delineates the time limits for placing the unit in a safe MODE or other specified condition when operation cannot be maintained within the limits for safe operation as defined by the LCO and its ACTIONS. It is not intended to be used as an operational convenience that permits routine voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable.

Upon entering LCO 3.0.3, 1 hour is allowed to prepare for an orderly shutdown before initiating a change in unit operation. This includes time to permit the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to ~~enter reach~~ lower MODES of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the capabilities of the unit, assuming that only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the Reactor Coolant System and the potential for a plant upset that could challenge safety systems under conditions to which this Specification applies. The use and interpretation of specified times to complete the actions of LCO 3.0.3 are consistent with the discussion of Section 1.3, Completion Times.

A unit shutdown required in accordance with LCO 3.0.3 may be terminated and LCO 3.0.3 exited if any of the following occurs:

- a. The LCO is now met,
- b. The LCO is no longer applicable,*
- ~~b-c.~~ A Condition exists for which the Required Actions have now been performed, or
- ~~c-d.~~ ACTIONS exist that do not have expired Completion Times. These Completion Times are applicable from the point in time that the Condition is initially entered and not from the time LCO 3.0.3 is exited.

The time limits of LCO 3.0.3 allow 37 hours for the unit to be in MODE 5 when a shutdown is required during MODE 1 operation. If the unit is in a lower MODE of operation when a shutdown is required, the time limit for ~~reaching~~ the next lower MODE applies. If a lower MODE is ~~reached~~ in less time than allowed, however, the total allowable time to ~~reach~~ MODE 5, or other applicable MODE, is not reduced. For example, if MODE 3 is ~~reached~~ in 2 hours, then the time allowed for

~~reaching~~ing MODE 4 is the next 11 hours, because the total time for
~~reaching~~ing

BASES

LCO 3.0.3 (continued)

MODE 4 is not reduced from the allowable limit of 13 hours. Therefore, if remedial measures are completed that would permit a return to MODE 1, a penalty is not incurred by having to *reacher* a lower MODE of operation in less than the total time allowed.

In MODES 1, 2, 3, and 4, LCO 3.0.3 provides actions for Conditions not covered in other Specifications. The requirements of LCO 3.0.3 do not apply in MODES 5 and 6 because the unit is already in the most restrictive Condition required by LCO 3.0.3. The requirements of LCO 3.0.3 do not apply in other specified conditions of the Applicability (unless in MODE 1, 2, 3, or 4) because the ACTIONS of individual Specifications sufficiently define the remedial measures to be taken.

Exceptions to LCO 3.0.3 are provided in instances where requiring a unit shutdown, in accordance with LCO 3.0.3, would not provide appropriate remedial measures for the associated condition of the unit. An example of this is in LCO 3.7.15, "Fuel Storage Pool Water Level." LCO 3.7.15 has an Applicability of "During movement of irradiated fuel assemblies in the fuel storage pool." Therefore, this LCO can be applicable in any or all MODES. If the LCO and the Required Actions of LCO 3.7.15 are not met while in MODE 1, 2, or 3, there is no safety benefit to be gained by placing the unit in a shutdown condition. The Required Action of LCO 3.7.15 of "Suspend movement of irradiated fuel assemblies in the fuel storage pool" is the appropriate Required Action to complete in lieu of the actions of LCO 3.0.3. These exceptions are addressed in the individual Specifications.

LCO 3.0.4

LCO 3.0.4 establishes limitations on changes in MODES or other specified conditions in the Applicability when an LCO is not met. It allows placing the unit in a MODE or other specified condition stated in that Applicability (e.g., the Applicability desired to be entered) when unit conditions are such that the requirements of the LCO would not be met, in accordance with *either* LCO 3.0.4.a, LCO 3.0.4.b, or LCO 3.0.4.c.

LCO 3.0.4.a allows entry into a MODE or other specified condition in the Applicability with the LCO not met when the associated ACTIONS to be entered *following entry into permit continued operation in* the MODE or other specified condition in the Applicability *will permit continued operation within the MODE or other specified condition* for an unlimited period of time. Compliance with ~~ACTIONS Required Actions~~ that permit continued operation of the unit for an unlimited period of time in a MODE or other specified condition provides an acceptable level of safety for continued operation. This is without regard to the status of the unit before or after the MODE change. Therefore, in such cases, entry into a MODE or other specified condition in the Applicability may be made *and the*

Required Actions followed after entry into the Applicability~~in accordance with the provisions of the Required Actions.~~

BASES

LCO 3.0.4 (continued)

For example, LCO 3.0.4.a may be used when the Required Action to be entered states that an inoperable instrument channel must be placed in the tripped condition within the Completion Time. Transition into a MODE or other specified in condition in the Applicability may be made in accordance with LCO 3.0.4 and the channel is subsequently placed in the tripped condition within the Completion Time, which begins when the Applicability is entered. If the instrument channel cannot be placed in the tripped condition and the subsequent default ACTION ("Required Action and associated Completion Time not met") allows the OPERABLE train to be placed in operation, use of LCO 3.0.4.a is acceptable because the subsequent ACTIONS to be entered following entry into the MODE include ACTIONS (place the OPERABLE train in operation) that permit safe plant operation for an unlimited period of time in the MODE or other specified condition to be entered.

LCO 3.0.4.b allows entry into a MODE or other specified condition in the Applicability with the LCO not met 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.

The risk assessment may use quantitative, qualitative, or blended approaches, and the risk assessment will be conducted using the plant program, procedures, and criteria in place to implement 10 CFR 50.65(a)(4), which requires that risk impacts of maintenance activities to be assessed and managed. The risk assessment, for the purposes of LCO 3.0.4.b, must take into account all inoperable Technical Specification equipment regardless of whether the equipment is included in the normal 10 CFR 50.65(a)(4) risk assessment scope. The risk assessments will be conducted using the procedures and guidance endorsed by Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." Regulatory Guide 1.182 endorses the guidance in Section 11 of NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." These documents address general guidance for conduct of the risk assessment, quantitative and qualitative guidelines for establishing risk management actions, and example risk management actions. These include actions to plan and conduct other activities in a manner that controls overall risk, increased risk awareness by shift and management personnel, actions to reduce the duration of the condition, actions to minimize the magnitude of risk increases (establishment of backup success paths or compensatory measures), and determination that the proposed MODE change is acceptable. Consideration should also be given to the probability of completing restoration such that the

requirements of the LCO would be met prior to the expiration of ACTIONS Completion Times that would require exiting the Applicability.

LCO 3.0.4.b may be used with single, or multiple systems and components unavailable. NUMARC 93-01 provides guidance relative to consideration of simultaneous unavailability of multiple systems and components.

The results of the risk assessment shall be considered in determining the acceptability of entering the MODE or other specified condition in the Applicability, and any corresponding risk management actions. The LCO 3.0.4.b risk assessments do not have to be documented.

BASES

LCO 3.0.4 (continued)

The Technical Specifications allow continued operation with equipment unavailable in MODE 1 for the duration of the Completion Time. Since this is allowable, and since in general the risk impact in that particular MODE bounds the risk of transitioning into and through the applicable MODES or other specified conditions in the Applicability of the LCO, the use of the LCO 3.0.4.b allowance should be generally acceptable, as long as the risk is assessed and managed as stated above. However, there is a small subset of systems and components that have been determined to be more important to risk and use of the LCO 3.0.4.b allowance is prohibited. The LCOs governing these systems and components contain Notes prohibiting the use of LCO 3.0.4.b by stating that LCO 3.0.4.b is not applicable.

LCO 3.0.4.c allows entry into a MODE or other specified condition in the Applicability with the LCO not met based on a Note in the Specification which states LCO 3.0.4.c is applicable. These specific allowances permit entry into MODES or other specified conditions in the Applicability when the associated ACTIONS to be entered do not provide for continued operation for an unlimited period of time and a risk assessment has not been performed. This allowance may apply to all the ACTIONS or to a specific Required Action of a Specification. The risk assessments performed to justify the use of LCO 3.0.4.b usually only consider systems and components. For this reason, LCO 3.0.4.c is typically applied to Specifications which describe values and parameters (e.g., [RCS Specific Activity](#)~~[Containment Air Temperature, Containment Pressure, MCPR, Moderator Temperature Coefficient]~~), and may be applied to other Specifications based on NRC plant specific approval.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

The provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown. In this context, a unit shutdown is defined as a change in MODE or other specified condition in the Applicability associated with transitioning from MODE 1 to MODE 2, MODE 2 to MODE 3, MODE 3 to MODE 4, and MODE 4 to MODE 5.

BASES

LCO 3.0.4 (continued)

Upon entry into a MODE or other specified condition in the Applicability with the LCO not met, LCO 3.0.1 and LCO 3.0.2 require entry into the applicable Conditions and Required Actions until the Condition is resolved, until the LCO is met, or until the unit is not within the Applicability of the Technical Specification.

Surveillances do not have to be performed on the associated inoperable equipment (or on variables outside the specified limits), as permitted by SR 3.0.1. Therefore, utilizing LCO 3.0.4 is not a violation of SR 3.0.1 or SR 3.0.4 for any Surveillances that have not been performed on inoperable equipment. However, SRs must be met to ensure OPERABILITY prior to declaring the associated equipment OPERABLE (or variable within limits) and restoring compliance with the affected LCO.

LCO 3.0.5

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

- a. The OPERABILITY of the equipment being returned to service or
- b. The OPERABILITY of other equipment.

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the required testing to demonstrate OPERABILITY. This Specification does not provide time to perform any other preventive or corrective maintenance. *LCO 3.0.5 should not be used in lieu of other practicable alternatives that comply with Required Actions and that do not require changing the MODE or other specified conditions in the Applicability in order to demonstrate equipment is OPERABLE. LCO 3.0.5 is not intended to be used repeatedly.*

An example of demonstrating equipment is OPERABLE with the Required Actions not met is opening a manual valve that was closed to comply with Required Actions to isolate a flowpath with excessive Reactor Coolant System (RCS) Pressure Isolation Valve (PIV) leakage in order to perform testing to demonstrate that RCS PIV leakage is now within limit.

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

Examples of demonstrating equipment OPERABILITY include instances in which it is necessary to take an inoperable channel or trip system out of a tripped condition that was directed by a Required Action, if there is no Required Action Note for this purpose. An example of verifying OPERABILITY of equipment removed from service is taking a tripped channel out of the tripped condition to permit the logic to function and indicate the appropriate response during performance of required testing on the inoperable channel. Examples ~~An example~~ of demonstrating the OPERABILITY of other equipment ~~are~~is taking an inoperable channel or trip system out of the tripped condition 1) to prevent the trip function from occurring during the performance of required testing on another channel in the other trip system, or 2). ~~A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition~~ to permit the logic to function and indicate the appropriate response during the performance of required testing on another channel in the same trip system.

In an interpretation dated December 20, 2012 (NRC Agencywide Document Access and Management System (ADAMS) Accession No, ML11145A085), the NRC concluded that the administrative controls in LCO 3.0.5 would apply in all cases to systems or components in Chapter 3 of the Technical Specifications, as long as the testing could not be conducted while complying with the Required Actions. This includes the realignment or repositioning of redundant or alternate equipment or trains previously manipulated to comply with ACTIONS, as well as equipment removed from service or declared inoperable to comply with ACTIONS.

BASES

SR 3.0.2 (continued)

25% extension of the interval specified in the Frequency does not apply. These exceptions are stated in the individual Specifications. The requirements of regulations take precedence over the TS. An example of where SR 3.0.2 does not apply is in the Containment Leakage Rate Testing Program. This program establishes testing requirements and Frequencies in accordance with the requirements of regulations. The TS cannot in and of themselves extend a test interval specified in the regulations. As stated in SR 3.0.2, the 25% extension also does not apply to the initial portion of a periodic Completion Time that requires performance on a "once per ..." basis. The 25% extension applies to each performance after the initial performance. The initial performance of the Required Action, whether it is a particular Surveillance or some other remedial action, is considered a single action with a single Completion Time. One reason for not allowing the 25% extension to this Completion Time is that such an action usually verifies that no loss of function has occurred by checking the status of redundant or diverse components or accomplishes the function of the inoperable equipment in an alternative manner.

The provisions of SR 3.0.2 are not intended to be used repeatedly ~~merely as an operational convenience~~ to extend Surveillance intervals (other than those consistent with refueling intervals) or periodic Completion Time intervals beyond those specified.

SR 3.0.3

SR 3.0.3 establishes the flexibility to defer declaring affected equipment inoperable or an affected variable outside the specified limits when a Surveillance has not been ~~completed-performed~~ within the specified Frequency. A delay period of up to 24 hours or up to the limit of the specified Frequency, whichever is greater, applies from the point in time that it is discovered that the Surveillance has not been performed in accordance with SR 3.0.2, and not at the time that the specified Frequency was not met.

This delay period provides adequate time to ~~perform complete~~ Surveillances that have been missed. This delay period permits the ~~performance completion~~ of a Surveillance before complying with Required Actions or other remedial measures that might preclude ~~performance completion~~ of the Surveillance.

The basis for this delay period includes consideration of unit conditions, adequate planning, availability of personnel, the time required to perform the Surveillance, the safety significance of the delay in completing the required Surveillance, and the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the requirements.

BASES

SR 3.0.3 (continued)

When a Surveillance with a Frequency based not on time intervals, but upon specified unit conditions, operating situations, or requirements of regulations (e.g., prior to entering MODE 1 after each fuel loading, or in accordance with 10 CFR 50, Appendix J, as modified by approved exemptions, etc.) is discovered to not have been performed when specified, SR 3.0.3 allows for the full delay period of up to the specified Frequency to perform the Surveillance. However, since there is not a time interval specified, the missed Surveillance should be performed at the first reasonable opportunity.

SR 3.0.3 provides a time limit for, and allowances for the performance of, Surveillances that become applicable as a consequence of MODE changes imposed by Required Actions.

SR 3.0.3 is only applicable if there is a reasonable expectation the associated equipment is OPERABLE or that variables are within limits, and it is expected that the Surveillance will be met when performed. Many factors should be considered, such as the period of time since the Surveillance was last performed, or whether the Surveillance, or a portion thereof, has ever been performed, and any other indications, tests, or activities that might support the expectation that the Surveillance will be met when performed. An example of the use of SR 3.0.3 would be a relay contact that was not tested as required in accordance with a particular SR, but previous successful performances of the SR included the relay contact; the adjacent, physically connected relay contacts were tested during the SR performance; the subject relay contact has been tested by another SR; or historical operation of the subject relay contact has been successful. It is not sufficient to infer the behavior of the associated equipment from the performance of similar equipment. The rigor of determining whether there is a reasonable expectation a Surveillance will be met when performed should increase based on the length of time since the last performance of the Surveillance. If the Surveillance has been performed recently, a review of the Surveillance history and equipment performance may be sufficient to support a reasonable expectation that the Surveillance will be met when performed. For Surveillances that have not been performed for a long period or that have never been performed, a rigorous evaluation based on objective evidence should provide a high degree of confidence that the equipment is OPERABLE. The evaluation should be documented in sufficient detail to allow a knowledgeable individual to understand the basis for the determination.

Failure to comply with specified Frequencies for SRs is expected to be an infrequent occurrence. Use of the delay period established by SR 3.0.3 is a flexibility which is not intended to be used ~~repeatedly as an operational convenience~~ to extend Surveillance intervals. While up to 24 hours or the

limit of the specified Frequency is provided to perform the missed Surveillance, it is expected that the missed Surveillance will be performed at the first reasonable opportunity. The determination of the first reasonable opportunity should include consideration of the impact on plant risk (from delaying the Surveillance as well as any plant configuration changes required or shutting the plant down to perform the Surveillance) and impact on any analysis assumptions, in addition to unit conditions, planning, availability of personnel, and the time required to perform the Surveillance. This risk impact should be managed through the program in place to implement 10 CFR 50.65(a)(4) and its implementation guidance, NRC Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." This Regulatory Guide addresses consideration of temporary and aggregate risk impacts, determination of risk management action thresholds, and risk management action up to and including plant shutdown. The missed Surveillance should be treated as an emergent condition as discussed in the Regulatory Guide. The risk evaluation may use quantitative, qualitative, or blended methods. The degree of depth and rigor of the evaluation should be commensurate with the importance of the component. Missed Surveillances for important components should be analyzed quantitatively. If the results of the risk evaluation determine the risk increase is significant, this evaluation should be used to determine the safest course of action. All missed Surveillances will be placed in the licensee's Corrective Action Program.

BASES

SR 3.0.3 (continued)

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Completion Time of the ACTIONS, restores compliance with SR 3.0.1.

SR 3.0.4

SR 3.0.4 establishes the requirement that all applicable SRs must be met before entry into a MODE or other specified condition in the Applicability.

This Specification ensures that system and component OPERABILITY requirements and variable limits are met before entry into MODES or other specified conditions in the Applicability for which these systems and components ensure safe operation of the unit. The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

A provision is included to allow entry into a MODE or other specified condition in the Applicability when an LCO is not met due to a Surveillance not being met in accordance with LCO 3.0.4.

However, in certain circumstances, failing to meet an SR will not result in SR 3.0.4 restricting a MODE change or other specified condition change. When a system, subsystem, division, component, device, or variable is inoperable or outside its specified limits, the associated SR(s) are not required to be performed, per SR 3.0.1, which states that surveillances do not have to be performed on inoperable equipment. When equipment is inoperable, SR 3.0.4 does not apply to the associated SR(s) since the requirement for the SR(s) to be performed is removed. Therefore, failing to perform the Surveillance(s) within the specified Frequency does not result in an SR 3.0.4 restriction to changing MODES or other specified conditions of the Applicability. However, since the LCO is not met in this

1.0 USE AND APPLICATION

1.3 Completion Times

PURPOSE	The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.
BACKGROUND	Limiting Conditions for Operation (LCOs) specify minimum requirements for ensuring safe operation of the unit. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Time(s).
DESCRIPTION	<p>The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., inoperable equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO.</p> <p><i>Unless otherwise specified, the Completion Time begins when a senior licensed operator on the operating shift crew with responsibility for plant operations makes the declaration that an LCO is not met and an ACTIONS Condition is entered. The "otherwise specified" exceptions are varied, such as a Required Action Note or Surveillance Requirement Note which provides an alternative time to perform specific tasks, such as testing, without starting the Completion Time. While utilizing the Note, should a Condition be applicable for any reason not addressed by the Note, the Completion Time begins. Should the time allowance in the Note be exceeded, the Completion Time begins at that point. The exceptions may also be incorporated into the Completion Time. For example, LCO 3.8.1, "AC Sources - Operating," Required Action B.2, requires declaring required feature(s) supported by an inoperable diesel generator, inoperable when the redundant required feature(s) are inoperable. The Completion Time states, "4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)." In this case, the Completion Time does not begin until the conditions in the Completion Time are satisfied.</i></p> <p>Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability.</p> <p>If situations are discovered that require entry into more than one Condition at a time within a single LCO (multiple Conditions), the Required Actions for each Condition must be performed within the associated Completion Time. When in multiple Conditions, separate Completion Times are tracked for each Condition starting from the time of</p>

discovery of the situation that required entry into the Condition, *unless otherwise specified*.

Once a Condition has been entered, subsequent trains, subsystems, components, or variables expressed in the Condition, discovered to be inoperable or not within limits, will not result in separate entry into the Condition, unless specifically stated. The Required Actions of the Condition continue to apply to each additional failure, with Completion Times based on initial entry into the Condition, *unless otherwise specified*.

However, when a subsequent train, subsystem, component, or variable expressed in the Condition is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability:

- a. Must exist concurrent with the first inoperability and
- b. Must remain inoperable or not within limits after the first inoperability is resolved.

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, LCO 3.0.7, LCO 3.0.8, and LCO 3.0.9.
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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.
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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.

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:
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- 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.

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:
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- 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;
 - 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.
-

B 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

BASES

LCOs	LCO 3.0.1 through LCO 3.0.9 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, <i>unless otherwise specified</i>. 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"> Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification and Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified. <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> <p>Completing the Required Actions is not required when an LCO is met or is no longer applicable, unless otherwise stated in the individual Specifications.</p>

BASES

LCO 3.0.2 (continued)

The nature of some Required Actions of some Conditions necessitates that, once the Condition is entered, the Required Actions must be completed even though the associated Conditions no longer exist. The individual LCO's ACTIONS specify the Required Actions where this is the case. An example of this is in LCO 3.4.3, "RCS Pressure and Temperature (P/T) Limits."

The Completion Times of the Required Actions are also applicable when a system or component is removed from service intentionally. The reasons for intentionally relying on the ACTIONS include, but are not limited to, performance of Surveillances, preventive maintenance, corrective maintenance, or investigation of operational problems. Entering ACTIONS for these reasons must be done in a manner that does not compromise safety. Intentional entry into ACTIONS should not be made for operational convenience. Additionally, if intentional entry into ACTIONS would result in redundant equipment being inoperable, alternatives should be used instead. Doing so limits the time both subsystems/trains of a safety function are inoperable and limits the time conditions exist which may result in LCO 3.0.3 being entered. Individual Specifications may specify a time limit for performing an SR when equipment is removed from service or bypassed for testing. In this case, the Completion Times of the Required Actions are applicable when this time limit expires, if the equipment remains removed from service or bypassed.

When a change in MODE or other specified condition is required to comply with Required Actions, the unit may enter a MODE or other specified condition in which another Specification becomes applicable. In this case, the Completion Times of the associated Required Actions would apply from the point in time that the new Specification becomes applicable and the ACTIONS Condition(s) are entered.

LCO 3.0.3

LCO 3.0.3 establishes the actions that must be implemented when an LCO is not met and either:

- a. An associated Required Action and Completion Time is not met and no other Condition applies or
- b. The condition of the unit is not specifically addressed by the associated ACTIONS. This means that no combination of Conditions stated in the ACTIONS can be made that exactly corresponds to the actual condition of the unit. Sometimes, possible combinations of Conditions are such that entering LCO 3.0.3 is warranted; in such cases, the ACTIONS specifically state a Condition corresponding to such combinations and also that LCO 3.0.3 be entered immediately.

BASES

LCO 3.0.3 (continued)

This Specification delineates the time limits for placing the unit in a safe MODE or other specified condition when operation cannot be maintained within the limits for safe operation as defined by the LCO and its ACTIONS. It is not intended to be used as an operational convenience that permits routine voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable.

Upon entering LCO 3.0.3, 1 hour is allowed to prepare for an orderly shutdown before initiating a change in unit operation. This includes time to permit the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to ~~enter reach~~ lower MODES of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the capabilities of the unit, assuming that only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the Reactor Coolant System and the potential for a plant upset that could challenge safety systems under conditions to which this Specification applies. The use and interpretation of specified times to complete the actions of LCO 3.0.3 are consistent with the discussion of Section 1.3, Completion Times.

A unit shutdown required in accordance with LCO 3.0.3 may be terminated and LCO 3.0.3 exited if any of the following occurs:

- a. The LCO is now met,
- b. The LCO is no longer applicable,*
- ~~c.~~ A Condition exists for which the Required Actions have now been performed, or
- ~~d.~~ ACTIONS exist that do not have expired Completion Times. These Completion Times are applicable from the point in time that the Condition is initially entered and not from the time LCO 3.0.3 is exited.

The time limits of LCO 3.0.3 allow 37 hours for the unit to be in MODE 5 when a shutdown is required during MODE 1 operation. If the unit is in a lower MODE of operation when a shutdown is required, the time limit for ~~reaching~~ the next lower MODE applies. If a lower MODE is ~~reached~~ in less time than allowed, however, the total allowable time to ~~reach~~

BASES

LCO 3.0.3 (continued)

MODE 5, or other applicable MODE, is not reduced. For example, if MODE 3 is ~~reached~~ entered in 2 hours, then the time allowed for ~~reaching~~ entering MODE 4 is the next 11 hours, because the total time for ~~reaching~~ entering MODE 4 is not reduced from the allowable limit of 13 hours. Therefore, if remedial measures are completed that would permit a return to MODE 1, a penalty is not incurred by having to ~~reach~~ enter a lower MODE of operation in less than the total time allowed.

In MODES 1, 2, 3, and 4, LCO 3.0.3 provides actions for Conditions not covered in other Specifications. The requirements of LCO 3.0.3 do not apply in MODES 5 and 6 because the unit is already in the most restrictive Condition required by LCO 3.0.3. The requirements of LCO 3.0.3 do not apply in other specified conditions of the Applicability (unless in MODE 1, 2, 3, or 4) because the ACTIONS of individual Specifications sufficiently define the remedial measures to be taken.

Exceptions to LCO 3.0.3 are provided in instances where requiring a unit shutdown, in accordance with LCO 3.0.3, would not provide appropriate remedial measures for the associated condition of the unit. An example of this is in LCO 3.7.16, "Fuel Storage Pool Water Level." LCO 3.7.16 has an Applicability of "During movement of irradiated fuel assemblies in the fuel storage pool." Therefore, this LCO can be applicable in any or all MODES. If the LCO and the Required Actions of LCO 3.7.16 are not met while in MODE 1, 2, or 3, there is no safety benefit to be gained by placing the unit in a shutdown condition. The Required Action of LCO 3.7.16 of "Suspend movement of irradiated fuel assemblies in fuel storage pool" is the appropriate Required Action to complete in lieu of the actions of LCO 3.0.3. These exceptions are addressed in the individual Specifications.

[The requirement to be in MODE 4 in 13 hours is plant specific and depends on the ability to cool the pressurizer and degas.]

LCO 3.0.4

LCO 3.0.4 establishes limitations on changes in MODES or other specified conditions in the Applicability when an LCO is not met. It allows placing the unit in a MODE or other specified condition stated in that Applicability (e.g., the Applicability desired to be entered) when unit conditions are such that the requirements of the LCO would not be met, in accordance with ~~either~~ LCO 3.0.4.a, LCO 3.0.4.b, or LCO 3.0.4.c.

BASES

LCO 3.0.4 (continued)

LCO 3.0.4.a allows entry into a MODE or other specified condition in the Applicability with the LCO not met when the associated ACTIONS to be entered ~~following entry into permit continued operation in~~ the MODE or other specified condition in the Applicability *will permit continued operation within the MODE or other specified condition* for an unlimited period of time. Compliance with ~~ACTIONS Required Actions~~ that permit continued operation of the unit for an unlimited period of time in a MODE or other specified condition provides an acceptable level of safety for continued operation. This is without regard to the status of the unit before or after the MODE change. Therefore, in such cases, entry into a MODE or other specified condition in the Applicability may be made *and the Required Actions followed after entry into the Applicability in accordance with the provisions of the Required Actions.*

For example, LCO 3.0.4.a may be used when the Required Action to be entered states that an inoperable instrument channel must be placed in the tripped condition within the Completion Time. Transition into a MODE or other specified in condition in the Applicability may be made in accordance with LCO 3.0.4 and the channel is subsequently placed in the tripped condition within the Completion Time, which begins when the Applicability is entered. If the instrument channel cannot be placed in the tripped condition and the subsequent default ACTION ("Required Action and associated Completion Time not met") allows the OPERABLE train to be placed in operation, use of LCO 3.0.4.a is acceptable because the subsequent ACTIONS to be entered following entry into the MODE include ACTIONS (place the OPERABLE train in operation) that permit safe plant operation for an unlimited period of time in the MODE or other specified condition to be entered.

LCO 3.0.4.b allows entry into a MODE or other specified condition in the Applicability with the LCO not met 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.

The risk assessment may use quantitative, qualitative, or blended approaches, and the risk assessment will be conducted using the plant program, procedures, and criteria in place to implement 10 CFR 50.65(a)(4), which requires that risk impacts of maintenance activities to be assessed and managed. The risk assessment, for the purposes of LCO 3.0.4.b, must take into account all inoperable Technical Specification equipment regardless of whether the equipment is included in the normal 10 CFR 50.65(a)(4) risk assessment scope. The risk assessments will be conducted using the procedures and guidance endorsed by Regulatory Guide 1.182, "Assessing and Managing Risk

Before Maintenance Activities at Nuclear Power Plants.” Regulatory Guide 1.182 endorses the guidance in Section 11 of NUMARC 93-01, “Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants.” These documents address general guidance for conduct of the risk assessment, quantitative and qualitative guidelines for establishing risk management actions, and example risk management actions. These include actions to plan and conduct other activities in a manner that controls overall risk, increased risk awareness by shift and management personnel, actions to reduce the duration of the condition, actions to minimize the magnitude of risk increases (establishment of backup success paths or compensatory measures), and determination that the proposed MODE change is acceptable. Consideration should also be given to the probability of completing restoration such that the requirements of the LCO would be met prior to the expiration of ACTIONS Completion Times that would require exiting the Applicability.

BASES

LCO 3.0.4 (continued)

LCO 3.0.4.b may be used with single, or multiple systems and components unavailable. NUMARC 93-01 provides guidance relative to consideration of simultaneous unavailability of multiple systems and components.

The results of the risk assessment shall be considered in determining the acceptability of entering the MODE or other specified condition in the Applicability, and any corresponding risk management actions. The LCO 3.0.4.b risk assessments do not have to be documented.

The Technical Specifications allow continued operation with equipment unavailable in MODE 1 for the duration of the Completion Time. Since this is allowable, and since in general the risk impact in that particular MODE bounds the risk of transitioning into and through the applicable MODES or other specified conditions in the Applicability of the LCO, the use of the LCO 3.0.4.b allowance should be generally acceptable, as long as the risk is assessed and managed as stated above. However, there is a small subset of systems and components that have been determined to be more important to risk and use of the LCO 3.0.4.b allowance is prohibited. The LCOs governing these systems and components contain Notes prohibiting the use of LCO 3.0.4.b by stating that LCO 3.0.4.b is not applicable.

LCO 3.0.4.c allows entry into a MODE or other specified condition in the Applicability with the LCO not met based on a Note in the Specification which states LCO 3.0.4.c is applicable. These specific allowances permit entry into MODES or other specified conditions in the Applicability when the associated ACTIONS to be entered do not provide for continued operation for an unlimited period of time and a risk assessment has not been performed. This allowance may apply to all the ACTIONS or to a specific Required Action of a Specification. The risk assessments performed to justify the use of LCO 3.0.4.b usually only consider systems and components. For this reason, LCO 3.0.4.c is typically applied to Specifications which describe values and parameters (e.g., *RCS Specific Activity*~~[Containment Air Temperature, Containment Pressure, MCPR, Moderator Temperature Coefficient]~~), and may be applied to other Specifications based on NRC plant specific approval.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

BASES

LCO 3.0.4 (continued)

The provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown. In this context, a unit shutdown is defined as a change in MODE or other specified condition in the Applicability associated with transitioning from MODE 1 to MODE 2, MODE 2 to MODE 3, MODE 3 to MODE 4, and MODE 4 to MODE 5.

Upon entry into a MODE or other specified condition in the Applicability with the LCO not met, LCO 3.0.1 and LCO 3.0.2 require entry into the applicable Conditions and Required Actions until the Condition is resolved, until the LCO is met, or until the unit is not within the Applicability of the Technical Specification.

Surveillances do not have to be performed on the associated inoperable equipment (or on variables outside the specified limits), as permitted by SR 3.0.1. Therefore, utilizing LCO 3.0.4 is not a violation of SR 3.0.1 or SR 3.0.4 for any Surveillances that have not been performed on inoperable equipment. However, SRs must be met to ensure OPERABILITY prior to declaring the associated equipment OPERABLE (or variable within limits) and restoring compliance with the affected LCO.

LCO 3.0.5

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

- a. The OPERABILITY of the equipment being returned to service or
- b. The OPERABILITY of other equipment.

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the required testing to demonstrate OPERABILITY. This Specification does not provide time to perform any other preventive or corrective maintenance. *LCO 3.0.5 should not be used in lieu of other practicable alternatives that comply with Required Actions and that do not require changing the MODE or other specified conditions in the Applicability in order to demonstrate equipment is OPERABLE. LCO 3.0.5 is not intended to be used repeatedly.*

BASES

LCO 3.0.5 (continued)

An example of demonstrating equipment is OPERABLE with the Required Actions not met is opening a manual valve that was closed to comply with Required Actions to isolate a flowpath with excessive Reactor Coolant System (RCS) Pressure Isolation Valve (PIV) leakage in order to perform testing to demonstrate that RCS PIV leakage is now within limit.

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

Examples of demonstrating equipment OPERABILITY include instances in which it is necessary to take an inoperable channel or trip system out of a tripped condition that was directed by a Required Action, if there is no Required Action Note for this purpose. An example of verifying OPERABILITY of equipment removed from service is taking a tripped channel out of the tripped condition to permit the logic to function and indicate the appropriate response during performance of required testing on the inoperable channel. Examples ~~An example of demonstrating the OPERABILITY of other equipment~~ *are* ~~is~~ *taking an inoperable channel or trip system out of the tripped condition 1) to prevent the trip function from occurring during the performance of required testing on another channel in the other trip system, or 2). A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition *to permit the logic to function and indicate the appropriate response during the performance of required testing on another channel in the same trip system.**

In an interpretation dated December 20, 2012 (NRC Agencywide Document Access and Management System (ADAMS) Accession No, ML11145A085), the NRC concluded that the administrative controls in LCO 3.0.5 would apply in all cases to systems or components in Chapter 3 of the Technical Specifications, as long as the testing could not be conducted while complying with the Required Actions. This includes the realignment or repositioning of redundant or alternate equipment or trains previously manipulated to comply with ACTIONS, as well as equipment removed from service or declared inoperable to comply with ACTIONS.

LCO 3.0.6

LCO 3.0.6 establishes an exception to LCO 3.0.2 for supported systems that have a support system LCO specified in the Technical Specifications (TS). 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 inoperability of the support system. This exception is justified because the actions that are required to ensure the unit is maintained in a safe condition are specified

BASES

SR 3.0.2 (continued)

The 25% extension does not significantly degrade the reliability that results from performing the Surveillance at its specified Frequency. This is based on the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the SRs. The exceptions to SR 3.0.2 are those Surveillances for which the 25% extension of the interval specified in the Frequency does not apply. These exceptions are stated in the individual Specifications. The requirements of regulations take precedence over the TS. An example of where SR 3.0.2 does not apply is in the Containment Leakage Rate Testing Program. This program establishes testing requirements and Frequencies in accordance with the requirements of regulations. The TS cannot in and of themselves extend a test interval specified in the regulations.

As stated in SR 3.0.2, the 25% extension also does not apply to the initial portion of a periodic Completion Time that requires performance on a "once per ..." basis. The 25% extension applies to each performance after the initial performance. The initial performance of the Required Action, whether it is a particular Surveillance or some other remedial action, is considered a single action with a single Completion Time. One reason for not allowing the 25% extension to this Completion Time is that such an action usually verifies that no loss of function has occurred by checking the status of redundant or diverse components or accomplishes the function of the inoperable equipment in an alternative manner.

The provisions of SR 3.0.2 are not intended to be used repeatedly ~~merely as an operational convenience~~ to extend Surveillance intervals (other than those consistent with refueling intervals) or periodic Completion Time intervals beyond those specified.

SR 3.0.3

SR 3.0.3 establishes the flexibility to defer declaring affected equipment inoperable or an affected variable outside the specified limits when a Surveillance has not been ~~performed completed~~ within the specified Frequency. A delay period of up to 24 hours or up to the limit of the specified Frequency, whichever is greater, applies from the point in time that it is discovered that the Surveillance has not been performed in accordance with SR 3.0.2, and not at the time that the specified Frequency was not met.

This delay period provides adequate time to ~~perform complete~~ Surveillances that have been missed. This delay period permits the ~~performance completion~~ of a Surveillance before complying with Required Actions or other remedial measures that might preclude ~~completion performance~~ of the Surveillance.

BASES

SR 3.0.3 (continued)

The basis for this delay period includes consideration of unit conditions, adequate planning, availability of personnel, the time required to perform the Surveillance, the safety significance of the delay in completing the required Surveillance, and the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the requirements.

When a Surveillance with a Frequency based not on time intervals, but upon specified unit conditions, operating situations, or requirements of regulations (e.g., prior to entering MODE 1 after each fuel loading, or in accordance with 10 CFR 50, Appendix J, as modified by approved exemptions, etc.) is discovered to not have been performed when specified, SR 3.0.3 allows for the full delay period of up to the specified Frequency to perform the Surveillance. However, since there is not a time interval specified, the missed Surveillance should be performed at the first reasonable opportunity.

SR 3.0.3 provides a time limit for, and allowances for the performance of, Surveillances that become applicable as a consequence of MODE changes imposed by Required Actions.

SR 3.0.3 is only applicable if there is a reasonable expectation the associated equipment is OPERABLE or that variables are within limits, and it is expected that the Surveillance will be met when performed. Many factors should be considered, such as the period of time since the Surveillance was last performed, or whether the Surveillance, or a portion thereof, has ever been performed, and any other indications, tests, or activities that might support the expectation that the Surveillance will be met when performed. An example of the use of SR 3.0.3 would be a relay contact that was not tested as required in accordance with a particular SR, but previous successful performances of the SR included the relay contact; the adjacent, physically connected relay contacts were tested during the SR performance; the subject relay contact has been tested by another SR; or historical operation of the subject relay contact has been successful. It is not sufficient to infer the behavior of the associated equipment from the performance of similar equipment. The rigor of determining whether there is a reasonable expectation a Surveillance will be met when performed should increase based on the length of time since the last performance of the Surveillance. If the Surveillance has been performed recently, a review of the Surveillance history and equipment performance may be sufficient to support a reasonable expectation that the Surveillance will be met when performed. For Surveillances that have not been performed for a long period or that have never been performed, a rigorous evaluation based on objective evidence should provide a high degree of confidence that the equipment is OPERABLE. The evaluation should be documented in sufficient detail

to allow a knowledgeable individual to understand the basis for the determination.

Failure to comply with specified Frequencies for SRs is expected to be an infrequent occurrence. Use of the delay period established by SR 3.0.3 is a flexibility which is not intended to be used ~~repeatedly as an operational convenience~~ to extend Surveillance intervals. While up to 24 hours or the limit of the specified Frequency is provided to perform the missed Surveillance, it is expected that the missed Surveillance will be performed at the first reasonable opportunity. The determination of the first reasonable opportunity should include consideration of the impact on plant risk (from delaying the Surveillance as well as any plant configuration changes required or shutting the plant down to perform the Surveillance) and impact on any analysis assumptions, in addition to unit conditions, planning, availability of personnel, and the time required to perform the Surveillance. This risk impact should be managed through the program in place to implement 10 CFR 50.65(a)(4) and its implementation guidance, NRC Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." This Regulatory Guide addresses consideration of temporary and aggregate risk impacts, determination of risk management action thresholds, and risk management action up to and including plant

BASES

SR 3.0.3 (continued)

shutdown. The missed Surveillance should be treated as an emergent condition as discussed in the Regulatory Guide. The risk evaluation may use quantitative, qualitative, or blended methods. The degree of depth and rigor of the evaluation should be commensurate with the importance of the component. Missed Surveillances for important components should be analyzed quantitatively. If the results of the risk evaluation determine the risk increase is significant, this evaluation should be used to determine the safest course of action. All missed Surveillances will be placed in the licensee's Corrective Action Program.

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Completion Time of the ACTIONS, restores compliance with SR 3.0.1.

SR 3.0.4

SR 3.0.4 establishes the requirement that all applicable SRs must be met before entry into a MODE or other specified condition in the Applicability.

This Specification ensures that system and component OPERABILITY requirements and variable limits are met before entry into MODES or other specified conditions in the Applicability for which these systems and components ensure safe operation of the unit. The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

A provision is included to allow entry into a MODE or other specified condition in the Applicability when an LCO is not met due to a Surveillance not being met in accordance with LCO 3.0.4.

BASES

SR 3.0.4 (continued)

However, in certain circumstances, failing to meet an SR will not result in SR 3.0.4 restricting a MODE change or other specified condition change. When a system, subsystem, division, component, device, or variable is inoperable or outside its specified limits, the associated SR(s) are not required to be performed, per SR 3.0.1, which states that surveillances do not have to be performed on inoperable equipment. When equipment is inoperable, SR 3.0.4 does not apply to the associated SR(s) since the requirement for the SR(s) to be performed is removed. Therefore, failing to perform the Surveillance(s) within the specified Frequency does not result in an SR 3.0.4 restriction to changing MODES or other specified conditions of the Applicability. However, since the LCO is not met in this instance, LCO 3.0.4 will govern any restrictions that may (or may not) apply to MODE or other specified condition changes. SR 3.0.4 does not restrict changing MODES or other specified conditions of the Applicability when a Surveillance has not been performed within the specified Frequency, provided the requirement to declare the LCO not met has been delayed in accordance with SR 3.0.3.

The provisions of SR 3.0.4 shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of SR 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown. In this context, a unit shutdown is defined as a change in MODE or other specified condition in the Applicability associated with transitioning from MODE 1 to MODE 2, MODE 2 to MODE 3, MODE 3 to MODE 4, and MODE 4 to MODE 5.

The precise requirements for performance of SRs are specified such that exceptions to SR 3.0.4 are not necessary. The specific time frames and conditions necessary for meeting the SRs are specified in the Frequency, in the Surveillance, or both. This allows performance of Surveillances when the prerequisite condition(s) specified in a Surveillance procedure require entry into the MODE or other specified condition in the Applicability of the associated LCO prior to the performance or completion of a Surveillance. A Surveillance that could not be performed until after entering the LCO's Applicability, would have its Frequency specified such that it is not "due" until the specific conditions needed are met. Alternately, the Surveillance may be stated in the form of a Note, as not required (to be met or performed) until a particular event, condition, or time has been reached. Further discussion of the specific formats of SRs' annotation is found in Section 1.4, Frequency.

1.0 USE AND APPLICATION

1.3 Completion Times

PURPOSE	The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.
BACKGROUND	Limiting Conditions for Operation (LCOs) specify minimum requirements for ensuring safe operation of the unit. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Time(s).
DESCRIPTION	<p>The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., inoperable equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO.</p> <p><i>Unless otherwise specified, the Completion Time begins when a senior licensed operator on the operating shift crew with responsibility for plant operations makes the declaration that an LCO is not met and an ACTIONS Condition is entered. The "otherwise specified" exceptions are varied, such as a Required Action Note or Surveillance Requirement Note which provides an alternative time to perform specific tasks, such as testing, without starting the Completion Time. While utilizing the Note, should a Condition be applicable for any reason not addressed by the Note, the Completion Time begins. Should the time allowance in the Note be exceeded, the Completion Time begins at that point. The exceptions may also be incorporated into the Completion Time. For example, LCO 3.8.1, "AC Sources - Operating," Required Action B.2, requires declaring required feature(s) supported by an inoperable diesel generator, inoperable when the redundant required feature(s) are inoperable. The Completion Time states, "4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)." In this case, the Completion Time does not begin until the conditions in the Completion Time are satisfied.</i></p> <p>Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability.</p> <p>If situations are discovered that require entry into more than one Condition at a time within a single LCO (multiple Conditions), the Required Actions for each Condition must be performed within the associated Completion Time. When in multiple Conditions, separate Completion Times are tracked for each Condition starting from the time of</p>

discovery of the situation that required entry into the Condition, *unless otherwise specified*.

Once a Condition has been entered, subsequent divisions, subsystems, components, or variables expressed in the Condition, discovered to be inoperable or not within limits, will not result in separate entry into the Condition, unless specifically stated. The Required Actions of the Condition continue to apply to each additional failure, with Completion Times based on initial entry into the Condition, *unless otherwise specified*.

However, when a subsequent division, subsystem, component, or variable expressed in the Condition is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability:

- a. Must exist concurrent with the first inoperability and
- b. Must remain inoperable or not within limits after the first inoperability is resolved.

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, LCO 3.0.7, LCO 3.0.8, and LCO 3.0.9.
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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.
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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.

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:
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- 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.

-----REVIEWER'S NOTE-----
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.

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:
	<ol style="list-style-type: none"> 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;

LCO Applicability

LCO 3.0.4 (continued)

- 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.

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.

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 5.5.12, "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.

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.

B 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

BASES

LCOs	LCO 3.0.1 through LCO 3.0.9 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, <i>unless otherwise specified</i>. 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"> Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification and Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified. <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> <p>Completing the Required Actions is not required when an LCO is met or is no longer applicable, unless otherwise stated in the individual Specifications.</p>

BASES

LCO 3.0.2 (continued)

The nature of some Required Actions of some Conditions necessitates that, once the Condition is entered, the Required Actions must be completed even though the associated Conditions no longer exist. The individual LCO's ACTIONS specify the Required Actions where this is the case. An example of this is in LCO 3.4.10, "RCS Pressure and Temperature (P/T) Limits."

The Completion Times of the Required Actions are also applicable when a system or component is removed from service intentionally. The reasons for intentionally relying on the ACTIONS include, but are not limited to, performance of Surveillances, preventive maintenance, corrective maintenance, or investigation of operational problems. Entering ACTIONS for these reasons must be done in a manner that does not compromise safety. Intentional entry into ACTIONS should not be made for operational convenience. Additionally, if intentional entry into ACTIONS would result in redundant equipment being inoperable, alternatives should be used instead. Doing so limits the time both subsystems/divisions of a safety function are inoperable and limits the time conditions exist which may result in LCO 3.0.3 being entered. Individual Specifications may specify a time limit for performing an SR when equipment is removed from service or bypassed for testing. In this case, the Completion Times of the Required Actions are applicable when this time limit expires, if the equipment remains removed from service or bypassed.

When a change in MODE or other specified condition is required to comply with Required Actions, the unit may enter a MODE or other specified condition in which another Specification becomes applicable. In this case, the Completion Times of the associated Required Actions would apply from the point in time that the new Specification becomes applicable, and the ACTIONS Condition(s) are entered.

LCO 3.0.3

LCO 3.0.3 establishes the actions that must be implemented when an LCO is not met and:

- a. An associated Required Action and Completion Time is not met and no other Condition applies or
 - b. The condition of the unit is not specifically addressed by the associated ACTIONS. This means that no combination of Conditions stated in the ACTIONS can be made that exactly corresponds to the actual condition of the unit. Sometimes, possible combinations of Conditions are such that entering LCO 3.0.3 is warranted; in such cases, the ACTIONS specifically state a Condition corresponding to such combinations and also that LCO 3.0.3 be entered immediately.
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BASES

LCO 3.0.3 (continued)

This Specification delineates the time limits for placing the unit in a safe MODE or other specified condition when operation cannot be maintained within the limits for safe operation as defined by the LCO and its ACTIONS. It is not intended to be used as an operational convenience that permits routine voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable.

Upon entering LCO 3.0.3, 1 hour is allowed to prepare for an orderly shutdown before initiating a change in unit operation. This includes time to permit the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to ~~reach~~*enter* lower MODES of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the capabilities of the unit, assuming that only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the Reactor Coolant System and the potential for a plant upset that could challenge safety systems under conditions to which this Specification applies. The use and interpretation of specified times to complete the actions of LCO 3.0.3 are consistent with the discussion of Section 1.3, Completion Times.

A unit shutdown required in accordance with LCO 3.0.3 may be terminated and LCO 3.0.3 exited if any of the following occurs:

- a. The LCO is now met,
- b. The LCO is no longer applicable,*
- ~~c.~~ A Condition exists for which the Required Actions have now been performed, or
- ~~d.~~ ACTIONS exist that do not have expired Completion Times. These Completion Times are applicable from the point in time that the Condition is initially entered and not from the time LCO 3.0.3 is exited.

The time limits of LCO 3.0.3 allow 37 hours for the unit to be in MODE 4 when a shutdown is required during MODE 1 operation. If the unit is in a lower MODE of operation when a shutdown is required, the time limit for ~~reaching~~*entering* the next lower MODE applies. If a lower MODE is ~~reached~~*entered* in less time than allowed, however, the total allowable time to ~~reach~~*enter* MODE 4, or other applicable MODE, is not reduced. For example, if MODE 2 is ~~reached~~*entered* in 2 hours, then the time allowed for ~~reaching~~*entering* MODE 3 is the next 11 hours, because the total time for

~~reach~~entering MODE 3 is not reduced from the allowable limit of 13 hours. Therefore, if

BASES

LCO 3.0.3 (continued)

remedial measures are completed that would permit a return to MODE 1, a penalty is not incurred by having to ~~reach~~*enter* a lower MODE of operation in less than the total time allowed.

In MODES 1, 2, and 3, LCO 3.0.3 provides actions for Conditions not covered in other Specifications. The requirements of LCO 3.0.3 do not apply in MODES 4 and 5 because the unit is already in the most restrictive Condition required by LCO 3.0.3. The requirements of LCO 3.0.3 do not apply in other specified conditions of the Applicability (unless in MODE 1, 2, or 3) because the ACTIONS of individual Specifications sufficiently define the remedial measures to be taken.

Exceptions to LCO 3.0.3 are provided in instances where requiring a unit shutdown, in accordance with LCO 3.0.3, would not provide appropriate remedial measures for the associated condition of the unit. An example of this is in LCO 3.7.8, "Spent Fuel Storage Pool Water Level." LCO 3.7.8 has an Applicability of "During movement of irradiated fuel assemblies in the spent fuel storage pool." Therefore, this LCO can be applicable in any or all MODES. If the LCO and the Required Actions of LCO 3.7.8 are not met while in MODE 1, 2, or 3, there is no safety benefit to be gained by placing the unit in a shutdown condition. The Required Action of LCO 3.7.8 of "Suspend movement of irradiated fuel assemblies in the spent fuel storage pool" is the appropriate Required Action to complete in lieu of the actions of LCO 3.0.3. These exceptions are addressed in the individual Specifications.

LCO 3.0.4

LCO 3.0.4 establishes limitations on changes in MODES or other specified conditions in the Applicability when an LCO is not met. It allows placing the unit in a MODE or other specified condition stated in that Applicability (e.g., the Applicability desired to be entered) when unit conditions are such that the requirements of the LCO would not be met, in accordance with *either* LCO 3.0.4.a, LCO 3.0.4.b, or LCO 3.0.4.c.

LCO 3.0.4.a allows entry into a MODE or other specified condition in the Applicability with the LCO not met when the associated ACTIONS to be entered ~~following entry into permit continued operation in~~ the MODE or other specified condition in the Applicability *will permit continued operation within the MODE or other specified condition* for an unlimited period of time. Compliance with ~~ACTIONS Required Actions~~ that permit continued operation of the unit for an unlimited period of time in a MODE or other specified condition provides an acceptable level of safety for continued operation. This is without regard to the status of the unit before or after the MODE change. Therefore, in such cases, entry into a MODE or other specified condition in the Applicability may be made *and the Required Actions followed after entry into the Applicability in accordance with the provisions of the Required Actions*.

BASES

LCO 3.0.4 (continued)

For example, LCO 3.0.4.a may be used when the Required Action to be entered states that an inoperable instrument channel must be placed in the trip condition within the Completion Time. Transition into a MODE or other specified condition in the Applicability may be made in accordance with LCO 3.0.4 and the channel is subsequently placed in the tripped condition within the Completion Time, which begins when the Applicability is entered. If the instrument channel cannot be placed in the tripped condition and the subsequent default ACTION ("Required Action and associated Completion Time not met") allows the OPERABLE train to be placed in operation, use of LCO 3.0.4.a is acceptable because the subsequent ACTIONS to be entered following entry into the MODE include ACTIONS (place the OPERABLE train in operation) that permit safe plant operation for an unlimited period of time in the MODE or other specified condition to be entered.

LCO 3.0.4.b allows entry into a MODE or other specified condition in the Applicability with the LCO not met 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.

The risk assessment may use quantitative, qualitative, or blended approaches, and the risk assessment will be conducted using the plant program, procedures, and criteria in place to implement 10 CFR 50.65(a)(4), which requires that risk impacts of maintenance activities to be assessed and managed. The risk assessment, for the purposes of LCO 3.0.4.b, must take into account all inoperable Technical Specification equipment regardless of whether the equipment is included in the normal 10 CFR 50.65(a)(4) risk assessment scope. The risk assessments will be conducted using the procedures and guidance endorsed by Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." Regulatory Guide 1.182 endorses the guidance in Section 11 of NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." These documents address general guidance for conduct of the risk assessment, quantitative and qualitative guidelines for establishing risk management actions, and example risk management actions. These include actions to plan and conduct other activities in a manner that controls overall risk, increased risk awareness by shift and management personnel, actions to reduce the duration of the condition, actions to minimize the magnitude of risk increases (establishment of backup success paths or compensatory measures), and determination that the proposed MODE change is acceptable. Consideration should also be given to the probability of completing restoration such that the

requirements of the LCO would be met prior to the expiration of ACTIONS Completion Times that would require exiting the Applicability.

LCO 3.0.4.b may be used with single, or multiple systems and components unavailable. NUMARC 93-01 provides guidance relative to consideration of simultaneous unavailability of multiple systems and components.

The results of the risk assessment shall be considered in determining the acceptability of entering the MODE or other specified condition in the Applicability, and any corresponding risk management actions. The LCO 3.0.4.b risk assessments do not have to be documented.

BASES

LCO 3.0.4 (continued)

The Technical Specifications allow continued operation with equipment unavailable in MODE 1 for the duration of the Completion Time. Since this is allowable, and since in general the risk impact in that particular MODE bounds the risk of transitioning into and through the applicable MODES or other specified conditions in the Applicability of the LCO, the use of the LCO 3.0.4.b allowance should be generally acceptable, as long as the risk is assessed and managed as stated above. However, there is a small subset of systems and components that have been determined to be more important to risk and use of the LCO 3.0.4.b allowance is prohibited. The LCOs governing these systems and components contain Notes prohibiting the use of LCO 3.0.4.b by stating that LCO 3.0.4.b is not applicable.

LCO 3.0.4.c allows entry into a MODE or other specified condition in the Applicability with the LCO not met based on a Note in the Specification which states LCO 3.0.4.c is applicable. These specific allowances permit entry into MODES or other specified conditions in the Applicability when the associated ACTIONS to be entered do not provide for continued operation for an unlimited period of time and a risk assessment has not been performed. This allowance may apply to all the ACTIONS or to a specific Required Action of a Specification. The risk assessments performed to justify the use of LCO 3.0.4.b usually only consider systems and components. For this reason, LCO 3.0.4.c is typically applied to Specifications which describe values and parameters (e.g., *RCS Specific Activity* [Containment Air Temperature, Containment Pressure, MCPR, Moderator Temperature Coefficient]), and may be applied to other Specifications based on NRC plant specific approval.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

The provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown. In this context, a unit shutdown is defined as a change in MODE or other specified condition in the Applicability associated with transitioning from MODE 1 to MODE 2, MODE 2 to MODE 3, and MODE 3 to MODE 4.

BASES

LCO 3.0.4 (continued)

Upon entry into a MODE or other specified condition in the Applicability with the LCO not met, LCO 3.0.1 AND LCO 3.0.2 require entry into the applicable Conditions and Required Actions until the Condition is resolved, until the LCO is met, or until the unit is not within the Applicability of the Technical Specifications.

Surveillances do not have to be performed on the associated inoperable equipment (or on variables outside the specified limits), as permitted by SR 3.0.1. Therefore, utilizing LCO 3.0.4 is not a violation of SR 3.0.1 or SR 3.0.4 for Surveillances that have not been performed on inoperable equipment. However, SRs must be met to ensure OPERABILITY prior to declaring the associated equipment OPERABLE (or variable within limits) and restoring compliance with the affected LCO.

LCO 3.0.5

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

- a. The OPERABILITY of the equipment being returned to service or
- b. The OPERABILITY of other equipment.

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the required testing to demonstrate OPERABILITY. This Specification does not provide time to perform any other preventive or corrective maintenance. *LCO 3.0.5 should not be used in lieu of other practicable alternatives that comply with Required Actions and that do not require changing the MODE or other specified conditions in the Applicability in order to demonstrate equipment is OPERABLE. LCO 3.0.5 is not intended to be used repeatedly.*

An example of demonstrating equipment is OPERABLE with the Required Actions not met is opening a manual valve that was closed to comply with Required Actions to isolate a flowpath with excessive Reactor Coolant System (RCS) Pressure Isolation Valve (PIV) leakage in order to perform testing to demonstrate that RCS PIV leakage is now within limit.

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

Examples of demonstrating equipment OPERABILITY include instances in which it is necessary to take an inoperable channel or trip system out of a tripped condition that was directed by a Required Action, if there is no Required Action Note for this purpose. An example of verifying OPERABILITY of equipment removed from service is taking a tripped channel out of the tripped condition to permit the logic to function and indicate the appropriate response during performance of required testing on the inoperable channel. Examples ~~An example~~ of demonstrating the OPERABILITY of other equipment ~~are~~ is taking an inoperable channel or trip system out of the tripped condition 1) to prevent the trip function from occurring during the performance of required testing on another channel in the other trip system, or 2). ~~A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition~~ to permit the logic to function and indicate the appropriate response during the performance of required testing on another channel in the same trip system.

In an interpretation dated December 20, 2012 (NRC Agencywide Document Access and Management System (ADAMS) Accession No, ML11145A085), the NRC concluded that the administrative controls in LCO 3.0.5 would apply in all cases to systems or components in Chapter 3 of the Technical Specifications, as long as the testing could not be conducted while complying with the Required Actions. This includes the realignment or repositioning of redundant or alternate equipment or trains previously manipulated to comply with ACTIONS, as well as equipment removed from service or declared inoperable to comply with ACTIONS.

BASES

SR 3.0.2 (continued)

The 25% extension does not significantly degrade the reliability that results from performing the Surveillance at its specified Frequency. This is based on the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the SRs. The exceptions to SR 3.0.2 are those Surveillances for which the 25% extension of the interval specified in the Frequency does not apply. These exceptions are stated in the individual Specifications. The requirements of regulations take precedence over the TS. An example of where SR 3.0.2 does not apply is in the Primary Containment Leakage Rate Testing Program. This program establishes testing requirements and Frequencies in accordance with the requirements of regulations. The TS cannot in and of themselves extend a test interval specified in the regulations.

As stated in SR 3.0.2, the 25% extension also does not apply to the initial portion of a periodic Completion Time that requires performance on a "once per ..." basis. The 25% extension applies to each performance after the initial performance. The initial performance of the Required Action, whether it is a particular Surveillance or some other remedial action, is considered a single action with a single Completion Time. One reason for not allowing the 25% extension to this Completion Time is that such an action usually verifies that no loss of function has occurred by checking the status of redundant or diverse components or accomplishes the function of the inoperable equipment in an alternative manner.

The provisions of SR 3.0.2 are not intended to be used repeatedly ~~merely as an operational convenience~~ to extend Surveillance intervals (other than those consistent with refueling intervals) or periodic Completion Time intervals beyond those specified.

SR 3.0.3

SR 3.0.3 establishes the flexibility to defer declaring affected equipment inoperable or an affected variable outside the specified limits when a Surveillance has not been ~~performed completed~~ within the specified Frequency. A delay period of up to 24 hours or up to the limit of the specified Frequency, whichever is greater, applies from the point in time that it is discovered that the Surveillance has not been performed in accordance with SR 3.0.2, and not at the time that the specified Frequency was not met.

BASES

SR 3.0.3 (continued)

This delay period provides adequate time to ~~complete~~ *perform* Surveillances that have been missed. This delay period permits the ~~performance completion~~ of a Surveillance before complying with Required Actions or other remedial measures that might preclude *performance completion* of the Surveillance.

The basis for this delay period includes consideration of unit conditions, adequate planning, availability of personnel, the time required to perform the Surveillance, the safety significance of the delay in completing the required Surveillance, and the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the requirements.

When a Surveillance with a Frequency based not on time intervals, but upon specified unit conditions, operating situations, or requirements of regulations (e.g., prior to entering MODE 1 after each fuel loading, or in accordance with 10 CFR 50, Appendix J, as modified by approved exemptions, etc.) is discovered to not have been performed when specified, SR 3.0.3 allows for the full delay period of up to the specified Frequency to perform the Surveillance. However, since there is not a time interval specified, the missed Surveillance should be performed at the first reasonable opportunity.

SR 3.0.3 provides a time limit for, and allowances for the performance of, Surveillances that become applicable as a consequence of MODE changes imposed by Required Actions.

SR 3.0.3 is only applicable if there is a reasonable expectation the associated equipment is OPERABLE or that variables are within limits, and it is expected that the Surveillance will be met when performed. Many factors should be considered, such as the period of time since the Surveillance was last performed, or whether the Surveillance, or a portion thereof, has ever been performed, and any other indications, tests, or activities that might support the expectation that the Surveillance will be met when performed. An example of the use of SR 3.0.3 would be a relay contact that was not tested as required in accordance with a particular SR, but previous successful performances of the SR included the relay contact; the adjacent, physically connected relay contacts were tested during the SR performance; the subject relay contact has been tested by another SR; or historical operation of the subject relay contact has been successful. It is not sufficient to infer the behavior of the associated equipment from the performance of similar equipment. The rigor of determining whether there is a reasonable expectation a Surveillance will be met when performed should increase based on the length of time since the last performance of the Surveillance. If the Surveillance has been performed recently, a review of the Surveillance

history and equipment performance may be sufficient to support a reasonable expectation that the Surveillance will be met when performed. For Surveillances that have not been performed for a long period or that have never been performed, a rigorous evaluation based on objective evidence should provide a high degree of confidence that the equipment is OPERABLE. The evaluation should be documented in sufficient detail to allow a knowledgeable individual to understand the basis for the determination.

Failure to comply with specified Frequencies for SRs is expected to be an infrequent occurrence. Use of the delay period established by SR 3.0.3 is a flexibility which is not intended to be used ~~repeatedly as an operational convenience~~ to extend Surveillance intervals. While up to 24 hours or the limit of the specified Frequency is provided to perform the missed Surveillance, it is expected that the missed Surveillance will be performed at the first reasonable opportunity. The determination of the first reasonable opportunity should include consideration of the impact on plant risk (from delaying the Surveillance as well as any plant configuration changes required or shutting the plant down to perform the Surveillance) and impact on any analysis assumptions, in addition to unit conditions, planning, availability of personnel, and the time required to perform the Surveillance. This risk impact should be managed through the program in place to implement 10 CFR 50.65(a)(4) and its implementation guidance, NRC Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." This Regulatory Guide addresses consideration of temporary and

BASES

SR 3.0.3 (continued)

aggregate risk impacts, determination of risk management action thresholds, and risk management action up to and including plant shutdown. The missed Surveillance should be treated as an emergent condition as discussed in the Regulatory Guide. The risk evaluation may use quantitative, qualitative, or blended methods. The degree of depth and rigor of the evaluation should be commensurate with the importance of the component. Missed Surveillances for important components should be analyzed quantitatively. If the results of the risk evaluation determine the risk increase is significant, this evaluation should be used to determine the safest course of action. All missed Surveillances will be placed in the licensee's Corrective Action Program.

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Completion Time of the ACTIONS, restores compliance with SR 3.0.1.

SR 3.0.4

SR 3.0.4 establishes the requirement that all applicable SRs must be met before entry into a MODE or other specified condition in the Applicability.

This Specification ensures that system and component OPERABILITY requirements and variable limits are met before entry into MODES or other specified conditions in the Applicability for which these systems and components ensure safe operation of the unit. The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

A provision is included to allow entry into a MODE or other specified condition in the Applicability when an LCO is not met due to a Surveillance not being met in accordance with LCO 3.0.4.

1.0 USE AND APPLICATION

1.3 Completion Times

PURPOSE	The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.
BACKGROUND	Limiting Conditions for Operation (LCOs) specify minimum requirements for ensuring safe operation of the unit. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Time(s).
DESCRIPTION	<p>The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., inoperable equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO.</p> <p><i>Unless otherwise specified, the Completion Time begins when a senior licensed operator on the operating shift crew with responsibility for plant operations makes the declaration that an LCO is not met and an ACTIONS Condition is entered. The "otherwise specified" exceptions are varied, such as a Required Action Note or Surveillance Requirement Note which provides an alternative time to perform specific tasks, such as testing, without starting the Completion Time. While utilizing the Note, should a Condition be applicable for any reason not addressed by the Note, the Completion Time begins. Should the time allowance in the Note be exceeded, the Completion Time begins at that point. The exceptions may also be incorporated into the Completion Time. For example, LCO 3.8.1, "AC Sources - Operating," Required Action B.2, requires declaring required feature(s) supported by an inoperable diesel generator, inoperable when the redundant required feature(s) are inoperable. The Completion Time states, "4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)." In this case, the Completion Time does not begin until the conditions in the Completion Time are satisfied.</i></p> <p>Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability.</p> <p>If situations are discovered that require entry into more than one Condition at a time within a single LCO (multiple Conditions), the Required Actions for each Condition must be performed within the associated Completion Time. When in multiple Conditions, separate Completion Times are tracked for each Condition starting from the time of</p>

discovery of the situation that required entry into the Condition, *unless otherwise specified*.

Once a Condition has been entered, subsequent divisions, subsystems, components, or variables expressed in the Condition, discovered to be inoperable or not within limits, will not result in separate entry into the Condition, unless specifically stated. The Required Actions of the Condition continue to apply to each additional failure, with Completion Times based on initial entry into the Condition, *unless otherwise specified*.

However, when a subsequent division, subsystem, component, or variable expressed in the Condition is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability:

- a. Must exist concurrent with the first inoperability and
- b. Must remain inoperable or not within limits after the first inoperability is resolved.

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, LCO 3.0.7, LCO 3.0.8, and LCO 3.0.9.
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 and LCO 3.0.6.</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> <ul style="list-style-type: none"> a. MODE 2 within 7 hours, b. MODE 3 within 13 hours, and c. MODE 4 within 37 hours. <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>
LCO 3.0.4	<p>When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:</p> <ul style="list-style-type: none"> 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; 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.

B 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

BASES

LCOs	LCO 3.0.1 through LCO 3.0.9 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, <i>unless otherwise specified</i>. 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"> Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification and Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified. <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> <p>Completing the Required Actions is not required when an LCO is met or is no longer applicable, unless otherwise stated in the individual Specifications.</p>

BASES

LCO 3.0.2 (continued)

The nature of some Required Actions of some Conditions necessitates that, once the Condition is entered, the Required Actions must be completed even though the associated Conditions no longer exist. The individual LCO's ACTIONS specify the Required Actions where this is the case. An example of this is in LCO 3.4.11, "RCS Pressure and Temperature (P/T) Limits."

The Completion Times of the Required Actions are also applicable when a system or component is removed from service intentionally. The reasons for intentionally relying on the ACTIONS include, but are not limited to, performance of Surveillances, preventive maintenance, corrective maintenance, or investigation of operational problems. Entering ACTIONS for these reasons must be done in a manner that does not compromise safety. Intentional entry into ACTIONS should not be made for operational convenience. Additionally, if intentional entry into ACTIONS would result in redundant equipment being inoperable, alternatives should be used instead. Doing so limits the time both subsystems/divisions of a safety function are inoperable and limits the time conditions exist which may result in LCO 3.0.3 being entered. Individual Specifications may specify a time limit for performing an SR when equipment is removed from service or bypassed for testing. In this case, the Completion Times of the Required Actions are applicable when this time limit expires, if the equipment remains removed from service or bypassed.

When a change in MODE or other specified condition is required to comply with Required Actions, the unit may enter a MODE or other specified condition in which another Specification becomes applicable. In this case, the Completion Times of the associated Required Actions would apply from the point in time that the new Specification becomes applicable, and the ACTIONS Condition(s) are entered.

LCO 3.0.3

LCO 3.0.3 establishes the actions that must be implemented when an LCO is not met and:

- a. An associated Required Action and Completion Time is not met and no other Condition applies or
 - b. The condition of the unit is not specifically addressed by the associated ACTIONS. This means that no combination of Conditions stated in the ACTIONS can be made that exactly corresponds to the actual condition of the unit. Sometimes, possible combinations of Conditions are such that entering LCO 3.0.3 is warranted; in such cases, the ACTIONS specifically state a Condition corresponding to such combinations and also that LCO 3.0.3 be entered immediately.
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BASES

LCO 3.0.3 (continued)

This Specification delineates the time limits for placing the unit in a safe MODE or other specified condition when operation cannot be maintained within the limits for safe operation as defined by the LCO and its ACTIONS. It is not intended to be used as an operational convenience that permits routine voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable.

Upon entering LCO 3.0.3, 1 hour is allowed to prepare for an orderly shutdown before initiating a change in unit operation. This includes time to permit the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to ~~enter reach~~ lower MODES of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the capabilities of the unit, assuming that only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the Reactor Coolant System and the potential for a plant upset that could challenge safety systems under conditions to which this Specification applies. The use and interpretation of specified times to complete the actions of LCO 3.0.3 are consistent with the discussion of Section 1.3, Completion Times.

A unit shutdown required in accordance with LCO 3.0.3 may be terminated and LCO 3.0.3 exited if any of the following occurs:

- a. The LCO is now met,
- b. The LCO is no longer applicable,*
- ~~c.~~ A Condition exists for which the Required Actions have now been performed, or
- ~~d.~~ ACTIONS exist that do not have expired Completion Times. These Completion Times are applicable from the point in time that the Condition is initially entered and not from the time LCO 3.0.3 is exited.

The time limits of LCO 3.0.3 allow 37 hours for the unit to be in MODE 4 when a shutdown is required during MODE 1 operation. If the unit is in a lower MODE of operation when a shutdown is required, the time limit for ~~reaching~~ the next lower MODE applies. If a lower MODE is ~~reached~~ in less time than allowed, however, the total allowable time to ~~reach~~ MODE 4, or other applicable MODE, is not reduced. For example, if MODE 2 is ~~reached~~ in 2 hours, then the time allowed for ~~reaching~~ MODE 3 is the next 11 hours, because the total time for

~~reach~~entering MODE 3 is not reduced from the allowable limit of 13 hours. Therefore, if

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BASES

LCO 3.0.3 (continued)

remedial measures are completed that would permit a return to MODE 1, a penalty is not incurred by having to ~~reach~~*enter* a lower MODE of operation in less than the total time allowed.

In MODES 1, 2, and 3, LCO 3.0.3 provides actions for Conditions not covered in other Specifications. The requirements of LCO 3.0.3 do not apply in MODES 4 and 5 because the unit is already in the most restrictive Condition required by LCO 3.0.3. The requirements of LCO 3.0.3 do not apply in other specified conditions of the Applicability (unless in MODE 1, 2, or 3) because the ACTIONS of individual Specifications sufficiently define the remedial measures to be taken.

Exceptions to LCO 3.0.3 are provided in instances where requiring a unit shutdown, in accordance with LCO 3.0.3, would not provide appropriate remedial measures for the associated condition of the unit. An example of this is in LCO 3.7.7, "Fuel Pool Water Level." LCO 3.7.7 has an Applicability of "During movement of irradiated fuel assemblies in the associated fuel storage pool." Therefore, this LCO can be applicable in any or all MODES. If the LCO and the Required Actions of LCO 3.7.7 are not met while in MODE 1, 2, or 3, there is no safety benefit to be gained by placing the unit in a shutdown condition. The Required Action of LCO 3.7.7 of "Suspend movement of irradiated fuel assemblies in the associated fuel storage pool(s)" is the appropriate Required Action to complete in lieu of the actions of LCO 3.0.3. These exceptions are addressed in the individual Specifications.

LCO 3.0.4

LCO 3.0.4 establishes limitations on changes in MODES or other specified conditions in the Applicability when an LCO is not met. It allows placing the unit in a MODE or other specified condition stated in that Applicability (e.g., the Applicability desired to be entered) when unit conditions are such that the requirements of the LCO would not be met, in accordance with *either* LCO 3.0.4.a, LCO 3.0.4.b, or LCO 3.0.4.c.

LCO 3.0.4.a allows entry into a MODE or other specified condition in the Applicability with the LCO not met when the associated ACTIONS to be entered ~~following entry into permit continued operation in~~ the MODE or other specified condition in the Applicability *will permit continued operation within the MODE or other specified condition* for an unlimited period of time. Compliance with ~~ACTIONS Required Actions~~ that permit continued operation of the unit for an unlimited period of time in a MODE or other specified condition provides an acceptable level of safety for continued operation. This is without regard to the status of the unit before or after the MODE change. Therefore, in such cases, entry into a MODE or other specified condition in the Applicability may be made *and the Required Actions followed after entry into the Applicability in accordance with the provisions of the Required Actions*.

BASES

LCO 3.0.4 (continued)

For example, LCO 3.0.4.a may be used when the Required Action to be entered states that an inoperable instrument channel must be placed in the trip condition within the Completion Time. Transition into a MODE or other specified in condition in the Applicability may be made in accordance with LCO 3.0.4 and the channel is subsequently placed in the tripped condition within the Completion Time, which begins when the Applicability is entered. If the instrument channel cannot be placed in the tripped condition and the subsequent default ACTION ("Required Action and associated Completion Time not met") allows the OPERABLE train to be placed in operation, use of LCO 3.0.4.a is acceptable because the subsequent ACTIONS to be entered following entry into the MODE include ACTIONS (place the OPERABLE train in operation) that permit safe plant operation for an unlimited period of time in the MODE or other specified condition to be entered.

LCO 3.0.4.b allows entry into a MODE or other specified condition in the Applicability with the LCO not met 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.

The risk assessment may use quantitative, qualitative, or blended approaches, and the risk assessment will be conducted using the plant program, procedures, and criteria in place to implement 10 CFR 50.65(a)(4), which requires that risk impacts of maintenance activities to be assessed and managed. The risk assessment, for the purposes of LCO 3.0.4.b, must take into account all inoperable Technical Specification equipment regardless of whether the equipment is included in the normal 10 CFR 50.65(a)(4) risk assessment scope. The risk assessments will be conducted using the procedures and guidance endorsed by Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." Regulatory Guide 1.182 endorses the guidance in Section 11 of NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." These documents address general guidance for conduct of the risk assessment, quantitative and qualitative guidelines for establishing risk management actions, and example risk management actions. These include actions to plan and conduct other activities in a manner that controls overall risk, increased risk awareness by shift and management personnel, actions to reduce the duration of the condition, actions to minimize the magnitude of risk increases (establishment of backup success paths or compensatory measures), and determination that the proposed MODE change is acceptable. Consideration should also be given to the probability of completing restoration such that the

requirements of the LCO would be met prior to the expiration of ACTIONS Completion Times that would require exiting the Applicability.

LCO 3.0.4.b may be used with single, or multiple systems and components unavailable. NUMARC 93-01 provides guidance relative to consideration of simultaneous unavailability of multiple systems and components.

The results of the risk assessment shall be considered in determining the acceptability of entering the MODE or other specified condition in the Applicability, and any corresponding risk management actions. The LCO 3.0.4.b risk assessments do not have to be documented.

BASES

LCO 3.0.4 (continued)

The Technical Specifications allow continued operation with equipment unavailable in MODE 1 for the duration of the Completion Time. Since this is allowable, and since in general the risk impact in that particular MODE bounds the risk of transitioning into and through the applicable MODES or other specified conditions in the Applicability of the LCO, the use of the LCO 3.0.4.b allowance should be generally acceptable, as long as the risk is assessed and managed as stated above. However, there is a small subset of systems and components that have been determined to be more important to risk and use of the LCO 3.0.4.b allowance is prohibited. The LCOs governing these systems and components contain Notes prohibiting the use of LCO 3.0.4.b by stating that LCO 3.0.4.b is not applicable.

LCO 3.0.4.c allows entry into a MODE or other specified condition in the Applicability with the LCO not met based on a Note in the Specification which states LCO 3.0.4.c is applicable. These specific allowances permit entry into MODES or other specified conditions in the Applicability when the associated ACTIONS to be entered do not provide for continued operation for an unlimited period of time and a risk assessment has not been performed. This allowance may apply to all the ACTIONS or to a specific Required Action of a Specification. The risk assessments performed to justify the use of LCO 3.0.4.b usually only consider systems and components. For this reason, LCO 3.0.4.c is typically applied to Specifications which describe values and parameters (e.g., [~~RCS Specific Activity Containment Air Temperature, Containment Pressure, MCPR, Moderator Temperature Coefficient~~]), and may be applied to other Specifications based on NRC plant specific approval.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

The provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown. In this context, a unit shutdown is defined as a change in MODE or other specified condition in the Applicability associated with transitioning from MODE 1 to MODE 2, MODE 2 to MODE 3, and MODE 3 to MODE 4.

BASES

LCO 3.0.4 (continued)

Upon entry into a MODE or other specified condition in the Applicability with the LCO not met, LCO 3.0.1 and LCO 3.0.2 require entry into the applicable Conditions and Required Actions until the Condition is resolved, until the LCO is met, or until the unit is not within the Applicability of the Technical Specification.

Surveillances do not have to be performed on the associated inoperable equipment (or on variables outside the specified limits), as permitted by SR 3.0.1. Therefore, utilizing LCO 3.0.4 is not a violation of SR 3.0.1 or SR 3.0.4 for any Surveillances that have not been performed on inoperable equipment. However, SRs must be met to ensure OPERABILITY prior to declaring the associated equipment OPERABLE (or variable within limits) and restoring compliance with the affected LCO.

LCO 3.0.5

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

- a. The OPERABILITY of the equipment being returned to service or
- b. The OPERABILITY of other equipment.

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the required testing to demonstrate OPERABILITY. This Specification does not provide time to perform any other preventive or corrective maintenance. *LCO 3.0.5 should not be used in lieu of other practicable alternatives that comply with Required Actions and that do not require changing the MODE or other specified conditions in the Applicability in order to demonstrate equipment is OPERABLE. LCO 3.0.5 is not intended to be used repeatedly.*

An example of demonstrating equipment is OPERABLE with the Required Actions not met is opening a manual valve that was closed to comply with Required Actions to isolate a flowpath with excessive Reactor Coolant System (RCS) Pressure Isolation Valve (PIV) leakage in order to perform testing to demonstrate that RCS PIV leakage is now within limit.

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

Examples of demonstrating equipment OPERABILITY include instances in which it is necessary to take an inoperable channel or trip system out of a tripped condition that was directed by a Required Action, if there is no Required Action Note for this purpose. An example of verifying OPERABILITY of equipment removed from service is taking a tripped channel out of the tripped condition to permit the logic to function and indicate the appropriate response during performance of required testing on the inoperable channel. Examples ~~An example~~ of demonstrating the OPERABILITY of other equipment ~~are~~is taking an inoperable channel or trip system out of the tripped condition 1) to prevent the trip function from occurring during the performance of required testing on another channel in the other trip system, or 2). ~~A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition~~ to permit the logic to function and indicate the appropriate response during the performance of required testing on another channel in the same trip system.

In an interpretation dated December 20, 2012 (NRC Agencywide Document Access and Management System (ADAMS) Accession No, ML11145A085), the NRC concluded that the administrative controls in LCO 3.0.5 would apply in all cases to systems or components in Chapter 3 of the Technical Specifications, as long as the testing could not be conducted while complying with the Required Actions. This includes the realignment or repositioning of redundant or alternate equipment or trains previously manipulated to comply with ACTIONS, as well as equipment removed from service or declared inoperable to comply with ACTIONS.

BASES

SR 3.0.2 (continued)

The 25% extension does not significantly degrade the reliability that results from performing the Surveillance at its specified Frequency. This is based on the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the SRs. The exceptions to SR 3.0.2 are those Surveillances for which the 25% extension of the interval specified in the Frequency does not apply. These exceptions are stated in the individual Specifications. The requirements of regulations take precedence over the TS. An example of where SR 3.0.2 does not apply is in the Primary Containment Leakage Rate Testing Program. This program establishes testing requirements and Frequencies in accordance with the requirements of regulations. The TS cannot in and of themselves extend a test interval specified in the regulations.

As stated in SR 3.0.2, the 25% extension also does not apply to the initial portion of a periodic Completion Time that requires performance on a "once per ..." basis. The 25% extension applies to each performance after the initial performance. The initial performance of the Required Action, whether it is a particular Surveillance or some other remedial action, is considered a single action with a single Completion Time. One reason for not allowing the 25% extension to this Completion Time is that such an action usually verifies that no loss of function has occurred by checking the status of redundant or diverse components or accomplishes the function of the inoperable equipment in an alternative manner.

The provisions of SR 3.0.2 are not intended to be used repeatedly ~~merely as an operational convenience~~ to extend Surveillance intervals (other than those consistent with refueling intervals) or periodic Completion Time intervals beyond those specified.

SR 3.0.3

SR 3.0.3 establishes the flexibility to defer declaring affected equipment inoperable or an affected variable outside the specified limits when a Surveillance has not been ~~performed completed~~ within the specified Frequency. A delay period of up to 24 hours or up to the limit of the specified Frequency, whichever is greater, applies from the point in time that it is discovered that the Surveillance has not been performed in accordance with SR 3.0.2, and not at the time that the specified Frequency was not met.

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SR 3.0.3 (continued)

This delay period provides adequate time to ~~perform complete~~ Surveillances that have been missed. This delay period permits the ~~performance completion~~ of a Surveillance before complying with Required Actions or other remedial measures that might preclude ~~performance completion~~ of the Surveillance.

The basis for this delay period includes consideration of unit conditions, adequate planning, availability of personnel, the time required to perform the Surveillance, the safety significance of the delay in completing the required Surveillance, and the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the requirements. When a Surveillance with a Frequency based not on time intervals, but upon specified unit conditions, operating situations, or requirements of regulations (e.g., prior to entering MODE 1 after each fuel loading, or in accordance with 10 CFR 50, Appendix J, as modified by approved exemptions, etc.) is discovered to not have been performed when specified, SR 3.0.3 allows for the full delay period of up to the specified Frequency to perform the Surveillance. However, since there is not a time interval specified, the missed Surveillance should be performed at the first reasonable opportunity.

SR 3.0.3 provides a time limit for, and allowances for the performance of, Surveillances that become applicable as a consequence of MODE changes imposed by Required Actions.

SR 3.0.3 is only applicable if there is a reasonable expectation the associated equipment is OPERABLE or that variables are within limits, and it is expected that the Surveillance will be met when performed. Many factors should be considered, such as the period of time since the Surveillance was last performed, or whether the Surveillance, or a portion thereof, has ever been performed, and any other indications, tests, or activities that might support the expectation that the Surveillance will be met when performed. An example of the use of SR 3.0.3 would be a relay contact that was not tested as required in accordance with a particular SR, but previous successful performances of the SR included the relay contact; the adjacent, physically connected relay contacts were tested during the SR performance; the subject relay contact has been tested by another SR; or historical operation of the subject relay contact has been successful. It is not sufficient to infer the behavior of the associated equipment from the performance of similar equipment. The rigor of determining whether there is a reasonable expectation a Surveillance will be met when performed should increase based on the length of time since the last performance of the Surveillance. If the Surveillance has been performed recently, a review of the Surveillance history and equipment performance may be sufficient to support a reasonable expectation that the Surveillance will be met when performed.

For Surveillances that have not been performed for a long period or that have never been performed, a rigorous evaluation based on objective evidence should provide a high degree of confidence that the equipment is OPERABLE. The evaluation should be documented in sufficient detail to allow a knowledgeable individual to understand the basis for the determination.

Failure to comply with specified Frequencies for SRs is expected to be an infrequent occurrence. Use of the delay period established by SR 3.0.3 is a flexibility which is not intended to be used ~~repeatedly as an operational convenience~~ to extend Surveillance intervals. While up to 24 hours or the limit of the specified Frequency is provided to perform the missed Surveillance, it is expected that the missed Surveillance will be performed at the first reasonable opportunity. The determination of the first reasonable opportunity should include consideration of the impact on plant risk (from delaying the Surveillance as well as any plant configuration changes required or shutting the plant down to perform the Surveillance) and impact on any analysis assumptions, in addition to unit conditions, planning, availability of personnel, and the time required to perform the Surveillance. This risk impact should be managed through the program in place to implement 10 CFR 50.65(a)(4) and its implementation guidance, NRC Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." This Regulatory Guide addresses consideration of temporary and aggregate risk impacts, determination of risk management action

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SR 3.0.3 (continued)

thresholds, and risk management action up to and including plant shutdown. The missed Surveillance should be treated as an emergent condition as discussed in the Regulatory Guide. The risk evaluation may use quantitative, qualitative, or blended methods. The degree of depth and rigor of the evaluation should be commensurate with the importance of the component. Missed Surveillances for important components should be analyzed quantitatively. If the results of the risk evaluation determine the risk increase is significant, this evaluation should be used to determine the safest course of action. All missed Surveillances will be placed in the licensee's Corrective Action Program.

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Completion Time of the ACTIONS, restores compliance with SR 3.0.1.

SR 3.0.4

SR 3.0.4 establishes the requirement that all applicable SRs must be met before entry into a MODE or other specified condition in the Applicability.

This Specification ensures that system and component OPERABILITY requirements and variable limits are met before entry into MODES or other specified conditions in the Applicability for which these systems and components ensure safe operation of the unit. The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

A provision is included to allow entry into a MODE or other specified condition in the Applicability when an LCO is not met due to a Surveillance not being met in accordance with LCO 3.0.4.