

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

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

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

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required unless otherwise stated.

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

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

Exceptions to this Specification are stated in the individual Specifications.

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

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

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

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3.0 LCO Applicability

LCO 3.0.4
(continued)

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 5.5.15, "Safety Function Determination Program (SFDP)." If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

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

LCO 3.0.7

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

3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

SR 3.0.1 SRs shall be met during the MODES or other specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. 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 LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

SR 3.0.2 The specified Frequency for each SR is met if the Surveillance is performed within 1.25 times the interval specified in the Frequency, as measured from the previous performance or as measured from the time a specified condition of the Frequency is met.

For Frequencies specified as "once," the above interval extension does not apply.

If a Completion Time requires periodic performance on a "once per . . ." basis, the above Frequency extension applies to each performance after the initial performance.

Exceptions to this Specification are stated in the individual Specifications.

SR 3.0.3 If it is discovered that a Surveillance was not performed within its specified Frequency, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified Frequency, 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 LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

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

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3.0 SR Applicability

SR 3.0.4 Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 3.0.3. 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 LCO 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.

3.1 REACTIVITY CONTROL SYSTEMS

3.1.1 SHUTDOWN MARGIN (SDM)

LCO 3.1.1 SDM shall be within the limit provided in the COLR.

APPLICABILITY: MODE 2 with $k_{eff} < 1.0$,
MODES 3, 4, and 5.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. SDM not within limit.	A.1 Initiate boration to restore SDM to within limit.	15 minutes

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.1.1.1 Verify SDM to be within limit.	24 hours

3.1 REACTIVITY CONTROL SYSTEMS

3.1.2 Core Reactivity

LCO 3.1.2 The measured core reactivity shall be within $\pm 1\% \Delta k/k$ of predicted values.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. Measured core reactivity not within limit.</p>	<p>A.1 Re-evaluate core design and safety analysis, and determine that the reactor core is acceptable for continued operation.</p> <p><u>AND</u></p> <p>A.2 Establish appropriate operating restrictions and SRs.</p>	<p>7 days</p> <p>7 days</p>
<p>B. Required Action and associated Completion Time not met.</p>	<p>B.1 Be in MODE 3.</p>	<p>6 hours</p>

3.3 INSTRUMENTATION

3.3.1 Reactor Trip System (RTS) Instrumentation

LCO 3.3.1 The RTS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.1-1.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one or more required channels or trains inoperable.	A.1 Enter the Condition referenced in Table 3.3.1-1 for the channel(s) or trains.	Immediately
B. One Manual Reactor Trip channel inoperable.	B.1 Restore channel to OPERABLE status.	48 hours
	<u>OR</u> B.2 Be in MODE 3.	54 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One channel or train inoperable.	C.1 Restore channel or train to OPERABLE status.	48 hours
	<u>OR</u>	
	C.2.1 Initiate action to fully insert rods.	48 hours
	<u>AND</u>	
	C.2.2 Place Rod Control System in a condition incapable of rod withdrawal.	49 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>L. One or more required channel(s) inoperable.</p>	<p>L.1 Verify interlock is in required state for existing unit condition.</p> <p><u>OR</u></p> <p>L.2.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>L.2.2 Be in MODE 4.</p>	<p>1 hour</p> <p>7 hours</p> <p>13 hours</p>
<p>M. One channel inoperable.</p>	<p>M.1 Place channel in trip.</p> <p><u>AND</u></p> <p>M.2 Restore channel to OPERABLE status.</p>	<p>1 hour</p> <p>During performance of next COT</p>
<p>N. One train inoperable.</p>	<p><u>NOTE</u></p> <p>One train may be bypassed for up to 2 hours for surveillance testing provided the other train is OPERABLE.</p> <p>N.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>N.2 Be in MODE 4.</p>	<p>6 hours</p> <p>12 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
O. One or more channels inoperable.	O.1 Declare associated auxiliary feedwater pump(s) inoperable.	Immediately
P. One or both train(s) inoperable.	P.1 Restore train(s) to OPERABLE status.	48 hours
	<u>OR</u>	
	P.2.1 Be in MODE 3.	54 hours
	<u>AND</u>	
	P.2.2 Be in MODE 4.	60 hours

SURVEILLANCE REQUIREMENTS

NOTE

Refer to Table 3.3.2-1 to determine which SRs apply for each ESFAS Function.

SURVEILLANCE	FREQUENCY
SR 3.3.2.1 Perform CHANNEL CHECK.	12 hours
SR 3.3.2.2 Perform ACTUATION LOGIC TEST.	31 days on a STAGGERED TEST BASIS

(continued)

Table 3.3.2-1 (page 5 of 5)
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE(a)
7. Automatic Switchover to Containment Sump					
a. Automatic Actuation Logic and Actuation Relays	1,2,3,4	2 trains	C	SR 3.3.2.2 SR 3.3.2.4 SR 3.3.2.13	NA
b. Refueling Water Storage Tank (RWST) Level - Low Low	1,2,3,4	4	K	SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10	≥ 35.5% of instrument span
Coincident with Safety Injection	Refer to Function 1 (Safety Injection) for all initiation functions and requirements.				
8. ESFAS Interlocks					
a. Reactor Trip, P-4	1,2,3	2 per train, 2 trains	F	SR 3.3.2.11	NA
b. Pressurizer Pressure, P-11	1,2,3	3	L	SR 3.3.2.5 SR 3.3.2.9	≤ 1979 psig

(a) The Allowable Value defines the Limiting Safety System Settings. See the Bases for the Trip Setpoints.

3.3 INSTRUMENTATION

3.3.3 Post Accident Monitoring (PAM) Instrumentation

LCO 3.3.3 The PAM instrumentation for each Function in Table 3.3.3-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTIONS

NOTE
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one required channel inoperable.	A.1 Restore required channel to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action in accordance with Specification 5.6.8.	Immediately

(continued)

Table 3.3.3-1 (page 1 of 1)
Post Accident Monitoring Instrumentation

	FUNCTION	REQUIRED CHANNELS	CONDITION REFERENCED FROM REQUIRED ACTION E.1
1.	Neutron Flux	2	F
2.	Reactor Coolant System (RCS) Hot Leg Temperature (Wide Range)	2	F
3.	RCS Cold Leg Temperature (Wide Range)	2	F
4.	RCS Pressure (Wide Range)	2	F
5.	Reactor Vessel Water Level	2	G
6.	Containment Normal Sump Water Level	2	F
7.	Containment Pressure (Normal Range)	2	F
8.	Steam Line Pressure	2 per steam generator	F
9.	Containment Radiation Level (High Range)	2	G
10.	Containment Hydrogen Concentration Level	2	F
11.	Pressurizer Water Level	2	F
12.	Steam Generator Water Level (Wide Range)	4	F
13.	Steam Generator Water Level (Narrow Range)	2 per steam generator	F
14.	Core Exit Temperature - Quadrant 1	2(a)	F
15.	Core Exit Temperature - Quadrant 2	2(a)	F
16.	Core Exit Temperature - Quadrant 3	2(a)	F
17.	Core Exit Temperature - Quadrant 4	2(a)	F
18.	Auxiliary Feedwater Flow Rate	4	F
19.	Refueling Water Storage Tank Level	2	F

(a) A channel consists of two core exit thermocouples (CETs).

3.3 INSTRUMENTATION

3.3.4 Remote Shutdown System

LCO 3.3.4 The Remote Shutdown System Functions in Table 3.3.4-1 and the required auxiliary shutdown panel (ASP) controls shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

NOTE

Separate Condition entry is allowed for each Function and required ASP control.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One or more required Functions inoperable.</p> <p><u>OR</u></p> <p>One or more required ASP controls inoperable.</p>	<p>A.1 Restore required Function and required ASP controls to OPERABLE status.</p>	<p>30 days</p>
<p>B. Required Action and associated Completion Time not met.</p>	<p>B.1 Be in MODE 3.</p>	<p>6 hours</p>
	<p><u>AND</u></p> <p>B.2 Be in MODE 4.</p>	<p>12 hours</p>

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 RCS Loops - MODE 5, Loops Not Filled

LCO 3.4.8 Two residual heat removal (RHR) loops shall be OPERABLE and one RHR loop shall be in operation.

NOTES

1. All RHR pumps may be removed from operation for ≤ 1 hour provided:
 - a. The core outlet temperature is maintained at least 10°F below saturation temperature;
 - b. No operations are permitted that would cause introduction into the RCS, coolant with boron concentration less than required to meet the SDM of LCO 3.1.1; and
 - c. Reactor vessel water level is above the vessel flange.
2. One RHR loop may be inoperable for ≤ 2 hours for surveillance testing provided that the other RHR loop is OPERABLE and in operation.

APPLICABILITY: MODE 5 with RCS loops not filled.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One RHR loop inoperable.	A.1 Initiate action to restore RHR loop to OPERABLE status.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required RHR loops inoperable. <u>OR</u> No RHR loop in operation	B.1 Suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet the SDM of LCO 3.1.1.	Immediately
	<u>AND</u> B.2 Initiate action to restore one RHR loop to OPERABLE status and operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.8.1 Verify one RHR loop is in operation.	12 hours
SR 3.4.8.2 Verify correct breaker alignment and indicated power are available to the required RHR pump that is not in operation.	7 days

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.11 Pressurizer Power Operated Relief Valves (PORVs)

LCO 3.4.11 Each PORV and associated block valve shall be OPERABLE.

APPLICABILITY: MODES 1 and 2,
MODE 3 with all RCS cold leg temperatures > 368°F.

ACTIONS

NOTE

Separate Condition entry is allowed for each PORV.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more PORVs inoperable and capable of being manually cycled.	A.1 Close and maintain power to associated block valve.	1 hour
B. One PORV inoperable and not capable of being manually cycled.	B.1 Close associated block valve.	1 hour
	<u>AND</u>	
	B.2 Remove power from associated block valve.	1 hour
	<u>AND</u>	
	B.3 Restore PORV to OPERABLE status.	72 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. One block valve inoperable.</p>	<p style="text-align: center;">NOTE</p> <p>Required Actions do not apply when block valve is inoperable solely as a result of complying with Required Actions B.2 or E.2.</p> <hr/> <p>C.1 Place associated PORV in manual control.</p> <p><u>AND</u></p> <p>C.2 Restore block valve to OPERABLE status.</p>	<p>1 hour</p> <p>72 hours</p>
<p>D. Required Action and associated Completion Time of Condition A, B, or C not met.</p>	<p>D.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>D.2 Be in MODE 4.</p>	<p>6 hours</p> <p>12 hours</p>
<p>E. Two PORVs inoperable and not capable of being manually cycled.</p>	<p>E.1 Close associated block valves.</p> <p><u>AND</u></p> <p>E.2 Remove power from associated block valves.</p> <p><u>AND</u></p> <p>E.3 Be in MODE 3.</p> <p><u>AND</u></p> <p>E.4 Be in MODE 4.</p>	<p>1 hour</p> <p>1 hour</p> <p>6 hours</p> <p>12 hours</p>

(continued)

APPLICABILITY: MODE 3, with any RCS cold leg temperature $\leq 368^{\circ}\text{F}$,
MODE 4,
MODE 5,
MODE 6 when the reactor vessel head is on.

ACTIONS

NOTE

LCO 3.0.4b. is not applicable when entering MODE 4 or MODE 3.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more safety injection pumps capable of injecting into the RCS.	A.1 Initiate action to verify a maximum of zero safety injection pumps are capable of injecting into the RCS.	Immediately
B. Two centrifugal charging pumps capable of injecting into the RCS.	B.1 Initiate action to verify a maximum of one centrifugal charging pump is capable of injecting into the RCS.	Immediately
C. An accumulator not isolated when the accumulator pressure is greater than or equal to the maximum RCS pressure for existing cold leg temperature allowed in the PTLR.	C.1 Isolate affected accumulator.	1 hour

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>D. Required Action and associated Completion Time of Condition C not met.</p>	<p>D.1 Increase all RCS cold leg temperatures to > 368°F.</p> <p><u>OR</u></p> <p>D.2 Depressurize affected accumulator to less than the maximum RCS pressure for existing cold leg temperature allowed in the PTLR.</p>	<p>12 hours</p> <p>12 hours</p>
<p>E. One required RCS relief valve inoperable in MODE 3 or MODE 4.</p>	<p>E.1 Restore required RCS relief valve to OPERABLE status.</p>	<p>7 days</p>
<p>F. One required RCS relief valve inoperable in MODE 5 or 6.</p>	<p>F.1 Restore required RCS relief valve to OPERABLE status.</p>	<p>24 hours</p>
<p>G. Two required RCS relief valves inoperable.</p> <p><u>OR</u></p> <p>Required Action and associated Completion Time of Condition A, B, D, E, or F not met.</p> <p><u>OR</u></p> <p>LTOP System inoperable for any reason other than Condition A, B, C, D, E, or F.</p>	<p>G.1 Depressurize RCS and establish RCS vent of ≥ 2.0 square inches.</p>	<p>8 hours</p>

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.15 RCS Leakage Detection Instrumentation

LCO 3.4.15 The following RCS leakage detection instrumentation shall be OPERABLE:

- a. The containment sump level and flow monitoring system;
- b. One containment atmosphere particulate radioactivity monitor; and
- c. One containment air cooler condensate monitoring system or one containment atmosphere (gaseous) radioactivity monitor.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. Required containment sump level and flow monitoring system inoperable.</p>	<p>A.1 <u>NOTE</u> Not required until 12 hours after establishment of steady state operation.</p> <hr/> <p>Perform SR 3.4.13.1.</p> <p><u>AND</u></p> <p>A.2 Restore required containment sump level and flow monitoring system to OPERABLE status.</p>	<p>Once per 24 hours</p> <p>30 days</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. Required containment atmosphere particulate radioactivity monitor inoperable.</p>	<p>B.1.1 Analyze samples of the containment atmosphere.</p>	<p>Once per 24 hours</p>
	<p><u>OR</u></p>	
	<p>B.1.2 NOTE Not required until 12 hours after establishment of steady state operation.</p>	
	<p>Perform SR 3.4.13.1.</p>	<p>Once per 24 hours</p>
	<p><u>AND</u></p>	
	<p>B.2 Restore required containment atmosphere particulate radioactivity monitor to OPERABLE status.</p>	<p>30 days</p>

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.16 RCS Specific Activity

LCO 3.4.16 The specific activity of the reactor coolant shall be within limits.

APPLICABILITY: MODES 1 and 2,
MODE 3 with RCS average temperature (T_{avg}) \geq 500°F.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. DOSE EQUIVALENT I-131 > 1.0 μ Ci/gm.	<hr/> NOTE LCO 3.0.4c. is applicable. <hr/>	
	A.1 Verify DOSE EQUIVALENT I-131 within the acceptable region of Figure 3.4.16-1.	Once per 4 hours
	AND A.2 Restore DOSE EQUIVALENT I-131 to within limit.	48 hours
B. Gross specific activity of the reactor coolant > 100 μ Ci/gm.	B.1 Be in MODE 3 with T_{avg} < 500°F.	6 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. Required Action and associated Completion Time of Condition A not met.</p> <p><u>OR</u></p> <p>DOSE EQUIVALENT I-131 in the unacceptable region of Figure 3.4.16-1.</p>	<p>C.1 Be in MODE 3 with $T_{avg} < 500^{\circ}\text{F}$.</p>	<p>6 hours</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.4.16.1 Verify reactor coolant gross specific activity $\leq 100 \text{ } \mu\text{Ci/gm}$.</p>	<p>7 days</p>
<p>SR 3.4.16.2</p> <p><u>NOTE</u></p> <p>Only required to be performed in MODE 1.</p> <p>Verify reactor coolant DOSE EQUIVALENT I-131 specific activity $\leq 1.0 \text{ } \mu\text{Ci/gm}$.</p>	<p>14 days</p> <p><u>AND</u></p> <p>Between 2 and 6 hours after a THERMAL POWER change of $\geq 15\%$ RTP within a 1 hour period</p>

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SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY												
SR 3.5.2.5	Verify each ECCS automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	18 months												
SR 3.5.2.6	Verify each ECCS pump starts automatically on an actual or simulated actuation signal.	18 months												
SR 3.5.2.7	<p>Verify, for each ECCS throttle valve listed below, each mechanical position stop is in the correct position.</p> <p style="text-align: center;"><u>Valve Number</u></p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td>EM-V0095</td> <td>EM-V0107</td> <td>EM-V0089</td> </tr> <tr> <td>EM-V0096</td> <td>EM-V0108</td> <td>EM-V0090</td> </tr> <tr> <td>EM-V0097</td> <td>EM-V0109</td> <td>EM-V0091</td> </tr> <tr> <td>EM-V0098</td> <td>EM-V0110</td> <td>EM-V0092</td> </tr> </table>	EM-V0095	EM-V0107	EM-V0089	EM-V0096	EM-V0108	EM-V0090	EM-V0097	EM-V0109	EM-V0091	EM-V0098	EM-V0110	EM-V0092	18 months
EM-V0095	EM-V0107	EM-V0089												
EM-V0096	EM-V0108	EM-V0090												
EM-V0097	EM-V0109	EM-V0091												
EM-V0098	EM-V0110	EM-V0092												
SR 3.5.2.8	Verify, by visual inspection, each ECCS train containment sump suction inlet is not restricted by debris and the suction inlet trash racks and screens show no evidence of structural distress or abnormal corrosion.	18 months												

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.3 ECCS -Shutdown

LCO 3.5.3 One ECCS train shall be OPERABLE.

~~NOTE~~

An RHR subsystem may be considered OPERABLE during alignment and operation for decay heat removal, if capable of being manually realigned to the ECCS mode of operation.

APPLICABILITY: MODE 4.

ACTIONS

~~NOTE~~

LCO 3.0.4b. is not applicable to ECCS centrifugal charging pump subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required ECCS residual heat removal (RHR) subsystem inoperable.	A.1 Initiate action to restore required ECCS RHR subsystem to OPERABLE status.	Immediately
B. Required ECCS centrifugal charging pump (CCP) subsystem inoperable.	B.1 Restore required ECCS CCP subsystem to OPERABLE status.	1 hour
C. Required Action and associated Completion Time of Condition B not met.	C.1 Be in MODE 5.	24 hours

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.7.2	Verify spray additive tank solution volume is ≥ 4340 gal and ≤ 4540 gal.	184 days
SR 3.6.7.3	Verify spray additive tank solution concentration is $\geq 28\%$ and $\leq 31\%$ by weight.	184 days
SR 3.6.7.4	Verify each spray additive automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	18 months
SR 3.6.7.5	Verify spray additive flow rate from each solution's flow path.	5 years

3.6 CONTAINMENT SYSTEMS

3.6.8 Hydrogen Recombiners

LCO 3.6.8 Two hydrogen recombiners shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One hydrogen recombiner inoperable.	A.1 Restore hydrogen recombiner to OPERABLE status.	30 days
B. Two hydrogen recombiners inoperable.	B.1 Verify by administrative means that the hydrogen control function is maintained.	1 hour <u>AND</u> Once per 12 hours thereafter
	<u>AND</u> B.2 Restore one hydrogen recombiner to OPERABLE status.	7 days

(continued)

3.7 PLANT SYSTEMS

3.7.4 Atmospheric Relief Valves (ARVs)

LCO 3.7.4 Four ARV lines shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ARV line inoperable for reasons other than excessive leakage.	A.1 Restore required ARV line to OPERABLE status.	7 days
B. Two ARV lines inoperable for reasons other than excessive leakage.	B.1 Restore all but one required ARV line to OPERABLE status.	72 hours
C. Three or more ARV lines inoperable for reasons other than excessive leakage.	C.1 Restore all but two ARV lines to OPERABLE status.	24 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. With one or more of the ARVs inoperable because of excessive seat leakage.	D.1 Initiate action to close the associated block valve(s).	Immediately
	<u>AND</u> D.2 Restore ARV(s) to OPERABLE status.	30 days
E. Required Action and associated Completion Time not met.	E.1 Be in MODE 3.	6 hours
	<u>AND</u> E.2 Be in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.4.1 Verify one complete cycle of each ARV.	In accordance with the Inservice Testing Program
SR 3.7.4.2 Verify one complete cycle of each ARV block valve.	18 months

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Three AFW trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

~~NOTE~~
LCO 3.0.4b. is not applicable when entering MODE 1.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One steam supply to turbine driven AFW pump inoperable.	A.1 Restore steam supply to OPERABLE status.	7 days <u>AND</u> 10 days from discovery of failure to meet the LCO
B. One AFW train inoperable for reasons other than Condition A.	B.1 Restore AFW train to OPERABLE status.	72 hours <u>AND</u> 10 days from discovery of failure to meet the LCO

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. Required Action and associated Completion Time for Condition A or B not met.</p> <p><u>OR</u></p> <p>Two AFW trains inoperable.</p>	<p>C.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>C.2 Be in MODE 4.</p>	<p>6 hours</p> <p>12 hours</p>
<p>D. Three AFW trains inoperable.</p>	<p>D.1</p> <p>NOTE</p> <p>LCO 3.0.3 and all other LCO Required Actions requiring MODE changes are suspended until one AFW train is restored to OPERABLE status.</p> <hr/> <p>Initiate action to restore one AFW train to OPERABLE status.</p>	<p>Immediately</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.7.5.1</p> <p>NOTE</p> <p>Not required to be performed for the AFW flow control valves until the system is placed in standby or THERMAL POWER is > 10% RTP.</p> <hr/> <p>Verify each AFW manual, power operated, and automatic valve in each water flow path, and in both steam supply flow paths to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	<p>31 days</p>

(continued)

3.8 ELECTRICAL POWER SYSTEMS

3.8.1 AC Sources - Operating

LCO 3.8.1 The following AC electrical sources shall be OPERABLE:

- a. Two qualified circuits between the offsite transmission network and the onsite Class 1E AC Electrical Power Distribution System; and
- b. Two diesel generators (DGs) capable of supplying the onsite Class 1E power distribution subsystem(s); and
- c. Load shedder and emergency load sequencers for Train A and Train B.

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

ACTIONS

~~NOTE~~

LCO 3.0.4b. is not applicable to DGs.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One offsite circuit inoperable.</p>	<p>A.1 Perform SR 3.8.1.1 for OPERABLE offsite circuit.</p> <p><u>AND</u></p> <p>A.2 NOTE In MODES 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature.</p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 8 hours thereafter</p> <p style="text-align: right;">(continued)</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	<p>Declare required feature(s) with no offsite power available inoperable when its redundant required feature(s) is inoperable.</p> <p><u>AND</u></p> <p>A.3 Restore offsite circuit to OPERABLE status.</p>	<p>24 hours from discovery of no offsite power to one train concurrent with inoperability of redundant required feature(s)</p> <p>72 hours</p> <p><u>AND</u></p> <p>6 days from discovery of failure to meet LCO</p>
B. One DG inoperable.	<p>B.1 Perform SR 3.8.1.1 for the offsite circuit(s).</p> <p><u>AND</u></p> <p>B.2 <u>NOTE</u> In MODES 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature.</p> <p>Declare required feature(s) supported by the inoperable DG inoperable when its required redundant feature(s) is inoperable.</p> <p><u>AND</u></p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 8 hours thereafter</p> <p>4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p> <p>(continued)</p>

3.9 REFUELING OPERATIONS

3.9.1 Boron Concentration

LCO 3.9.1 Boron concentrations of all filled portions of the Reactor Coolant System and the refueling canal, that have direct access to the reactor vessel, shall be maintained within the limit specified in the COLR.

APPLICABILITY: MODE 6.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Boron concentration not within limit.	A.1 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u>	
	A.2 Suspend positive reactivity additions.	Immediately
	<u>AND</u>	
	A.3 Initiate action to restore boron concentration to within limit.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.9.1.1 Verify boron concentration is within the limit specified in the COLR.	72 hours

3.9 REFUELING OPERATIONS

3.9.2 Unborated Water Source Isolation Valves

LCO 3.9.2 Each valve used to isolate unborated water sources, BG-V0178 and BG-V0601, shall be secured in the closed position.

APPLICABILITY: MODE 6.

ACTIONS

~~NOTE~~

Separate Condition entry is allowed for each unborated water source isolation valve.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. NOTE</p> <p>Required Action A.3 must be completed whenever Condition A is entered.</p> <hr/> <p>One or more valves not secured in closed position.</p>	<p>A.1 Suspend CORE ALTERATIONS.</p> <p><u>AND</u></p>	<p>Immediately</p>
	<p>A.2 Initiate actions to secure valve in closed position.</p> <p><u>AND</u></p>	<p>Immediately</p>
	<p>A.3 Perform SR 3.9.1.1.</p>	<p>4 hours</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.9.2.1 Verify each valve that isolates unborated water sources, BG-V0178 and BG-V0601, is secured in the closed position.</p>	<p>31 days</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.2 Initiate action to restore one RHR loop to operation.	Immediately
	<u>AND</u> B.3 Close all containment penetrations providing direct access from containment atmosphere to outside atmosphere.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.9.6.1 Verify one RHR loop is in operation and circulating reactor coolant at a flow rate of ≥ 1000 gpm.	12 hours
SR 3.9.6.2 Verify correct breaker alignment and indicated power available to the required RHR pump that is not in operation.	7 days