



**FPL Energy**  
**Seabrook Station**

**FPL Energy Seabrook Station**  
**P.O. Box 300**  
**Seabrook, NH 03874**  
**(603) 773-7000**

April 28, 2006  
SBK-L-06065  
Docket No. 50-443

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

**Seabrook Station**  
**License Amendment Request 06-04**

**“Application for Technical Specification Change Regarding Mode Change Limitations Using the Consolidated Line Item Improvement Process”**

In accordance with the provisions of Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), FPL Energy Seabrook, LLC (FPL Energy Seabrook) is submitting License Amendment Request (LAR) 06-04 for an amendment to the technical specifications (TS) for Seabrook Station.

The amendment would modify TS requirements for mode change limitations in TS 3.0.4 and 4.0.4. The proposed changes are consistent with NRC approved TSTF-359, Revision 9. TSTF-359, Revision 9 is the equivalent of TSTF-359, Revision 8, as modified by the notice in the Federal Register published April 4, 2003.

The enclosure provides a description of the proposed change (including a table of affected TS with a brief descriptor of the change), the requested confirmation of applicability, and plant-specific verifications. Attachment 1 provides a mark-up of the technical specification (TS) pages showing the proposed changes, and Attachment 2 contains markups showing proposed changes to the TS bases. The retyped TS pages will be provided at a later date upon request from the NRC.

A copy of this letter and the enclosed LAR have been forwarded to the New Hampshire State Liaison Officer pursuant to 10 CFR 50.91(b). The Station Operation Review Committee and the Company Nuclear Review Board have reviewed this LAR.

FPL Energy Seabrook requests NRC Staff review and approval of LAR 06-04 with issuance of a license amendment by March 30, 2007 and implementation of the amendment within 90 days.

AD001

Should you have any questions regarding this letter, please contact Mr. James M. Peschel, Regulatory Programs Manager, at (603) 773-7194.

Very truly yours,

FPL Energy Seabrook, LLC.



Gene F. St. Pierre  
Site Vice President

Enclosures:

Notarized Affidavit  
FPL Energy Seabrook's Evaluation of the Proposed Change

Attachments:

1. Proposed Technical Specification Changes (markup)
2. Proposed Technical Specification Bases Changes (markup)

cc: S. J. Collins, NRC Region I Administrator  
G. E. Miller, NRC Project Manager, Project Directorate I-2  
G.T. Dentel, NRC Senior Resident Inspector

Mr. Bruce G. Cheney, ENP, Director, Division of Emergency Services  
N.H. Department of Safety  
Division of Emergency Services, Communications, and Management  
Bureau of Emergency Management  
33 Hazen Drive  
Concord, NH 03305



**FPL Energy**  
**Seabrook Station**

**SEABROOK STATION UNIT 1**  
 Facility Operating License NPF-86  
 Docket No. 50-443  
 License Amendment Request 06-04  
 "Application for Technical Specification Change Regarding Mode Change  
 Limitations Using the Consolidated Line Item Improvement Process"

The following information is enclosed in support of this License Amendment Request:

- Enclosure            FPL Energy Seabrook's Evaluation of the Proposed Change
- Attachment 1        Proposed Technical Specification Changes (markup)
- Attachment 2        Proposed Technical Specification Bases Changes (markup)

I, Gene St. Pierre, Site Vice President of FPL Energy Seabrook, LLC hereby affirm that the information and statements contained within this License Amendment Request are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

Sworn and Subscribed

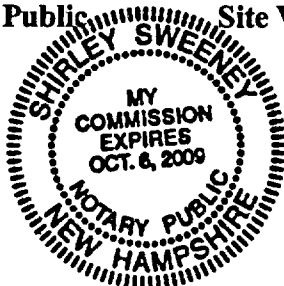
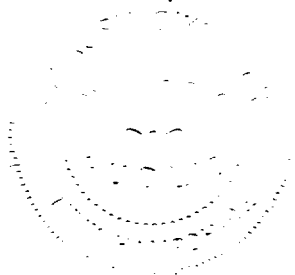
before me this

28<sup>th</sup> day of April, 2006

Gene St. Pierre

Shirley Sweeney  
 Notary Public

Gene St. Pierre  
 Site Vice President



# FPL ENERGY SEABROOK'S EVALUATION

**Subject: License Amendment Request 06-04, "Application for Technical Specification Change Regarding Mode Change Limitations Using the Consolidated Line Item Improvement Process"**

## **1.0 Description**

## **2.0 Assessment**

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

### **2.2 Optional Changes and Variations**

## **3.0 Regulatory Analysis**

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

### **3.2 Verification and Commitments**

## **4.0 Environmental Evaluation**

## **1.0 DESCRIPTION**

The proposed amendment would modify technical specifications (TS) requirements for mode change limitations in Limiting Condition for Operation (LCO) 3.0.4 and Surveillance Requirement (SR) 3.0.4.

The changes are consistent with Nuclear Regulatory Commission (NRC) approved Industry/Technical Specification Task Force (TSTF) STS change TSTF-359 Revision 8, as modified by the notice in the *Federal Register* published on April 4, 2003. That *Federal Register* notice announced the availability of this TS improvement through the consolidated line item improvement process (CLIP).

## **2.0 ASSESSMENT**

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

FPL Energy Seabrook has reviewed the safety evaluation dated April 4, 2003 as part of the CLIP. This review included a review of the NRC staff's evaluation, as well as the supporting information provided to support TSTF-359 Revision 9. FPL Energy Seabrook has concluded that the justifications presented in the TSTF proposal and the safety evaluation prepared by the NRC staff are applicable to Seabrook Station Unit No. 1 and justify this amendment for the incorporation of the changes to the Seabrook Station TS.

### **2.2 Optional Changes and Variations**

FPL Energy Seabrook is not proposing any variations or deviations from the TS changes described in the modified TSTF-359 Revision 8 and the NRC staff's model safety evaluation dated April 3, 2003. However, FPL Energy Seabrook will not incorporate, in its entirety, the TS Bases change SR 3.0.4 contained in TSTF-359. Seabrook Station has not converted to the Improved Standard Technical Specifications (NUREG 1431). As a result, the Seabrook Station individual SRs do not stipulate the specific time frames and conditions necessary for meeting the SRs to allow entry into the mode or condition of applicability without having performed the SR. Consequently, the existing exceptions to Specification 4.0.4 will be retained in the Seabrook Station TS, and the proposed TS Bases for Specification 4.0.4 will not include the paragraph below that is included in TSTF-359 for SR 3.0.4.

*"The precise requirement 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."*

### **3.0 REGULATORY ANALYSIS**

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

FPL Energy Seabrook has reviewed the proposed no significant hazards consideration determination (NSHCD) published in the *Federal Register* as part of the CLIP. FPL Energy Seabrook has concluded that the proposed generic NSHCD presented in the Federal Register notice is applicable to Seabrook Station and is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

#### **3.2 Verifications and Commitments**

As discussed in the notice of availability published in the *Federal Register* on April 4, 2003 for this TS improvement, plant-specific verifications were performed as follows:

FPL Energy Seabrook has established TS Bases for LCO 3.0.4 and SR 4.0.4, which state that use of the TS mode change limitation flexibility established by LCO 3.0.4 and SR 4.0.4 is not to 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 TS Applicability.

The modification also includes changes to the bases for LCO 3.0.4 and SR 4.0.4 that provide details on how to implement the new requirements. The bases changes provide guidance for changing Modes or other specified conditions in the Applicability when an LCO is not met. The bases changes describe in detail how:

- 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 permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time,
- 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; and

- 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 is typically applied to Specifications which describe values and parameters (e.g., Containment Air Temperature, Containment Pressure, MCP, Moderator Temperature Coefficient), though it may be applied to other Specifications based on NRC plant-specific approval.

The bases also state that any 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 Risks Before Maintenance Activities at Nuclear Power Plants," and that 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. In addition, the bases state that 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 in to the applicable ACTIONS until the condition is resolved, until the LCO is met, or until the unit is not within the Applicability of the TS. The bases also state that SR 4.0.4 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 4.0.3. Finally, FPL Energy Seabrook has a bases control program consistent with Section 5.5 of the STS, and the equivalent of STS SR 3.0.1 and associated bases.

#### **4.0 ENVIRONMENTAL EVALUATION**

FPL Energy Seabrook has reviewed the environmental evaluation included in the model safety evaluation dated April 4, 2003 as part of the CLIIP. FPL Energy Seabrook has concluded that the staff's findings presented in that evaluation are applicable to Seabrook Station and the evaluation is hereby incorporated by reference for this application.

Table 1  
Affected Technical Specifications and Brief Description of Changes

<b><u>Technical Specification No.</u></b>	<b><u>Description of Change</u></b>
LCO 3.0.4	Delete current LCO 3.0.4 and replace with TSTF-359 requirements.
SR 4.0.4	Delete current SR 4.0.4 and replace with TSTF-359 requirements.
Table 3.3-1	Delete the # footnote that provided an exception to LCO 3.0.4 for table items 11, 12.a, 12.b, and 16.a. TSTF-359 removes all existing LCO 3.0.4 exceptions. Revised the ## and ### footnotes to # and ## for items 2.b, 5, 6.a, and 18.a.
Table 3.3-3	Delete the * footnote that provided an exception to LCO 3.0.4 for table items 1.c, 1.e, 4.c, 4.d, and 4.e. TSTF-359 removes all existing LCO 3.0.4 exceptions. Revised the ** footnote to * for item 4.e.
Table 3.3-6	Delete the # footnote that provided an exception to LCO 3.0.4 for table item 1.b.1 and 1.b.2. TSTF-359 removes all existing LCO 3.0.4 exceptions. Revise the footnote from ## to # for item 2.b.
LCO 3.3.3.5	Delete the last sentence of Actions a and c, which provided for an exception to LCO 3.0.4. TSTF-359 removes all existing LCO 3.0.4 exceptions.
LCO 3.3.3.6	Delete the last sentence of Action b, which provided for an exception to LCO 3.0.4. TSTF-359 removes all existing LCO 3.0.4 exceptions.
LCO 3.3.10	Delete the 3.0.4 portion of Action c, which provides an exception to LCO 3.0.4. TSTF-359 removes all existing LCO 3.0.4 exceptions.
LCO 3.4.4	Delete Action e, which provides an exception to LCO 3.0.4. TSTF-359 removes all existing LCO 3.0.4 exceptions.
LCO 3.4.8	Add a new note to the Action that LCO 3.0.4.c is applicable, consistent with TSTF-359.
LCO 3.4.9.3	Add a new note to the Action that LCO 3.0.4.b is not applicable when entering Mode 4, consistent with TSTF-359.
LCO 3.5.2	Delete the 3.0.4 portion from footnote **. TSTF-359 removes all existing LCO 3.0.4 exceptions.



**Table 1 (continued)**

<b><u>Technical Specification No.</u></b>	<b><u>Description of Change</u></b>
LCO 3.5.3.1	Add a new note to the Action that LCO 3.0.4.b is not applicable to the ECCS high head subsystem consistent with TSTF-359.
LCO 3.6.1.3	Delete Action a.4, which provides an exception to LCO 3.0.4. TSTF-359 removes all existing LCO 3.0.4 exceptions.
LCO 3.7.1.2	Add two new notes to the Action consistent with TSTF-359. Note 1 states that LCO 3.0.4.b is not applicable to the Emergency Feedwater (EFW) pumps for entry into Mode 1. The EFW pumps are not used during plant start-up. Note 2 states that LCO 3.0.4.b is not applicable to the startup feed pump (SUFP). The SUFP is used during plant startup in Modes 3, 2, and 1.
LCO 3.8.1.1	Add a new note to the action that LCO 3.0.4.b is not applicable to the diesel generators consistent with TSTF-359.
Bases for LCO 3.0.4	Delete current Specification 3.0.4 discussion and replace with TSTF-359 discussion of LCO 3.0.4.
Bases for SR 4.0.4	Delete current Specification 4.0.4 discussion and replace with TSTF-359 discussion of SR 3.0.4.
Bases for LCO 3.4.8	Add a new discussion for the LCO 3.0.4.c allowance consistent with TSTF-359.
Bases for LCO 3.4.9	Add a new discussion concerning the application of LCO 3.0.4.b consistent with TSTF-359.
Bases for LCO 3.5.3	Add a new discussion concerning the application of LCO 3.0.4.b consistent with TSTF-359.
Bases for LCO 3.7.1.2	Add a new discussion concerning the application of LCO 3.0.4.b consistent with TSTF-359. The EFW pumps are not used during plant startup, and the SUFP is used during plant startup in Modes 3, 2, and 1.
Bases for LCO 3.8.1	Add a new discussion concerning the application of LCO 3.0.4.b consistent with TSTF-359.

## Attachment 1

### Proposed Technical Specification Change (mark-up)

Refer to the attached markup of the proposed changes to the Technical Specifications. The attached markup reflects the currently issued version of the Technical Specifications. At the time of submittal, the Technical Specifications were revised through Amendment No. 106. Pending Technical Specifications or Technical Specification changes issued subsequent to this submittal are not reflected in the enclosed markup.

Listed below are the license amendment requests that are awaiting NRC approval and may impact the currently issued version of the Technical Specifications affected by this LAR.

<u>LAR</u>	<u>Title</u>	<u>FPL Energy Seabrook Letter</u>	<u>Date Submitted</u>
None			

The following Technical Specifications are included in the attached markup:

<u>Technical Specification</u>	<u>Title</u>	<u>Page</u>
3.0.4	Limiting Condition for Operation	3/4 0-1
4.0.4	Surveillance Requirements	3/4 0-2
Table 3.3-1	Reactor Trip System Instrumentation	3/4 3-2 3/4 3-3 3/4 3-5
Table 3.3-3	Engineered Safety Features Actuation System Instrumentation	3/4 3-16 3/4 3-19 3/4 3-22
Table 3.3-6	Radiation Monitoring Instrumentation for Plant Operations	3/4 3-37
3.3.3.5	Remote Shutdown System	3/4 3-46

<u>Technical Specification</u>	<u>Title</u>	<u>Page</u>
3.3.3.6	Accident Monitoring Instrumentation	3/4 3-49
3.3.3.10	Explosive Gas Monitoring Instrumentation	3/4 3-60
3.4.4	Relief Valves	3/4 4-11
3.4.8	Specific Activity	3/4 4-27
3.4.9.3	Overpressure Protection Systems	3/4 4-34
3.5.2	ECCS Subsystems – Tavg Greater Than or Equal to 350 Degrees	3/4 5-4
3.5.3.1	ECCS Subsystems – Tavg Less Than 350 Degrees	3/4 5-8
3.6.1.3	Containment Air Locks	3/4 6-7
3.7.1.2	Auxiliary Feedwater System	3/4 7-3
3.8.1.1	AC Sources – Operating	3/4 8-1

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

#### 3/4.0 APPLICABILITY

##### LIMITING CONDITION 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, except as provided in Specification 3.0.5. ⊕

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, except as provided in Specification 3.0.5. 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 the unit in a MODE in which the specification does not apply by placing 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 MODE 5 or 6.

INSERT 1 (LCO 3.0.4)

3.0.4 ~~Entry into an OPERATIONAL MODE or another 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.~~

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 Specifications 3.0.1 and 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY. ⊕

***INSERT 1 (LCO 3.0.4)***

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

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time;
- 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.

## APPLICABILITY

### SURVEILLANCE 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. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the Limiting Condition for Operation. Failure to perform a Surveillance within the specified surveillance interval shall be failure to meet the Limiting Condition for Operation except as provided in Specification 4.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

**4.0.2** Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

**4.0.3** If it is discovered that a Surveillance was not performed within its specified surveillance interval, then compliance with the requirement to declare the Limiting Condition for Operation not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified surveillance interval, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

If the Surveillance is not performed within the delay period, the Limiting Condition for Operation must immediately be declared not met, and the applicable ACTION(s) must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the Limiting Condition for Operation must immediately be declared not met, and the applicable ACTION(s) must be entered.

**4.0.4** Entry into an OPERATIONAL MODE or other specified condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for 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 shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR Part 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR Part 50, Section 50.55a(g)(6)(i).

Inservice testing of ASME Code Class 1, 2, and 3 components shall be performed in accordance with the Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda as required by 10 CFR Part 50, Section 50.55a(f), except where specific written relief has been granted by the Commission pursuant to 10 CFR Part 50, Section 50.55a(f)(6)(i).

***INSERT 2 (LCO 4-0-4)***

Entry into a MODE or other specified condition in the Applicability of a Limiting Condition for Operation (LCO) shall only be made when the LCO's Surveillances have been met within their specified frequency, except as provided by Specification 4.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with Specification 3.0.4.

This provision shall not prevent entry into 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.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
1. Manual Reactor Trip	2	1	2	1, 2	1
	2	1	2	3*, 4*, 5*	10
2. Power Range, Neutron Flux					
a. High Setpoint	4	2	3	1, 2	2
b. Low Setpoint	4	2	3	1# #2	2
3. Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	2
4. (NOT USED)					
5. Intermediate Range, Neutron Flux	2	1	2	1# #2	3
6. Source Range, Neutron Flux					
a. Startup	2	1	2	2#	4
b. Shutdown	2	0	1	3, 4, 5	5
c. Shutdown	2	1	2	3*, 4*, 5*	10
7. Overtemperature ΔT	4	2	3	1, 2	6
8. Overpower ΔT	4	2	3	1, 2	6
9. Pressurizer Pressure--Low	4	2	3	1**	6
10. Pressurizer Pressure--High	4	2	3	1, 2	6
11. Pressurizer Water Level--High	3	2	2	1**	6#





TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
12. Reactor Coolant Flow—Low a. Single Loop (Above P-8)	3/loop	2/loop in any operating loop	2/loop in each operating loop	1	<del>6#</del>
b. Two Loops (Above P-7 and below P-8)	3/loop	2/loop in two operating loops	2/loop in each operating loop	1	<del>6#</del>
13. Steam Generator Water Level—Low—Low	4/stm. gen.	2/stm. gen. in any operating stm. gen.	3/stm. gen. each operating stm. gen.	1, 2	6
14. Undervoltage—Reactor Coolant Pumps	4-2/bus	2-1/bus	2 on one bus	1**	6
15. Underfrequency—Reactor Coolant Pumps	4-2/bus	2-1/bus	2 on one bus	1**	6
16. Turbine Trip a. Low Fluid Oil Pressure	3	2	2	1***	<del>6#</del>
b. Turbine Stop Valve Closure	4	4	4	1***	11
17. Safety Injection Input from ESF	2	1	2	1, 2	7
18. Reactor Trip System Interlocks a. Intermediate Range Neutron Flux, P-6	2	1	2	2# <del>6#</del>	8



TABLE 3.3-1 (Continued)

TABLE NOTATIONS

\*When the Reactor Trip System breakers are in the closed position and the Control Rod Drive System is capable of rod withdrawal.

\*\*Trip function automatically blocked or bypassed below the P-7 (At Power) Setpoint.

\*\*\*Trip function automatically blocked below the P-9 (Reactor Trip/Turbine Trip Interlock) Setpoint.

~~#The provisions of Specification 3.0.4 are not applicable.~~

#~~#~~Below the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint.

# #~~#~~Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) Setpoint.



ACTION STATEMENTS

ACTION 1 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

- a. The inoperable Channel is placed in the tripped condition within 6 hours,
- b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1, and
- c. Either, THERMAL POWER is restricted to less than or equal to 75% of RATED THERMAL POWER and the Power Range Neutron Flux Trip Setpoint is reduced to less than or equal to 85% of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours per Specification 4.2.4.2.

TABLE 3.3-3

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION



<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>	
1. Safety Injection (Reactor Trip, Feedwater Isolation, Start Diesel Generators, Phase "A" Isolation, Containment Ventilation Isolation, Emergency Feedwater, Service Water to Secondary Component Cooling Water Isolation, CBA Emergency Fan/Filter Actuation, and Latching Relay).						
a. Manual Initiation	2	1	2	1, 2, 3, 4	17	
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	13	
c. Containment Pressure--Hi-1	3	2	2	1, 2, 3	18 <del>5</del>	
d. Pressurizer Pressure--Low	4	2	3	1, 2, 3#	18	
e. Steam Line Pressure--Low	3/steam line	2/steam line any steam line	2/steam line	1, 2, 3#	18 <del>5</del>	
SEABROOK - UNIT 1		3/4	3-16			Amendment No. <del>36</del>

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
4. Steam Line Isolation (continued)					
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3	20
c. Containment Pressure--Hi-2	3	2	2	1, 2, 3	18 <del>5</del>
d. Steam Line Pressure-Low	3/steam line	2/steam line any steam line	2/steam line	1, 2, 3#	18 <del>5</del>
e. Steam Generator Pressure - Negative Rate-High	3/steam line	2/steam line any steam line	2/steam line	3 <del>5</del>	18 <del>5</del>
5. Turbine Trip					
a. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2	22
b. Steam Generator Water Level--High-High (P-14)	4/stm. gen.	2/stm. gen.	3/stm. gen.	1, 2	18
6. Feedwater Isolation					
a. Steam Generator Water Level--High-High (P-14)	4/stm. gen.	2/stm. gen.	3/stm. gen.	1, 2	18
b. Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements.				



TABLE 3.3-3 (Continued)

TABLE NOTATIONS

~~\*The provisions of Specification 3.0.4 are not applicable.~~

#Trip function may be blocked in this MODE below the P-11 (Pressurizer Pressure Interlock) Setpoint.

\*Trip function automatically blocked above P-11 and may be blocked below P-11 when Safety Injection on low steam line pressure is not blocked.

ACTION STATEMENTS

ACTION 13 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.

ACTION 14 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

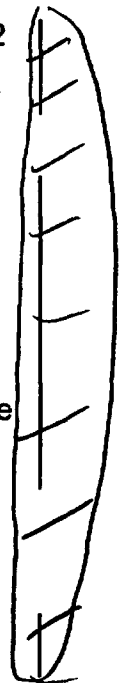
- a. The inoperable channel is placed in the tripped condition within 6 hours, and
- b. The Minimum Channels OPERABLE requirements is met; however, the inoperable channel may be bypassed for up to 2 hours for surveillance testing of other channels per Specification 4.3.2.1.

ACTION 15 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition and the Minimum Channels OPERABLE requirement is met. One additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.

ACTION 16 - With less than the Minimum Channels OPERABLE requirement, operation may continue provided the containment purge supply and exhaust valves are maintained closed.

ACTION 17 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 18 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:



**TABLE 3.3-6  
RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS**

<u>FUNCTIONAL UNIT</u>	<u>CHANNELS TO TRIP/ALARM</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ALARM/TRIP SETPOINT</u>	<u>ACTION</u>
1. Containment					
a. Containment - Post LOCA - Area Monitor	1	2	All	≤ 10 R/h	27
b. RCS Leakage Detection					
1) Particulate Radioactivity	N.A.	1	1, 2, 3, 4	N.A.	26#
2) Gaseous Radioactivity	N.A.	1	1, 2, 3, 4	N.A.	26#
2. Containment Ventilation Isolation					
a. On Line Purge Monitor	1	2	1, 2, 3, 4	*	23
b. Manipulator Crane Area Monitor	1	2	6#	**	23
3. Main Steam Line	1/steam line	1/steam line	1, 2, 3, 4	N.A.	27
4. Fuel Storage Pool Areas					
a. Fuel Storage Building Exhaust Monitor	N.A.	1	***	****	25
5. Control Room Isolation					
a. Air Intake-Radiation Level					
1) East Air Intake	1/intake	2/intake	All	****	24
2) West Air Intake	1/intake	2/intake	All	****	24
6. Primary Component Cooling Water					
a. Loop A	1	1	All	≤ 2 x Background	28
b. Loop B	1	1	All	≤ 2 x Background	28

**TABLE NOTATIONS**

- \*Two times background; purge rate will be verified to ensure compliance with ODCM Control C.7.1.1 requirements
- \*\*Two times background or 15 mR/hr, whichever is greater.
- \*\*\*With irradiated fuel in the fuel storage pool areas.
- \*\*\*\*Two times background or 100 CPM, whichever is greater.
- #The provisions of Specification 3.0.4 are not applicable
- ##During CORE ALTERATIONS or movements of irradiated fuel within the containment.



## INSTRUMENTATION

### MONITORING INSTRUMENTATION

#### REMOTE SHUTDOWN SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.3.3.5 The Remote Shutdown System transfer switches, power, controls and monitoring instrumentation channels shown in Table 3.3-9 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With the number of OPERABLE remote shutdown monitoring channels less than the Minimum Channels OPERABLE as required by Table 3.3-9, restore the inoperable channel(s) to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours. The provisions of Specification 3.0.4 are not applicable
- b. With the number of OPERABLE remote shutdown monitoring channels less than the Total Number of Channels as required by Table 3.3-9, within 60 days restore the inoperable channel(s) to OPERABLE status or, pursuant to Specification 6.8.2, submit a Special Report that defines the corrective action to be taken.
- c. With one or more Remote Shutdown System transfer switches, power, or control circuits inoperable, restore the inoperable switch(s) / circuit(s) to OPERABLE status within 7 days, or be in HOT STANDBY within the next 12 hours. The provisions of Specification 3.0.4 are not applicable

#### SURVEILLANCE REQUIREMENTS

---

4.3.3.5.1 Each remote shutdown monitoring instrumentation channel in Table 3.3-9 shall be demonstrated OPERABLE:

- a. Every 31 days by performance of a CHANNEL CHECK, and
- b. Every 18 months by performance of a CHANNEL CALIBRATION.

4.3.3.5.2 Each Remote Shutdown System transfer switch, power and control circuit listed in Table 3.3-9, including the actuated components, shall be demonstrated OPERABLE at least once per 18 months.

INSTRUMENTATION

MONITORING INSTRUMENTATION

ACCIDENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

---

---

3.3.3.6 The accident monitoring instrumentation channels shown in Table 3.3-10 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

.....NOTE.....

A separate ACTION entry is allowed for each INSTRUMENT listed in Table 3.3-10.

.....



ACTION:

- a. With the number of OPERABLE accident monitoring instrumentation channels less than the Total Number of Channels shown in Table 3.3-10, restore the inoperable channel(s) to OPERABLE status within 30 days, or submit a Special Report to the Commission pursuant to Specification 6.8.2 within the next 14 days outlining the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation to OPERABLE status.
- b. With the number of OPERABLE accident monitoring instrumentation channels except the containment POST-LOCA high range area monitor, less than the Minimum Channels OPERABLE requirements of Table 3.3-10, restore the inoperable channel(s) to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours. The provisions of Specification 3.0.4 are not applicable.
- c. With the number of OPERABLE channels for the containment Post-LOCA high range area monitor less than required by the Minimum Channels OPERABLE requirements, initiate an alternate method of monitoring the appropriate parameter(s), within 72 hours, and either restore the inoperable channel(s) to OPERABLE status within 7 days or prepare and submit a Special Report to the Commission, pursuant to Specification 6.8.2, within 14 days that provides actions taken, cause of the inoperability, and the plans and schedule for restoring the channels to OPERABLE status.





## INSTRUMENTATION

### MONITORING INSTRUMENTATION

#### EXPLOSIVE GAS MONITORING INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

---

3.3.3.10 The explosive gas monitoring instrumentation channels shown in Table 3.3-13 shall be OPERABLE with their Alarm/Trip Setpoints set to ensure that the limits of Specification 3.11.2.5 are not exceeded.

APPLICABILITY: As shown in Table 3.3-13.

#### ACTION:

- a. With an explosive gas monitoring instrumentation channel Alarm/Trip Setpoint less conservative than required by the above specification declare the channel inoperable and take the ACTION shown in Table 3.3-13.
- b. With the number of OPERABLE explosive gas monitoring instrumentation channels less than the Minimum Channels OPERABLE, take the ACTION shown in Table 3.3-13. Restore the inoperable instrumentation to OPERABLE status within 30 days or, if unsuccessful, prepare and submit a Special Report to the Commission pursuant to Specification 6.8.2 to explain why this inoperability was not corrected in a timely manner.
- c. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

4.3.3.10 Each explosive gas monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL OPERATIONAL TEST at the frequencies shown in Table 4.3-6.

## REACTOR COOLANT SYSTEM

### 3/4.4.4 RELIEF VALVES

#### LIMITING CONDITION FOR OPERATION

---

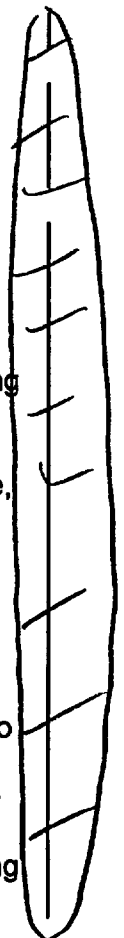
3.4.4 Both power-operated relief valves (PORVs) and their associated block valves shall be OPERABLE. (4)

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With one or both PORV(s) inoperable, because of excessive seat leakage, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s) with power maintained to the block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With one PORV inoperable due to causes other than excessive seat leakage, within 1 hour either restore the PORV to OPERABLE status or close the associated block valve and remove power from the block valve; restore the PORV to OPERABLE status within the following 72 hours or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- c. With both PORVs inoperable due to causes other than excessive seat leakage, within 1 hour either restore at least one PORV to OPERABLE status or close each associated block valve and remove power from the block valve and be in HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours.
- d. With one or both block valves inoperable, within 1 hour restore the block valve(s) to OPERABLE status or place its associated PORV(s) control switch to "CLOSE". Restore at least one block valve to OPERABLE status within the next hour if both block valves are inoperable; restore any remaining inoperable block valve to operable status within 72 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

~~e. The provisions of Specification 3.0.4 are not applicable.~~



## REACTOR COOLANT SYSTEM

### 3/4.4.8 SPECIFIC ACTIVITY

#### LIMITING CONDITION FOR OPERATION

---

3.4.8 The specific activity of the reactor coolant shall be limited to:

- a. Less than or equal to 1 microCurie per gram DOSE EQUIVALENT I-131, and
- b. Less than or equal to  $100/\bar{E}$  microCuries per gram of gross radioactivity.

APPLICABILITY: MODES 1, 2, 3, 4, and 5.

ACTION:

*INSERT 3 (specific activity note)*

MODES 1, 2, and 3\*:

- a. With the specific activity of the reactor coolant greater than 1 microCurie per gram DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or exceeding the limit line shown on Figure 3.4-1, be in at least HOT STANDBY with  $T_{avg}$  less than 500°F within 6 hours; and
- b. With the specific activity of the reactor coolant greater than  $100/\bar{E}$  microCuries per gram, be in at least HOT STANDBY with  $T_{avg}$  less than 500°F within 6 hours.

MODES 1, 2, 3, 4, and 5:

With the specific activity of the reactor coolant greater than 1 microCurie per gram DOSE EQUIVALENT I-131 or greater than  $100/\bar{E}$  microCuries per gram, perform the sampling and analysis requirements of Item 4.a) of Table 4.4-3 until the specific activity of the reactor coolant is restored to within its limits.

#### SURVEILLANCE REQUIREMENTS

---

4.4.8 The specific activity of the reactor coolant shall be determined to be within the limits by performance of the sampling and analysis program of Table 4.4-3.

\*With  $T_{avg}$  greater than or equal to 500°F.

***INSERT 3 (Specific Activity Note)***

.....  
-NOTE-  
LCO 3.0.4.c is applicable to DOSE EQUIVALENT I-131  
.....

REACTOR COOLANT SYSTEM

PRESSURE/TEMPERATURE LIMITS

OVERPRESSURE PROTECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

---

3.4.9.3 The following Overpressure Protection Systems shall be OPERABLE:

- a. In MODE 4 when the temperature of any RCS cold leg is less than or equal to 290°F; and in MODE 5 and MODE 6 with all Safety Injection pumps inoperable at least one of the following groups of two overpressure protection devices shall be OPERABLE when the RCS is not depressurized with an RCS vent area of greater than or equal to 1.58 square inches: Ⓢ
  - 1) Two residual heat removal (RHR) suction relief valves each with a setpoint of 450 psig +0, -3 %; or
  - 2) Two power-operated relief valves (PORVs) with lift setpoints that vary with RCS temperature which do not exceed the limit established in Figure 3.4-4, or
  - 3) One RHR suction relief valve and one PORV with setpoints as required above.
  
- b. In MODE 5 and MODE 6 with all Safety Injection pumps except one inoperable:
  - 1) The Reactor Coolant System (RCS) depressurized with an RCS vent area equal to or greater than 18 square inches, or
  - 2) The RCS in a reduced inventory condition\*.

APPLICABILITY: MODE 4 when the temperature of any RCS cold leg is less than or equal to 290°F; MODE 5 and MODE 6 with the reactor vessel head on and the vessel head closure bolts not fully detensioned. Ⓢ

ACTION:

- INSERT 4 (LTOP Note)*
- a) In MODE 4 with all Safety Injection pumps inoperable and with one of the two required overpressure protection devices inoperable, either restore two overpressure protection devices to OPERABLE status within 7 days or within the next 8 hours
    - (a) depressurize the RCS and
    - (b) vent the RCS through at least a 1.58-square-inch vent.

\*A reduced inventory condition exists whenever reactor vessel (RV) water level is lower than 36 inches below the RV flange.

***INSERT 4 (LTOP Note)***

.....  
**-NOTE-**

**LCO 3.0.4.b is not applicable when entering MODE 4**  
.....

## EMERGENCY CORE COOLING SYSTEMS

### 3/4.5.2 ECCS SUBSYSTEMS - $T_{avg}$ GREATER THAN OR EQUAL TO 350°F

#### LIMITING CONDITION FOR OPERATION

---

3.5.2 Two independent Emergency Core Cooling System (ECCS) subsystems shall be OPERABLE with each subsystem comprised of:

- a. One OPERABLE centrifugal charging pump,
- b. One OPERABLE Safety Injection pump,
- c. One OPERABLE RHR heat exchanger,
- d. One OPERABLE RHR pump, and
- e. An OPERABLE flow path\* capable of taking suction from the refueling water storage tank on a Safety Injection signal and automatically transferring suction to the containment sump during the recirculation phase of operation.

APPLICABILITY: MODES 1, 2, and 3\*\*.

#### ACTION:

- a. With one ECCS subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.8.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected Safety Injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.

---

\*During MODE 3, the discharge paths of both Safety Injection pumps may be isolated by closing for a period of up to 2 hours to perform surveillance testing as required by Specification 4.4.6.2.2.

\*\*The provisions of Specifications ~~4.0.4~~ and 4.0.4 are not applicable for entry into MODE 3 for the centrifugal charging pump and the Safety Injection pumps declared inoperable pursuant to Specification 4.5.3.1.2 provided the centrifugal charging pump and the Safety Injection pumps are restored to OPERABLE status within at least 4 hours or prior to the temperature of one or more of the RCS cold legs exceeding 375°F, whichever comes first.

## EMERGENCY CORE COOLING SYSTEMS

### 3/4.5.3 ECCS SUBSYSTEMS - $T_{avg}$ LESS THAN 350°F

#### LIMITING CONDITION FOR OPERATION

---

3.5.3.1 As a minimum, one ECCS subsystem comprised of the following shall be OPERABLE:

- a. One OPERABLE centrifugal charging pump,
- b. One OPERABLE RHR heat exchanger,
- c. One OPERABLE RHR pump, and
- d. An OPERABLE flow path capable of taking suction from the refueling water storage tank upon being manually realigned and transferring suction to the containment sump during the recirculation phase of operation.

APPLICABILITY: MODE 4.

*INSERT 5 (ECCS Note)*

ACTION:

- a. With no ECCS subsystem OPERABLE because of the inoperability of either the centrifugal charging pump or the flow path from the refueling water storage tank, restore at least one ECCS subsystem to OPERABLE status within 1 hour or be in COLD SHUTDOWN within the next 20 hours.
- b. With no ECCS subsystem OPERABLE because of the inoperability of either the residual heat removal heat exchanger or RHR pump, restore at least one ECCS subsystem to OPERABLE status or maintain the Reactor Coolant System  $T_{avg}$  less than 350°F by use of alternate heat removal methods.
- c. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.8.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected Safety Injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.



***INSERT 5 (ECCS Note)***

.....  
**-NOTE-**

**LCO 3.0.4.b is not applicable to the ECCS high head subsystem**  
.....

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT AIR-LOCKS

LIMITING CONDITION FOR OPERATION

---

3.6.1.3 Each containment air lock shall be OPERABLE in accordance with the Containment Leakage Rate Testing Program.



APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With one containment air lock door inoperable:
  - 1. Maintain at least the OPERABLE air lock door closed\* and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed,
  - 2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days,
  - 3. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours, and
  - ~~4. The provisions of Specification 3.0.4 are not applicable.~~
- b. With the containment air lock inoperable, except as the result of an inoperable air lock door, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

\*Except during entry to repair an inoperable inner door, for a cumulative time not to exceed 1 hour per year.

PLANT SYSTEMS

TURBINE CYCLE

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

---

3.7.1.2 At least three independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:

- a. One motor-driven emergency feedwater pump, and one startup feedwater pump capable of being powered from an emergency bus and capable of being aligned to the dedicated water volume in the condensate storage tank, and
- b. One steam turbine-driven emergency feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

*INSERT 6 (AFW Note)*

- a. With one auxiliary feedwater pump inoperable, restore the required auxiliary feedwater pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With two emergency feedwater pumps inoperable, restore at least one emergency feedwater pump to OPERABLE status within 12 hours and restore both emergency feedwater pumps to OPERABLE status within 72 hours, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With one emergency feedwater pump and the startup feedwater pump inoperable, restore both emergency feedwater pumps to OPERABLE status within 24 hours and all three pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- d. With three auxiliary feedwater pumps inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater pump to OPERABLE status as soon as possible.

SURVEILLANCE REQUIREMENTS

---

4.7.1.2.1 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

- a. At least once per 31 days by:
  - 1) Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position;
  - 2) Verifying that each automatic valve in the flow path is in the fully open position whenever the Auxiliary Feedwater System is placed in automatic control or when above 10% RATED THERMAL POWER; and

***INSERT 6 (AFW Note)***

.....  
**-NOTES-**

1. LCO 3.0.4.b is not applicable to the EFW pumps when entering MODE 1
  2. LCO 3.0.4.b is not applicable to the startup feedwater pump
- .....

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

---

---

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E Distribution System, and
- b. Two separate and independent diesel generators, each with:
  - 1) A separate day fuel tank containing a minimum fuel volume fraction of 3/8 (600 gallons),
  - 2) A separate Fuel Storage System containing a minimum volume of 62,000 gallons of fuel,
  - 3) A separate fuel transfer pump,
  - 4) Lubricating oil storage containing a minimum total volume of 275 gallons of lubricating oil, and
  - 5) Capability to transfer lubricating oil from storage to the diesel generator unit.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

*INSERT 7 (DG Note)*

- a. With an offsite circuit of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. source by performing Specification 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; restore at least two offsite circuits to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

***INSERT 7 (DG Note)***

.....  
-NOTE-  
LCO 3.0.4.b is not applicable to the diesel generators  
.....

## **Attachment 2**

### **Proposed Technical Specifications Bases Changes (markups)**

The following TS bases are included in this attachment:

<u>Technical Specification</u>	<u>Title</u>
Bases 3/4.0	Applicability
Bases 3/4.4.8	Specific Activity
Bases 3/4.4.9	Cold Overpressure Protection
Bases 3/4.5.2 and 3/4.5.3	ECCS Subsystems
Bases 3/4.7.1.2	Auxiliary Feedwater System
bases 3/4.8.1	AC Sources

3/4.0 APPLICABILITY

BASES

---

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.

INSERT B1 (3.0.4)

~~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.~~

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.

Specification 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 Specifications 3.0.1 and 3.0.2 (e.g., to not comply with the applicable Required Action(s)) to allow the performance of required testing to demonstrate:





### ***INSERT B1 (3.0.4)***

**Limiting Condition for Operation (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 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 permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time. Compliance with 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 in accordance with the provisions of the Required Actions.**

**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.**

***(INSERT B1 (3.0.4) con't)***

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 ACTION 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 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., Reactor Coolant System Specific Activity), 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.

***(INSERT B1 (3.0.4) con't)***

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 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 Surveillance Requirement (SR) 4.0.1. Therefore, utilizing LCO 3.0.4 is not a violation of SR 4.0.1 or SR 4.0.4 for any Surveillances that have not been performed on inoperable equipment. However, Surveillance Requirements must be met to ensure OPERABILITY prior to declaring the associated equipment OPERABLE (or variable within limits) and restoring compliance with the affected LCO.

INSERT B2 (4.0.4)

BASES

~~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.

Certain Specifications allow an exception to the requirements of Specification 4.0.4 for individual Surveillance Requirements when the surveillance can only be performed after entering the MODE or condition specified in the Applicability statement. When surveillance requirements become applicable as a consequence of an exception to Specification 4.0.4, a period of 24 hours, unless otherwise stipulated in the individual technical specification, is permitted to allow completion of surveillance testing. During this period, the equipment is considered OPERABLE or the variable within specified limits provided all other necessary surveillance testing has been completed satisfactorily and the equipment or variable is not otherwise known to be inoperable or outside specified limits. Considering the equipment OPERABLE or the variable within SR specified limits upon entering the MODE or condition specified in the Applicability statement with a surveillance requirement exempt from the provision of Specification 4.0.4 ensures compliance with Specification 3.0.4. If the surveillance fails within the 24-hour period, then the equipment is inoperable or the variable is outside the specified limits and the applicable ACTIONS begin immediately upon the failure of the surveillance test. Similarly, if the testing is not completed within 24 hours, the equipment is inoperable or the variable is outside specified limits and the ACTION requirements are immediately applicable upon expiration of the 24 hours.

LCO



~~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 the ASME OM Code including applicable 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 the ASME OM Code including 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.

### ***INSERT B2 (4.0.4)***

Surveillance Requirement (SR) 4.0.4 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 a Limiting Condition for Operations (LCO) is not met due to Surveillances not being met in accordance with LCO 3.0.4.

However, in certain circumstances, failing to meet a SR will not result in SR 4.0.4 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 4.0.1, which states that surveillances do not have to be performed on inoperable equipment. When equipment is inoperable, SR 4.0.4 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 a SR 4.0.4 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 4.0.4 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 4.0.3.

The provisions of SR 4.0.4 shall not prevent entry into MODES or other specified conditions in the Applicability that is required to comply with ACTIONS. In addition, the provisions of SR 4.0.4 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.

## REACTOR COOLANT SYSTEM

### BASES

---

---

#### 3/4.4.8 SPECIFIC ACTIVITY (Continued)

The sample analysis for determining the gross specific activity and  $\bar{E}$  can exclude the radioiodines because of the low reactor coolant limit of 1 microCurie/gram DOSE EQUIVALENT I-131, and because, if the limit is exceeded, the radioiodine level is to be determined every 4 hours. If the gross specific activity level and radioiodine level in the reactor coolant were at their limits, the radioiodine contribution would be approximately 1%. In a release of reactor coolant with a typical mixture of radioactivity, the actual radioiodine contribution would probably be about 20%. The exclusion of radionuclides with half-lives less than 10 minutes from these determinations has been made for several reasons. The first consideration is the difficulty to identify short-lived radionuclides in a sample that requires a significant time to collect, transport, and analyze. The second consideration is the predictable delay time between the postulated release of radioactivity from the reactor coolant to its release to the environment and transport to the SITE BOUNDARY, which is relatable to at least 30 minutes' decay time. The choice of 10 minutes for the half-life cutoff was made because of the nuclear characteristics of the typical reactor coolant radioactivity. The radionuclides in the typical reactor coolant have half-lives of less than 4 minutes or half-lives of greater than 14 minutes, which allows a distinction between the radionuclides above and below a half-life of 10 minutes. For these reasons the radionuclides that are excluded from consideration are expected to decay to very low levels before they could be transported from the reactor coolant to the SITE BOUNDARY under any accident condition.

Reducing  $T_{avg}$  to less than 500°F prevents the release of activity should a steam generator tube rupture, since the saturation pressure of the reactor coolant is below the lift pressure of the atmospheric steam relief valves. The Surveillance Requirements provide adequate assurance that excessive specific activity levels in the reactor coolant will be detected in sufficient time to take corrective action. A reduction in frequency of isotopic analyses following power changes may be permissible if justified by the data obtained.

*A note permits the use of the provisions of LCO 3.0.4.c for DOSE EQUIVALENT IODINE-131. This allowance permits entry into the applicable MODES while relying on the ACTIONS.*

REACTOR COOLANT SYSTEM

BASES

3/4.4.9 PRESSURE/TEMPERATURE LIMITS (Continued)

COLD OVERPRESSURE PROTECTION (Continued)

ESF actuation circuitry will result in the starting of at most one train of Safety Injection (one centrifugal charging pump, and one Safety Injection pump). For temperatures above 325°F, an overpressure event occurring as a result of starting two pumps can be successfully mitigated by operation of both PORVs without exceeding Appendix G limit. A single failure of a PORV is not assumed due to the short duration that this condition is allowed and the low probability of an event occurring during this interval in conjunction with the failure of a PORV to open. Initiation of both trains of Safety Injection during this 4-hour time frame due to operator error or a single failure occurring during testing of a redundant channel are not considered to be credible accidents. (A)

Operation with all centrifugal charging pumps and both Safety Injection pumps OPERABLE is acceptable when RCS temperature is greater than 350°F, a single PORV has sufficient capacity to relieve the combined flow rate of all pumps. Above 350°F two RCPs and all pressure safety valves are required to be OPERABLE. Operation of an RCP eliminates the possibility of a 50°F difference existing between indicated and actual RCS temperature as a result of heat transport effects. Considering instrument uncertainties only, an indicated RCS temperature of 350°F is sufficiently high to allow full RCS pressurization in accordance with Appendix G limitations. Should an overpressure event occur in these conditions, the pressurizer safety valves provide acceptable and redundant overpressure protection.

INSERT B3 (LTOP)

When operating below 200°F in MODE 5 or MODE 6 with the reactor vessel head on and the vessel head closure bolts not fully detensioned, Technical Specification 3.5.3.2 allows one Safety Injection pump to be made OPERABLE whenever the RCS has a vent area equal to or greater than 18 square inches or whenever the RCS is in a reduced inventory condition, i.e., whenever reactor vessel water level is lower than 36 inches below the reactor vessel flange. Cold overpressure protection provided by the venting method utilizes an 18 square inch or greater mechanical opening in the RCS pressure boundary. This mechanical opening is larger in size than the 1.58 square inch opening required for normal overpressure protection and is of sufficient size to ensure that the Appendix G limits are not exceeded when an SI pump is operating in MODE 5 or MODE 6 with the reactor vessel head on and the vessel head closure bolts not fully detensioned. When the reactor has been shut down for at least 7 days, the larger vent area also enhances the ability to provide a gravity feed to the RCS from the Refueling Water Storage Tank in the unlikely event that the CCP and SI pumps were unavailable after a loss of RHR. Additionally, when steam generator nozzle dams are installed for maintenance purposes and the reactor vessel water level is not in a reduced inventory condition, the larger vent area limits RCS pressure during overpressure transients to reduce the possibility of adversely affecting steam generator nozzle dams.



***INSERT B3 (LTOP)***

A Note prohibits the application of LCO 3.0.4.b to an inoperable LTOP system. There is an increased risk associated with entering MODE 4 from MODE 5 with LTOP inoperable and the provisions of LCO 3.0.4.b, which allow 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, should not be applied in this circumstance.



## EMERGENCY CORE COOLING SYSTEMS

### BASES

---

---

#### 3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS (Continued)

Each operable RHR subsystem must remain aligned to provide injection into all four RCS cold legs to meet the assumptions in the ECCS analysis. Isolating RHR flow to any RCS cold leg in MODES 1, 2, or 3 would render both trains of ECCS inoperable, placing the plant in a condition outside design bases.



With the RCS temperature below 350°F, the ECCS operational requirements are reduced. Only one OPERABLE ECCS subsystem is acceptable without single failure consideration during MODE 4 operation on the basis of the stable reactivity condition of the reactor and the limited core cooling requirements, as well as the reduced probability of occurrence of a Design Basis Accident (DBA). It is understood in these reductions in operational requirements that certain automatic safety injection (SI) actuation is not available. In this MODE, sufficient time exists for manual actuation of the required ECCS to mitigate the consequences of a DBA. LCO Condition d. requires that an OPERABLE flow path must be capable of taking suction from the refueling water storage tank upon being manually realigned and transferring suction to the containment sump during the recirculation phase of operation. Thus, LCO Condition d. allows for the manual realignment of the OPERABLE ECCS subsystem to support the ECCS mode of operation.

INSERT B4 (ECCS)

***INSERT B4 (ECCS)***

A Note prohibits the application of LCO 3.0.4.b to an inoperable ECCS high head subsystem when entering MODE 4. There is an increased risk associated with entering MODE 4 from MODE 5 with an inoperable ECCS high head subsystem and the provisions of LCO 3.0.4.b, which allow 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, should not be applied in this circumstance.

## PLANT SYSTEMS

### BASES

---

---

#### 3/4.7.1 TURBINE CYCLE (Continued)

##### 3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM (Continued)

###### ACTIONS

*INSERT B5 (AFW)*

With one AFW pump inoperable, the action provides a 72-hour AOT for restoring the pump to an operable status before requiring a plant shutdown. This time is reasonable based on the availability of redundant equipment and the low probability of an accident occurring during this time. Additional actions with more limiting AOTs apply to conditions involving more than one inoperable AFW pump. In the event that all AFW pumps are inoperable, the plant is in a seriously degraded condition. Consequently, the plant should not be perturbed by any action, including a power change, that might result in a plant trip and demand on the EFW system. The seriousness of this condition requires immediately initiating corrective action to restore at least one AFW pump to operable status as soon as possible.

###### SURVEILLANCES

Various surveillance requirements, with frequencies ranging from 31 days to eighteen months, demonstrate the operability of the AFW system. Every 31 days, each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured, is verified in its correct position. This verification includes only those valves in the direct flow path through safety-related equipment whose position is critical to the proper functioning of the safety-related equipment. Vents, drains, sampling connections, instrument taps, etc., that are not directly in the flow path and are not critical to proper functioning of the safety-related equipment are excluded from this surveillance requirement.

Testing of the steam-driven EFW pump is exempt from the provisions of TS 4.0.4 for entry into MODE 3. This allowance is necessary because the surveillance testing, which requires a minimum steam pressure of 500 psig, cannot be performed until the plant reaches MODE 3. Once steam pressure reaches 500 psig, administrative controls establish a 24-hour time limit for completing the testing consistent with Specification 4.0.4.



##### 3/4.7.1.3 CONDENSATE STORAGE TANK

The OPERABILITY of the condensate storage tank with the indicated minimum water volume ensures that sufficient water is available to cool the RCS to a temperature of 350°F. The OPERABILITY of the concrete enclosure ensures this availability of water following rupture of the condensate storage tank by a tornado generated missile. The contained water volume limit includes an allowance for water not usable because of instrument uncertainty, tank discharge line location, or other physical characteristics.

***INSERT B5 (AFW)***

Note 1 prohibits the application of LCO 3.0.4.b to an inoperable EFW train when entering MODE 1, and Note 2 prohibits the application of LCO 3.0.4.b to an inoperable startup feedwater pump. There is an increased risk associated with entering MODE 1 with AFW inoperable, or entering MODES 3 or 2 with the startup feedwater pump inoperable. The provisions of LCO 3.0.4.b, which allow 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, should not be applied in this circumstance.

ELECTRICAL POWER SYSTEMS

BASES

---

3/4.8.1 AC SOURCES (Continued)

**LIMITING CONDITION FOR OPERATION (LCO) (continued)**

**APPLICABILITY**

The AC sources are required to be OPERABLE in MODES 1, 2, 3, and 4 to ensure that:

- a. Acceptable fuel design limits and reactor coolant pressure boundary limits are not exceeded as a result of AOOs or abnormal transients and
- b. Adequate core cooling is provided and containment OPERABILITY and other vital functions are maintained in the event of a postulated DBA.

The AC power requirements for MODES 5 and 6 are covered in LCO 3/4.8.2, "AC Sources – Shutdown."

---

**ACTIONS**

For all of the following ACTIONS, if the inoperable AC electric power sources cannot be restored to OPERABLE status within the required AOT, the unit must be brought to a MODE in which the LCO does not apply. To achieve this status, the unit must be brought to at least HOT STANDBY within 6 hours and to COLD SHUTDOWN within the following 30 hours.

*INSERT B6 (DG)*

***INERT B6 (DG)***

A Note prohibits the application of LCO 3.0.4.b to an inoperable DG. There is an increased risk associated with entering a MODE or other specified condition in the Applicability with an inoperable DG and the provisions of LCO 3.0.4.b, which allow 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, should not be applied in this circumstance.