

3.6 CONTAINMENT SYSTEMS

3.6.3 Containment Isolation Valves (Atmospheric, Subatmospheric, Ice Condenser, and Dual)

LCO 3.6.3 Each containment isolation valve shall be OPERABLE.

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

ACTIONS

- NOTES -

1. Penetration flow path(s) [except for [42] inch purge valve flow paths] may be unisolated intermittently under administrative controls.
 2. Separate Condition entry is allowed for each penetration flow path.
 3. Enter applicable Conditions and Required Actions for systems made inoperable by containment isolation valves.
 4. Enter applicable Conditions and Required Actions of LCO 3.6.1, "Containment," when isolation valve leakage results in exceeding the overall containment leakage rate acceptance criteria.
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CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. ----- - NOTE - Only applicable to penetration flow paths with two [or more] containment isolation valves. ----- One or more penetration flow paths with one containment isolation valve inoperable [for reasons other than Condition[s] D [and E]].</p>	<p>A.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.</p> <p style="text-align: center;"><u>AND</u></p>	<p>4 hours</p>

Containment Isolation Valves (Atmospheric, Subatmospheric, Ice Condenser, and Dual)
3.6.3

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p>A.2</p> <p>----- - NOTES - 1. Isolation devices in high radiation areas may be verified by use of administrative means. 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means. -----</p> <p>Verify the affected penetration flow path is isolated.</p>	<p>Once per 31 days for isolation devices outside containment</p> <p><u>AND</u></p> <p>Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment</p>

Containment Isolation Valves (Atmospheric, Subatmospheric, Ice Condenser, and Dual)
3.6.3

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. ----- - NOTE - Only applicable to penetration flow paths with two [or more] containment isolation valves. -----</p> <p>One or more penetration flow paths with two [or more] containment isolation valves inoperable [for reasons other than Condition[s] D [and E]].</p>	<p>B.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.</p>	1 hour
<p>C. ----- - NOTE - Only applicable to penetration flow paths with only one containment isolation valve and a closed system. -----</p> <p>One or more penetration flow paths with one containment isolation valve inoperable.</p>	<p>C.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.</p> <p style="text-align: center;"><u>AND</u></p>	72 hours

Containment Isolation Valves (Atmospheric, Subatmospheric, Ice Condenser, and Dual)
3.6.3

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p>C.2</p> <p style="text-align: center;">----- - NOTES - -----</p> <p>1. Isolation devices in high radiation areas may be verified by use of administrative means.</p> <p>2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means.</p> <p style="text-align: center;">-----</p> <p>Verify the affected penetration flow path is isolated.</p>	<p>Once per 31 days</p>
<p>D. [One or more shield building bypass leakage [or purge valve leakage] not within limit.</p>	<p>D.1 Restore leakage within limit.</p>	<p>4 hours for shield building bypass leakage</p> <p><u>AND</u></p> <p>24 hours for purge valve leakage]</p>
<p>E. [One or more penetration flow paths with one or more containment purge valves not within purge valve leakage limits.</p>	<p>E.1 Isolate the affected penetration flow path by use of at least one [closed and de-activated automatic valve, closed manual valve, or blind flange].</p> <p><u>AND</u></p>	<p>24 hours</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p>E.2</p> <p>----- - NOTES - 1. Isolation devices in high radiation areas may be verified by use of administrative means. 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means. -----</p> <p>Verify the affected penetration flow path is isolated.</p> <p><u>AND</u></p> <p>E.3 Perform SR 3.6.3.7 for the resilient seal purge valves closed to comply with Required Action E.1.</p>	<p>Once per 31 days for isolation devices outside containment</p> <p><u>AND</u></p> <p>Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment</p> <p>Once per [92] days]</p>
<p>F. Required Action and associated Completion Time not met.</p>	<p>F.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>F.2 Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.3.1	[Verify each [42] inch purge valve is sealed closed, except for one purge valve in a penetration flow path while in Condition E of this LCO.	31 days]
SR 3.6.3.2	[Verify each [8] inch purge valve is closed, except when the [8] inch containment purge valves are open for pressure control, ALARA or air quality considerations for personnel entry, or for Surveillances that require the valves to be open.	31 days]
SR 3.6.3.3	<p>----- - NOTE - Valves and blind flanges in high radiation areas may be verified by use of administrative controls. -----</p> <p>Verify each containment isolation manual valve and blind flange that is located outside containment and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.</p>	31 days
SR 3.6.3.4	<p>----- - NOTE - Valves and blind flanges in high radiation areas may be verified by use of administrative means. -----</p> <p>Verify each containment isolation manual valve and blind flange that is located inside containment and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.</p>	Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days
SR 3.6.3.5	Verify the isolation time of each automatic power operated containment isolation valve is within limits.	[In accordance with the Inservice Testing Program or 92 days]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.3.6	[Cycle each weight or spring loaded check valve testable during operation through one complete cycle of full travel, and verify each check valve remains closed when the differential pressure in the direction of flow is \leq [1.2] psid and opens when the differential pressure in the direction of flow is \geq [1.2] psid and $<$ [5.0] psid.	92 days]
SR 3.6.3.7	[Perform leakage rate testing for containment purge valves with resilient seals.	184 days <u>AND</u> Within 92 days after opening the valve]
SR 3.6.3.8	Verify each automatic containment isolation valve that is not locked, sealed or otherwise secured in position, actuates to the isolation position on an actual or simulated actuation signal.	[18] months
SR 3.6.3.9	[Cycle each weight or spring loaded check valve not testable during operation through one complete cycle of full travel, and verify each check valve remains closed when the differential pressure in the direction of flow is \leq [1.2] psid and opens when the differential pressure in the direction of flow is \geq [1.2] psid and $<$ [5.0] psid.	18 months]
SR 3.6.3.10	[Verify each [] inch containment purge valve is blocked to restrict the valve from opening $>$ [50]%.]	[18] months]
SR 3.6.3.11	[Verify the combined leakage rate for all shield building bypass leakage paths is \leq [L_a] when pressurized to \geq [psig].]	In accordance with the Containment Leakage Rate Testing Program]

3.6 CONTAINMENT SYSTEMS

3.6.4A Containment Pressure (Atmospheric, Dual, and Ice Condenser)

LCO 3.6.4A Containment pressure shall be \geq [-0.3] psig and \leq [+1.5] psig.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment pressure not within limits.	A.1 Restore containment pressure to within limits.	1 hour
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.4A.1 Verify containment pressure is within limits.	12 hours

3.6 CONTAINMENT SYSTEMS

3.6.4B Containment Pressure (Subatmospheric)

LCO 3.6.4B Containment air partial pressure shall be \geq [9.0] psia and within the acceptable operation range shown on Figure 3.6.4B-1.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment air partial pressure not within limits.	A.1 Restore containment air partial pressure to within limits.	1 hour
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.4B.1 Verify containment air partial pressure is within limits.	12 hours

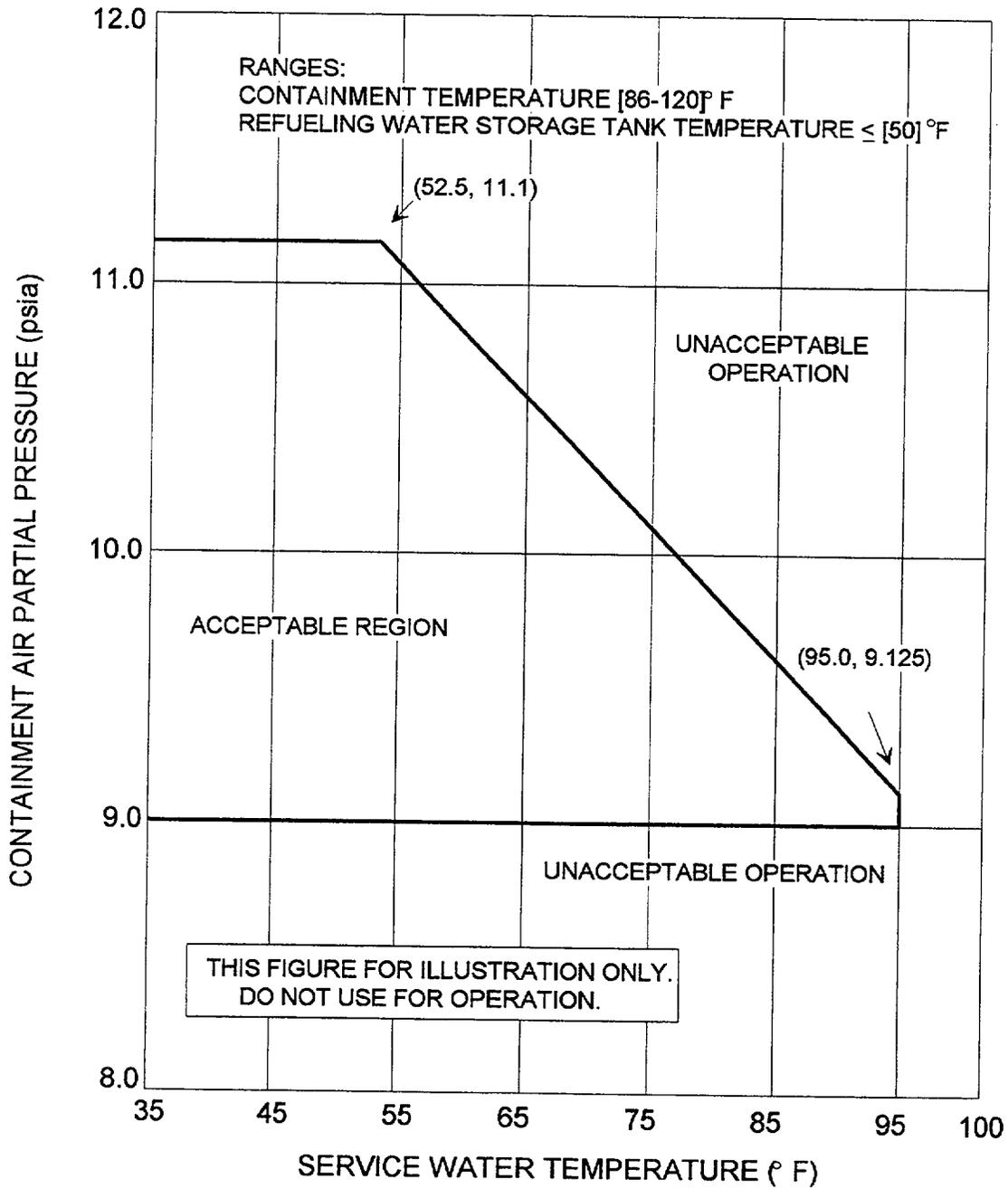


Figure 3.6.4B-1 (page 1 of 1)
Containment Air Partial Pressure Versus
Service Water Temperature

3.6 CONTAINMENT SYSTEMS

3.6.5A Containment Air Temperature (Atmospheric and Dual)

LCO 3.6.5A Containment average air temperature shall be \leq [120]°F.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment average air temperature not within limit.	A.1 Restore containment average air temperature to within limit.	8 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.5A.1 Verify containment average air temperature is within limit.	24 hours

3.6 CONTAINMENT SYSTEMS

3.6.5B Containment Air Temperature (Ice Condenser)

LCO 3.6.5B Containment average air temperature shall be:

- a. $\geq [85]^{\circ}\text{F}$ and $\leq [110]^{\circ}\text{F}$ for the containment upper compartment and
- b. $\geq [100]^{\circ}\text{F}$ and $\leq [120]^{\circ}\text{F}$ for the containment lower compartment.

- NOTE -

The minimum containment average air temperature in MODES 2, 3, and 4 may be reduced to $[60]^{\circ}\text{F}$.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment average air temperature not within limits.	A.1 Restore containment average air temperature to within limits.	8 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.5B.1 Verify containment upper compartment average air temperature is within limits.	24 hours

Containment Air Temperature (Ice Condenser)
3.6.5B

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.5B.2	Verify containment lower compartment average air temperature is within limits.	24 hours

3.6 CONTAINMENT SYSTEMS

3.6.5C Containment Air Temperature (Subatmospheric)

LCO 3.6.5C Containment average air temperature shall be \geq [86] $^{\circ}$ F and \leq [120] $^{\circ}$ F.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment average air temperature not within limits.	A.1 Restore containment average air temperature to within limits.	8 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.5C.1 Verify containment average air temperature is within limits.	24 hours

3.6 CONTAINMENT SYSTEMS

3.6.6A Containment Spray and Cooling Systems (Atmospheric and Dual) (Credit taken for iodine removal by the Containment Spray System)

LCO 3.6.6A Two containment spray trains and [two] containment cooling trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One containment spray train inoperable.	A.1 Restore containment spray train to OPERABLE status.	72 hours <u>AND</u> 10 days from discovery of failure to meet the LCO
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 5.	6 hours 84 hours
C. One [required] containment cooling train inoperable.	C.1 Restore [required] containment cooling train to OPERABLE status.	7 days <u>AND</u> 10 days from discovery of failure to meet the LCO
D. Two [required] containment cooling trains inoperable.	D.1 Restore one [required] containment cooling train to OPERABLE status.	72 hours

Containment Spray and Cooling Systems (Atmospheric and Dual)
3.6.6A

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required Action and associated Completion Time of Condition C or D not met.	E.1 Be in MODE 3.	6 hours
	<u>AND</u>	
	E.2 Be in MODE 5.	36 hours
F. Two containment spray trains inoperable. <u>OR</u> Any combination of three or more trains inoperable.	F.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.6A.1 Verify each containment spray manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	31 days
SR 3.6.6A.2 Operate each [required] containment cooling train fan unit for \geq 15 minutes.	31 days
SR 3.6.6A.3 Verify each [required] containment cooling train cooling water flow rate is \geq [700] gpm.	31 days
SR 3.6.6A.4 Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.6.6A.5 Verify each automatic containment spray 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

Containment Spray and Cooling Systems (Atmospheric and Dual)
3.6.6A

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.6A.6	Verify each containment spray pump starts automatically on an actual or simulated actuation signal.	[18] months
SR 3.6.6A.7	Verify each [required] containment cooling train starts automatically on an actual or simulated actuation signal.	[18] months
SR 3.6.6A.8	Verify each spray nozzle is unobstructed.	[At first refueling] <u>AND</u> 10 years

3.6 CONTAINMENT SYSTEMS

3.6.6B Containment Spray and Cooling Systems (Atmospheric and Dual (Credit not taken for iodine removal by the Containment Spray System))

LCO 3.6.6B Two containment spray trains and [two] containment cooling trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One containment spray train inoperable.	A.1 Restore containment spray train to OPERABLE status.	7 days <u>AND</u> 14 days from discovery of failure to meet the LCO
B. One [required] containment cooling train inoperable.	B.1 Restore [required] containment cooling train to OPERABLE status.	7 days <u>AND</u> 14 days from discovery of failure to meet the LCO
C. Two containment spray trains inoperable.	C.1 Restore one containment spray train to OPERABLE status.	72 hours
D. One containment spray train and one [required] containment cooling train inoperable.	D.1 Restore containment spray train to OPERABLE status.	72 hours
	<u>OR</u> D.2 Restore [required] containment cooling train to OPERABLE status.	72 hours

Containment Spray and Cooling Systems (Atmospheric and Dual)
3.6.6B

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two [required] containment cooling trains inoperable.	E.1 Restore one [required] containment cooling train to OPERABLE status.	72 hours
F. Required Action and associated Completion Time of Condition A, B, C, D, or E not met.	F.1 Be in MODE 3.	6 hours
	<u>AND</u> F.2 Be in MODE 5.	36 hours
G. Any combination of three or more trains inoperable.	G.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.6B.1 Verify each containment spray manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	31 days
SR 3.6.6B.2 Operate each [required] containment cooling train fan unit for ≥ 15 minutes.	31 days
SR 3.6.6B.3 Verify each [required] containment cooling train cooling water flow rate is $\geq [700]$ gpm.	31 days
SR 3.6.6B.4 Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.6.6B.5 Verify each automatic containment spray 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

Containment Spray and Cooling Systems (Atmospheric and Dual)
3.6.6B

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.6B.6	Verify each containment spray pump starts automatically on an actual or simulated actuation signal.	[18] months
SR 3.6.6B.7	Verify each [required] containment cooling train starts automatically on an actual or simulated actuation signal.	[18] months
SR 3.6.6B.8	Verify each spray nozzle is unobstructed.	[At first refueling] <u>AND</u> 10 years

3.6 CONTAINMENT SYSTEMS

3.6.6C Containment Spray System (Ice Condenser)

LCO 3.6.6C Two containment spray trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One containment spray train inoperable.	A.1 Restore containment spray train to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. <u>AND</u>	6 hours
	B.2 Be in MODE 5.	84 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.6C.1 Verify each containment spray manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	31 days
SR 3.6.6C.2 Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.6.6C.3 Verify each automatic containment spray 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

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.6C.4	Verify each containment spray pump starts automatically on an actual or simulated actuation signal.	[18] months
SR 3.6.6C.5	Verify each spray nozzle is unobstructed.	[At first refueling] <u>AND</u> 10 years

3.6 CONTAINMENT SYSTEMS

3.6.6D Quench Spray (QS) System (Subatmospheric)

LCO 3.6.6D Two QS trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One QS train inoperable.	A.1 Restore QS train to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.6D.1 Verify each QS manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	31 days
SR 3.6.6D.2 Verify each QS pump's developed head at the flow test point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.6.6D.3 Verify each QS 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

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.6D.4	Verify each QS pump starts automatically on an actual or simulated actuation signal.	[18] months
SR 3.6.6D.5	Verify each spray nozzle is unobstructed.	[At first refueling] <u>AND</u> 10 years

3.6 CONTAINMENT SYSTEMS

3.6.6E Recirculation Spray (RS) System (Subatmospheric)

LCO 3.6.6E Four RS subsystems [and a casing cooling tank] shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One RS subsystem inoperable.	A.1 Restore RS subsystem to OPERABLE status.	7 days
B. Two RS subsystems inoperable in one train.	B.1 Restore one RS subsystem to OPERABLE status.	72 hours
C. [Two inside RS subsystems inoperable.	C.1 Restore one RS subsystem to OPERABLE status.	72 hours]
D. [Two outside RS subsystems inoperable.	D.1 Restore one RS subsystem to OPERABLE status.	72 hours]
E. [Casing cooling tank inoperable.	E.1 Restore casing cooling tank to OPERABLE status.	72 hours]
F. Required Action and associated Completion Time not met.	F.1 Be in MODE 3. <u>AND</u> F.2 Be in MODE 5.	6 hours 84 hours
G. Three or more RS subsystems inoperable.	G.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.6E.1	Verify casing cooling tank temperature is \geq [35] $^{\circ}$ F and \leq [50] $^{\circ}$ F.	24 hours
SR 3.6.6E.2	Verify casing cooling tank contained borated water volume is \geq [116,500] gal.	7 days
SR 3.6.6E.3	Verify casing cooling tank boron concentration is \geq [2300] ppm and \leq [2400] ppm.	7 days
SR 3.6.6E.4	Verify each RS [and casing cooling] manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	31 days
SR 3.6.6E.5	Verify each RS [and casing cooling] pump's developed head at the flow test point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.6.6E.6	Verify on an actual or simulated actuation signal(s): <ul style="list-style-type: none"> a. Each RS automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position, b. Each RS pump starts automatically, and c. [Each casing cooling pump starts automatically.] 	[18] months
SR 3.6.6E.7	Verify each spray nozzle is unobstructed.	[At first refueling] <u>AND</u> 10 years

3.6 CONTAINMENT SYSTEMS

3.6.7 Spray Additive System (Atmospheric, Subatmospheric, Ice Condenser, and Dual)

LCO 3.6.7 The Spray Additive System shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Spray Additive System inoperable.	A.1 Restore Spray Additive System to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	84 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.7.1	Verify each spray additive manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	31 days
SR 3.6.7.2	Verify spray additive tank solution volume is \geq [2568] gal and \leq [4000] gal.	184 days
SR 3.6.7.3	Verify spray additive tank [NaOH] solution concentration is \geq [30]% and \leq [32]% by weight.	184 days

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
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 (Atmospheric, Subatmospheric, Ice Condenser, and Dual) (if permanently installed)

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 ----- - NOTE - LCO 3.0.4 is not applicable. ----- 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. AND B.2 Restore one hydrogen recombiner to OPERABLE status.	1 hour AND Once per 12 hours thereafter 7 days]
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours

Hydrogen Recombiners (Atmospheric, Subatmospheric, Ice Condenser, and Dual)
3.6.8

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.8.1	Perform a system functional test for each hydrogen recombiner.	[18] months
SR 3.6.8.2	Visually examine each hydrogen recombiner enclosure and verify there is no evidence of abnormal conditions.	[18] months
SR 3.6.8.3	Perform a resistance to ground test for each heater phase.	[18] months

3.6 CONTAINMENT SYSTEMS

3.6.9 Hydrogen Mixing System (HMS) (Atmospheric, Ice Condenser, and Dual)

LCO 3.6.9 [Two] HMS trains shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One HMS train inoperable.	A.1 ----- - NOTE - LCO 3.0.4 is not applicable. ----- Restore HMS train to OPERABLE status.	30 days
B. Two HMS trains inoperable.	B.1 Verify by administrative means that the hydrogen control function is maintained. <u>AND</u> B.2 Restore one HMS train to OPERABLE status.	1 hour <u>AND</u> Once per 12 hours thereafter 7 days
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.9.1	Operate each HMS train for ≥ 15 minutes.	92 days
SR 3.6.9.2	Verify each HMS train flow rate on slow speed is $\geq [4000]$ cfm.	[18] months
SR 3.6.9.3	Verify each HMS train starts on an actual or simulated actuation signal.	[18] months

3.6 CONTAINMENT SYSTEMS

3.6.10 Hydrogen Ignition System (HIS) (Ice Condenser)

LCO 3.6.10 Two HIS trains shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One HIS train inoperable.	A.1 Restore HIS train to OPERABLE status.	7 days
	<u>OR</u>	
	A.2 Perform SR 3.6.10.1 on the OPERABLE train.	Once per 7 days
B. One containment region with no OPERABLE hydrogen ignitor.	B.1 Restore one hydrogen ignitor in the affected containment region to OPERABLE status.	7 days
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.10.1 Energize each HIS train power supply breaker and verify \geq [32] ignitors are energized in each train.	92 days
SR 3.6.10.2 Verify at least one hydrogen ignitor is OPERABLE in each containment region.	92 days

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.10.3 Energize each hydrogen ignitor and verify temperature is \geq [1700] $^{\circ}$ F.	[18] months

3.6 CONTAINMENT SYSTEMS

3.6.11 Iodine Cleanup System (ICS) (Atmospheric and Subatmospheric)

LCO 3.6.11 Two ICS trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ICS train inoperable.	A.1 Restore ICS train to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.11.1	Operate each ICS train for [\geq 10 continuous hours with heaters operating or (for systems without heaters) \geq 15 minutes].	31 days
SR 3.6.11.2	Perform required ICS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.11.3	Verify each ICS train actuates on an actual or simulated actuation signal.	[18] months
SR 3.6.11.4	[Verify each ICS filter bypass damper can be opened.	[18] months]

3.6 CONTAINMENT SYSTEMS

3.6.12 Vacuum Relief Valves (Atmospheric and Ice Condenser)

LCO 3.6.12 [Two] vacuum relief lines shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One vacuum relief line inoperable.	A.1 Restore vacuum relief line to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.12.1 Verify each vacuum relief line is OPERABLE in accordance with the Inservice Testing Program.	In accordance with the Inservice Testing Program

3.6 CONTAINMENT SYSTEMS

3.6.13 Shield Building Air Cleanup System (SBACS) (Dual and Ice Condenser)

LCO 3.6.13 Two SBACS trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SBACS train inoperable.	A.1 Restore SBACS train to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.13.1 Operate each SBACS train for [\geq 10 continuous hours with heaters operating or (for systems without heaters) \geq 15 minutes].	31 days
SR 3.6.13.2 Perform required SBACS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.13.3 Verify each SBACS train actuates on an actual or simulated actuation signal.	[18] months
SR 3.6.13.4 [Verify each SBACS filter bypass damper can be opened.	[18] months]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.13.5 Verify each SBACS train flow rate is \geq [] cfm.	[18] months on a STAGGERED TEST BASIS

3.6 CONTAINMENT SYSTEMS

3.6.14 Air Return System (ARS) (Ice Condenser)

LCO 3.6.14 Two ARS trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ARS train inoperable.	A.1 Restore ARS train to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.14.1	Verify each ARS fan starts on an actual or simulated actuation signal, after a delay of \geq [9.0] minutes and \leq [11.0] minutes, and operates for \geq 15 minutes.	[92] days
SR 3.6.14.2	Verify, with the ARS fan dampers closed, each ARS fan motor current is \geq [20.5] amps and \leq [35.5] amps [when the fan speed is \geq [840] rpm and \leq [900] rpm].	92 days
SR 3.6.14.3	Verify, with the ARS fan not operating, each ARS fan damper opens when \leq [11.0] lb is applied to the counterweight.	92 days

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.14.4 [Verify each motor operated valve in the hydrogen collection header that is not locked, sealed, or otherwise secured in position, opens on an actual or simulated actuation signal after a delay of \geq [9.0] minutes and \leq [11.0] minutes.	92 days]

3.6 CONTAINMENT SYSTEMS

3.6.15 Ice Bed (Ice Condenser)

LCO 3.6.15 The ice bed shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Ice bed inoperable.	A.1 Restore ice bed to OPERABLE status.	48 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.15.1	Verify maximum ice bed temperature is $\leq [27]^{\circ}\text{F}$.	12 hours
SR 3.6.15.2	Verify total weight of stored ice is $\geq [2,721,600]$ lb by: a. Weighing a representative sample of ≥ 144 ice baskets and verifying each basket contains $\geq [1400]$ lb of ice and b. Calculating total weight of stored ice, at a 95% confidence level, using all ice basket weights determined in SR 3.6.15.2.a.	9 months

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.15.3	<p>Verify azimuthal distribution of ice at a 95% confidence level by subdividing weights, as determined by SR 3.6.15.2.a, into the following groups:</p> <ul style="list-style-type: none"> a. Group 1 - bays 1 through 8, b. Group 2 - bays 9 through 16, and c. Group 3 - bays 17 through 24. <p>The average ice weight of the sample baskets in each group from radial rows 1, 2, 4, 6, 8, and 9 shall be \geq [1400] lb.</p>	9 months
SR 3.6.15.4	<p>Verify, by visual inspection, accumulation of ice on structural members comprising flow channels through the ice bed is \leq 15 percent blockage of the total flow area for each safety analysis section.</p>	18 months
SR 3.6.15.5	<p style="text-align: center;">----- - NOTE - -----</p> <p>The requirements of this SR are satisfied if the boron concentration and pH values obtained from averaging the individual sample results are within the limits specified below.</p> <p style="text-align: center;">-----</p> <p>Verify, by chemical analysis of the stored ice in at least one randomly selected ice basket from each ice condenser bay, that ice bed:</p> <ul style="list-style-type: none"> a. Boron concentration is a \geq [1800] ppm and \leq [2000] ppm; and b. pH is \geq [9.0] and \leq [9.5]. 	[54] months
SR 3.6.15.6	<p>Visually inspect, for detrimental structural wear, cracks, corrosion, or other damage, two ice baskets from each azimuthal group of bays. See SR 3.6.15.3.</p>	40 months

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.6.15.7</p> <p>----- - NOTE - ----- The chemical analysis may be performed on either the liquid solution or on the resulting ice. -----</p> <p>Verify, by chemical analysis, that ice added to the ice condenser meets the boron concentration and pH requirements of SR 3.6.15.5.</p>	<p>Each ice addition</p>

3.6 CONTAINMENT SYSTEMS

3.6.16 Ice Condenser Doors (Ice Condenser)

LCO 3.6.16 The ice condenser inlet doors, intermediate deck doors, and top deck [doors] shall be OPERABLE and closed.

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

ACTIONS

- NOTE -

Separate Condition entry is allowed for each ice condenser door.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more ice condenser inlet doors inoperable due to being physically restrained from opening.	A.1 Restore inlet door to OPERABLE status.	1 hour
B. One or more ice condenser doors inoperable for reasons other than Condition A or not closed.	B.1 Verify maximum ice bed temperature is $\leq [27]^{\circ}\text{F}$.	Once per 4 hours
	<u>AND</u> B.2 Restore ice condenser door to OPERABLE status and closed positions.	14 days
C. Required Action and associated Completion Time of Condition B not met.	C.1 Restore ice condenser door to OPERABLE status and closed positions.	48 hours
D. Required Action and associated Completion Time of Condition A or C not met.	D.1 Be in MODE 3.	6 hours
	<u>AND</u> D.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.16.1	Verify all inlet doors indicate closed by the Inlet Door Position Monitoring System.	12 hours
SR 3.6.16.2	Verify, by visual inspection, each intermediate deck door is closed and not impaired by ice, frost, or debris.	7 days
SR 3.6.16.3	Verify, by visual inspection, each inlet door is not impaired by ice, frost, or debris.	[3 months during first year after receipt of license] <u>AND</u> [18] months
SR 3.6.16.4	Verify torque required to cause each inlet door to begin to open is \leq [675] in-lb.	[3 months during first year after receipt of license] <u>AND</u> [18] months
SR 3.6.16.5	Perform a torque test on [a sampling of \geq 25% of the] inlet doors.	[3 months during first year after receipt of license] <u>AND</u> [18] months
SR 3.6.16.6	Verify for each intermediate deck door: a. No visual evidence of structural deterioration, b. Free movement of the vent assemblies, and c. Free movement of the door.	[3 months during first year after receipt of license] <u>AND</u> [18] months

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.16.7	Verify, by visual inspection, each top deck [door]: a. Is in place; and b. Has no condensation, frost, or ice formed on the [door] that would restrict its opening.	92 days

3.6 CONTAINMENT SYSTEMS

3.6.17 Divider Barrier Integrity (Ice Condenser)

LCO 3.6.17 Divider barrier integrity shall be maintained.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. ----- - NOTE - For this action, separate Condition entry is allowed for each personnel access door or equipment hatch. -----</p> <p>One or more personnel access doors or equipment hatches open or inoperable, other than for personnel transit entry.</p>	<p>A.1 Restore personnel access doors and equipment hatches to OPERABLE status and closed positions.</p>	<p>1 hour</p>
<p>B. Divider barrier seal inoperable.</p>	<p>B.1 Restore seal to OPERABLE status.</p>	<p>1 hour</p>
<p>C. Required Action and associated Completion Time not met.</p>	<p>C.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>C.2 Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.17.1	Verify, by visual inspection, all personnel access doors and equipment hatches between upper and lower containment compartments are closed.	Prior to entering MODE 4 from MODE 5
SR 3.6.17.2	Verify, by visual inspection, that the seals and sealing surfaces of each personnel access door and equipment hatch have: <ul style="list-style-type: none"> a. No detrimental misalignments, b. No cracks or defects in the sealing surfaces, and c. No apparent deterioration of the seal material. 	Prior to final closure after each opening <u>AND</u> ----- - NOTE - Only required for seals made of resilient materials ----- 10 years
SR 3.6.17.3	Verify, by visual inspection, each personnel access door or equipment hatch that has been opened for personnel transit entry is closed.	After each opening
SR 3.6.17.4	Remove two divider barrier seal test coupons and verify: <ul style="list-style-type: none"> a. Both test coupons' tensile strength is \geq [120] psi and [b. Both test coupons' elongation is \geq [100]%.] 	[18] months
SR 3.6.17.5	Visually inspect \geq [95]% of the divider barrier seal length, and verify: <ul style="list-style-type: none"> a. Seal and seal mounting bolts are properly installed and b. Seal material shows no evidence of deterioration due to holes, ruptures, chemical attack, abrasion, radiation damage, or changes in physical appearance. 	[18] months

3.6 CONTAINMENT SYSTEMS

3.6.18 Containment Recirculation Drains (Ice Condenser)

LCO 3.6.18 The ice condenser floor drains and the refueling canal drains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ice condenser floor drain inoperable.	A.1 Restore ice condenser floor drain to OPERABLE status.	1 hour
B. One refueling canal drain inoperable.	B.1 Restore refueling canal drain to OPERABLE status.	1 hour
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours
	<u>AND</u> C.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE REQUIREMENTS		FREQUENCY
SR 3.6.18.1	<p>Verify, by visual inspection, that:</p> <ul style="list-style-type: none"> a. Each refueling canal drain plug is removed, b. Each refueling canal drain is not obstructed by debris, and c. No debris is present in the upper compartment or refueling canal that could obstruct the refueling canal drain. 	<p>92 days</p> <p><u>AND</u></p> <p>Prior to entering MODE 4 from MODE 5 after each partial or complete fill of the canal</p>
SR 3.6.18.2	<p>Verify for each ice condenser floor drain that the:</p> <ul style="list-style-type: none"> a. Valve opening is not impaired by ice, frost, or debris, b. Valve seat shows no evidence of damage, c. Valve opening force is \leq [66] lb, and d. Drain line from the ice condenser floor to the lower compartment is unrestricted. 	<p>[18] months</p>

3.6 CONTAINMENT SYSTEMS

3.6.19 Shield Building (Dual and Ice Condenser)

LCO 3.6.19 The shield building shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Shield building inoperable.	A.1 Restore shield building to OPERABLE status.	24 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.19.1	[Verify annulus negative pressure is > [5] inches water gauge.	12 hours]
SR 3.6.19.2	Verify one shield building access door in each access opening is closed.	31 days
SR 3.6.19.3	[Verify shield building structural integrity by performing a visual inspection of the exposed interior and exterior surfaces of the shield building.	During shutdown for SR 3.6.1.1 Type A tests

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.19.4	Verify the shield building can be maintained at a pressure equal to or more negative than [-0.5] inch water gauge in the annulus by one Shield Building Air Cleanup System train with final flow \leq [] cfm within [22] seconds after a start signal.	[18] months on a STAGGERED TEST BASIS for each Shield Building Air Cleanup System Train

3.7 PLANT SYSTEMS

3.7.1 Main Steam Safety Valves (MSSVs)

LCO 3.7.1 [Five] MSSVs per steam generator shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

- NOTE -

Separate Condition entry is allowed for each MSSV.

- REVIEWER'S NOTE -

The * noted text is required for units that are licensed to operate at partial power with a positive Moderator Temperature Coefficient (MTC).

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more steam generators with one MSSV inoperable [and the Moderator Temperature Coefficient (MTC) zero or negative at all power levels]*.	A.1 Reduce THERMAL POWER to \leq [72] % RTP.	4 hours
B. One or more steam generators with two or more MSSVs inoperable. [OR One or more steam generators with one MSSV inoperable and the MTC positive at any power level.]*	B.1 Reduce THERMAL POWER to less than or equal to the Maximum Allowable % RTP specified in Table 3.7.1-1 for the number of OPERABLE MSSVs. <u>AND</u>	4 hours

Table 3.7.1-1 (page 1 of 1)
OPERABLE Main Steam Safety Valves versus
Maximum Allowable Power

NUMBER OF OPERABLE MSSVs PER STEAM GENERATOR	MAXIMUM ALLOWABLE POWER (% RTP)
[4]	[65]
3	[46]
2	[28]

Table 3.7.1-2 (page 1 of 1)
Main Steam Safety Valve Lift Settings

VALVE NUMBER				LIFT SETTING (psig ± [3]%)
STEAM GENERATOR				
#1	#2	[#3]	[#4]	
[]	[]	[]	[]	[]
[]	[]	[]	[]	[]
[]	[]	[]	[]	[]
[]	[]	[]	[]	[]

3.7 PLANT SYSTEMS

3.7.2 Main Steam Isolation Valves (MSIVs)

LCO 3.7.2 [Four] MSIVs shall be OPERABLE.

APPLICABILITY: MODE 1,
MODES 2 and 3 except when all MSIVs are closed [and de-activated].

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One MSIV inoperable in MODE 1.	A.1 Restore MSIV to OPERABLE status.	[8] hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 2.	6 hours
C. ----- - NOTE - Separate Condition entry is allowed for each MSIV. ----- One or more MSIVs inoperable in MODE 2 or 3.	C.1 Close MSIV. <u>AND</u> C.2 Verify MSIV is closed.	[8] hours Once per 7 days
D. Required Action and associated Completion Time of Condition C not met.	D.1 Be in MODE 3. <u>AND</u> D.2 Be in MODE 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.7.2.1</p> <p>----- - NOTE - Only required to be performed in MODES 1 and 2. -----</p> <p>Verify the isolation time of each MSIV is ≤ [4.6] seconds.</p>	<p>In accordance with the Inservice Testing Program</p>
<p>SR 3.7.2.2</p> <p>----- - NOTE - Only required to be performed in MODES 1 and 2. -----</p> <p>Verify each MSIV actuates to the isolation position on an actual or simulated actuation signal.</p>	<p>[18] months</p>

3.7 PLANT SYSTEMS

3.7.3 Main Feedwater Isolation Valves (MFIVs) and Main Feedwater Regulation Valves (MFRVs) and [Associated Bypass Valves]

LCO 3.7.3 [Four] MFIVs, [four] MFRVs, and [associated bypass valves] shall be OPERABLE.

APPLICABILITY: MODES 1, [and 2] [2, and 3] except when MFIV, MFRV, or [associated bypass valve] is either closed and [de-activated] or [isolated by a closed manual valve].

ACTIONS

- NOTE -

Separate Condition entry is allowed for each valve.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more MFIVs inoperable.	A.1 Close or isolate MFIV.	[72] hours
	<u>AND</u>	
	A.2 Verify MFIV is closed or isolated.	Once per 7 days
	<u>AND</u>	
B. One or more MFRVs inoperable.	B.1 Close or isolate MFRV.	[72] hours
	<u>AND</u>	
	B.2 Verify MFRV is closed or isolated.	Once per 7 days
	<u>AND</u>	
C. [One or more [MFRV or preheater] bypass valves inoperable.	C.1 Close or isolate bypass valve.	[72] hours
	<u>AND</u>	
	C.2 Verify bypass valve is closed or isolated.	Once per 7 days]

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Two valves in the same flow path inoperable.	D.1 Isolate affected flow path.	8 hours
E. Required Action and associated Completion Time not met.	E.1 Be in MODE 3.	6 hours 12 hours]
	[AND E.2 Be in MODE 4.	

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.3.1 Verify the isolation time of each MFIV, MFRV[, and associated bypass valve] is \leq [7] seconds.	In accordance with the Inservice Testing Program
SR 3.7.3.2 Verify each MFIV, MFRV[, and associated bypass valve] actuates to the isolation position on an actual or simulated actuation signal.	[18] months

3.7 PLANT SYSTEMS

3.7.4 Atmospheric Dump Valves (ADVs)

LCO 3.7.4 [Three] ADV lines shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required ADV line inoperable.	A.1 ----- - NOTE - LCO 3.0.4 is not applicable. ----- Restore required ADV line to OPERABLE status.	7 days
B. Two or more required ADV lines inoperable.	B.1 Restore all but one ADV line to OPERABLE status.	24 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours
	<u>AND</u> C.2 Be in MODE 4 without reliance upon steam generator for heat removal.	[24] hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.4.1	Verify one complete cycle of each ADV.	[18] months

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.7.4.2 [Verify one complete cycle of each ADV 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.

- NOTE -

[Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.]

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. [One steam supply to turbine driven AFW pump inoperable.</p> <p><u>OR</u></p> <p>- NOTE - Only applicable if MODE 2 has not been entered following refueling.</p> <p>One turbine driven AFW pump inoperable in MODE 3 following refueling.</p>	<p>A.1 Restore affected equipment to OPERABLE status.</p>	<p>7 days</p> <p><u>AND</u></p> <p>10 days from discovery of failure to meet the LCO]</p>
<p>B. One AFW train inoperable in MODE 1, 2 or 3 [for reasons other than Condition A].</p>	<p>B.1 Restore AFW train to OPERABLE status.</p>	<p>72 hours</p> <p><u>AND</u></p> <p>[10 days from discovery of failure to meet the LCO]</p>

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 in MODE 1, 2, or 3.]</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>[18] hours]</p>
<p>D. [[Three] AFW trains inoperable in MODE 1, 2, or 3.</p>	<p>D.1</p> <p>-----</p> <p>- NOTE - 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> <p>-----</p> <p>Initiate action to restore one AFW train to OPERABLE status.</p>	<p>Immediately]</p>
<p>E. Required AFW train inoperable in MODE 4.</p>	<p>E.1 Initiate action to restore AFW train to OPERABLE status.</p>	<p>Immediately</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.7.5.1</p> <p style="text-align: center;">----- - NOTE - -----</p> <p>[AFW train(s) may be considered OPERABLE during alignment and operation for steam generator level control, if it is capable of being manually realigned to the AFW mode of operation.]</p> <p style="text-align: center;">-----</p> <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>
<p>SR 3.7.5.2</p> <p style="text-align: center;">----- - NOTE - -----</p> <p>[Not required to be performed for the turbine driven AFW pump until [24 hours] after \geq [1000] psig in the steam generator.]</p> <p style="text-align: center;">-----</p> <p>Verify the developed head of each AFW pump at the flow test point is greater than or equal to the required developed head.</p>	<p>In accordance with the Inservice Testing Program</p>
<p>SR 3.7.5.3</p> <p style="text-align: center;">----- - NOTE - -----</p> <p>[AFW train(s) may be considered OPERABLE during alignment and operation for steam generator level control, if it is capable of being manually realigned to the AFW mode of operation.]</p> <p style="text-align: center;">-----</p> <p>Verify each AFW automatic valve that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.</p>	<p>[18] months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.7.5.4</p> <p style="text-align: center;">----- - NOTES - -----</p> <p>1. [Not required to be performed for the turbine driven AFW pump until [24 hours] after \geq [1000] psig in the steam generator.]</p> <p>2. [AFW train(s) may be considered OPERABLE during alignment and operation for steam generator level control, if it is capable of being manually realigned to the AFW mode of operation.]</p> <p style="text-align: center;">-----</p> <p>Verify each AFW pump starts automatically on an actual or simulated actuation signal.</p>	<p>[18] months</p>
<p>SR 3.7.5.5</p> <p>[Verify proper alignment of the required AFW flow paths by verifying flow from the condensate storage tank to each steam generator.</p>	<p>Prior to entering MODE 2 whenever unit has been in MODE 5, MODE 6, or defueled for a cumulative period of > 30 days]</p>

3.7 PLANT SYSTEMS

3.7.6 Condensate Storage Tank (CST)

LCO 3.7.6 The CST shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. CST inoperable.	A.1 Verify by administrative means OPERABILITY of backup water supply.	4 hours <u>AND</u> Once per 12 hours thereafter
	<u>AND</u> A.2 Restore CST to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 4, without reliance on steam generator for heat removal.	[24] hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.6.1	Verify the CST level is \geq [110,000 gal].	12 hours

3.7 PLANT SYSTEMS

3.7.7 Component Cooling Water (CCW) System

LCO 3.7.7 Two CCW trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CCW train inoperable.	<p>A.1</p> <p style="text-align: center;">----- - NOTE - -----</p> <p>Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by CCW.</p> <p style="text-align: center;">-----</p> <p>Restore CCW train to OPERABLE status.</p>	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u>	
	B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.7.1	<p style="text-align: center;">----- - NOTE - Isolation of CCW flow to individual components does not render the CCW System inoperable. -----</p> <p>Verify each CCW manual, power operated, and automatic valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	31 days
SR 3.7.7.2	Verify each CCW 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 3.7.7.3	Verify each CCW pump starts automatically on an actual or simulated actuation signal.	[18] months

3.7 PLANT SYSTEMS

3.7.8 Service Water System (SWS)

LCO 3.7.8 Two SWS trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One SWS train inoperable.</p>	<p>A.1</p> <p style="text-align: center;">----- - NOTES - -----</p> <p>1. Enter applicable and Required Actions of LCO 3.8.1, "AC Sources - Operating," for emergency diesel generator made inoperable by SWS.</p> <p>2. Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by SWS.</p> <p style="text-align: center;">-----</p> <p>Restore SWS train to OPERABLE status.</p>	<p>72 hours</p>
<p>B. Required Action and associated Completion Time of Condition A not met.</p>	<p>B.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>B.2 Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.8.1	<p style="text-align: center;">----- - NOTE - Isolation of SWS flow to individual components does not render the SWS inoperable. -----</p> <p>Verify each SWS manual, power operated, and automatic valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	31 days
SR 3.7.8.2	Verify each SWS 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 3.7.8.3	Verify each SWS pump starts automatically on an actual or simulated actuation signal.	[18] months

3.7 PLANT SYSTEMS

3.7.9 Ultimate Heat Sink (UHS)

LCO 3.7.9 The UHS shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. [One or more cooling towers with one cooling tower fan inoperable.	A.1 Restore cooling tower fan(s) to OPERABLE status.	7 days]
<p>----- - REVIEWER'S NOTE - The []°F is the maximum allowed UHS temperature value and is based on temperature limitations of the equipment that is relied upon for accident mitigation and safe shutdown of the unit. -----</p> B. [Water temperature of the UHS > [90]°F and ≤ []°F.	B.1 Verify water temperature of the UHS is ≤ [90]°F averaged over the previous 24 hour period.	Once per hour]
C. [Required Action and associated Completion Time of Condition A or B not met. <u>OR</u>] UHS inoperable [for reasons other than Condition A or B].	C.1 Be in MODE 3. <u>AND</u> C.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.9.1	[Verify water level of UHS is \geq [562] ft [mean sea level].	[24] hours]
SR 3.7.9.2	[Verify average water temperature of UHS is \leq [90] $^{\circ}$ F.	24 hours]
SR 3.7.9.3	[Operate each cooling tower fan for \geq [15] minutes.	31 days]
SR 3.7.9.4	[Verify each cooling tower fan starts automatically on an actual or simulated actuation signal.	[18] months]

3.7 PLANT SYSTEMS

3.7.10 Control Room Emergency Filtration System (CREFS)

LCO 3.7.10 Two CREFS trains shall be OPERABLE.

- NOTE -

The control room boundary may be opened intermittently under administrative control.

APPLICABILITY: MODES 1, 2, 3, 4, [5, and 6],
During movement of [recently] irradiated fuel assemblies.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CREFS train inoperable.	A.1 Restore CREFS train to OPERABLE status.	7 days
B. Two CREFS trains inoperable due to inoperable control room boundary in MODE 1, 2, 3, or 4.	B.1 Restore control room boundary to OPERABLE status.	24 hours
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.	C.1 Be in MODE 3.	6 hours
	<u>AND</u> C.2 Be in MODE 5.	36 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A not met [in MODE 5 or 6, or] during movement of [recently] irradiated fuel assemblies.	D.1 ----- - NOTE - [Place in toxic gas protection mode if automatic transfer to toxic gas protection mode is inoperable.] ----- Place OPERABLE CREFS train in emergency mode.	Immediately
	<u>OR</u> D.2 Suspend movement of [recently] irradiated fuel assemblies.	Immediately
E. Two CREFS trains inoperable [in MODE 5 or 6, or] during movement of [recently] irradiate fuel assemblies.	E.1 Suspend movement of [recently] irradiated fuel assemblies.	Immediately
F. Two CREFS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.	F.1 Enter LCO 3.0.3	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.10.1	Operate each CREFS train for [\geq 10 continuous hours with the heaters operating or (for systems without heaters) \geq 15 minutes].	31 days
SR 3.7.10.2	Perform required CREFS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with [VFTP]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.10.3	Verify each CREFS train actuates on an actual or simulated actuation signal.	[18] months
SR 3.7.10.4	Verify one CREFS train can maintain a positive pressure of \geq [0.125] inches water gauge, relative to the adjacent [turbine building] during the pressurization mode of operation at a makeup flow rate of \leq [3000] cfm.	[18] months on a STAGGERED TEST BASIS

3.7 PLANT SYSTEMS

3.7.11 Control Room Emergency Air Temperature Control System (CREATCS)

LCO 3.7.11 Two CREATCS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, 4, [5, and 6],
During movement of [recently] irradiated fuel assemblies.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CREATCS train inoperable.	A.1 Restore CREATCS train to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, 3, or 4.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours
C. Required Action and associated Completion Time of Condition A not met [in MODE 5 or 6, or] during movement of [recently] irradiated fuel assemblies.	C.1 Place OPERABLE CREATCS train in operation.	Immediately
	<u>OR</u> C.2 Suspend movement of [recently] irradiated fuel assemblies.	Immediately
D. Two CREATCS trains inoperable [in MODE 5 or 6, or] during movement of [recently] irradiated fuel assemblies.	D.1 Suspend movement of [recently] irradiated fuel assemblies.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two CREATCS trains inoperable in MODE 1, 2, 3, or 4.	E.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.11.1 Verify each CREATCS train has the capability to remove the assumed heat load.	[18] months

3.7 PLANT SYSTEMS

3.7.12 Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS)

LCO 3.7.12 Two ECCS PREACS trains shall be OPERABLE.

- NOTE -

The ECCS pump room boundary may be opened intermittently under administrative control.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ECCS PREACS train inoperable.	A.1 Restore ECCS PREACS train to OPERABLE status.	7 days
B. Two ECCS PREACS trains inoperable due to inoperable ECCS pump room boundary.	B.1 Restore ECCS pump room boundary to OPERABLE status.	24 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours
	<u>AND</u> C.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.12.1	Operate each ECCS PREACS train for [≥ 10 continuous hours with the heaters operating or (for systems without heaters) ≥ 15 minutes].	31 days
SR 3.7.12.2	Perform required ECCS PREACS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.12.3	Verify each ECCS PREACS train actuates on an actual or simulated actuation signal.	[18] months
SR 3.7.12.4	Verify one ECCS PREACS train can maintain a pressure ≤ [-0.125] inches water gauge relative to atmospheric pressure during the [post accident] mode of operation at a flow rate of ≤ [3000] cfm.	[18] months on a STAGGERED TEST BASIS
SR 3.7.12.5	[Verify each ECCS PREACS filter bypass damper can be closed.	[18] months]

3.7 PLANT SYSTEMS

3.7.13 Fuel Building Air Cleanup System (FBACS)

LCO 3.7.13 Two FBACS trains shall be OPERABLE.

- NOTE -

The fuel building boundary may be opened intermittently under administrative control.

APPLICABILITY: [MODES 1, 2, 3, and 4,]
During movement of [recently] irradiated fuel assemblies in the fuel building.

ACTIONS

- NOTE -

LCO 3.0.3 is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One FBACS train inoperable.	A.1 Restore FBACS train to OPERABLE status.	7 days
B. Two FBACS trains inoperable due to inoperable fuel building boundary in MODE 1, 2, 3, or 4.	B.1 Restore fuel building boundary to OPERABLE status.	24 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. [Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.</p> <p><u>OR</u></p> <p>Two FBACS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.</p>	<p>C.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>C.2 Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours]</p>
<p>D. Required Action and associated Completion Time [of Condition A] not met during movement of [recently] irradiated fuel assemblies in the fuel building.</p>	<p>D.1 Place OPERABLE FBACS train in operation.</p> <p><u>OR</u></p> <p>D.2 Suspend movement of [recently] irradiated fuel assemblies in the fuel building.</p>	<p>Immediately</p> <p>Immediately</p>
<p>E. Two FBACS trains inoperable during movement of [recently] irradiated fuel assemblies in the fuel building.</p>	<p>E.1 Suspend movement of [recently] irradiated fuel assemblies in the fuel building.</p>	<p>Immediately</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.7.13.1 Operate each FBACS train for [\geq 10 continuous hours with the heaters operating or (for systems without heaters) \geq 15 minutes].</p>	<p>31 days</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.13.2	Perform required FBACS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.13.3	[Verify each FBACS train actuates on an actual or simulated actuation signal.	[18] months]
SR 3.7.13.4	Verify one FBACS train can maintain a pressure \leq [-0.125] inches water gauge with respect to atmospheric pressure during the [post accident] mode of operation at a flow rate \leq [20,000] cfm.	[18] months on a STAGGERED TEST BASIS
SR 3.7.13.5	[Verify each FBACS filter bypass damper can be closed.	[18] months]

3.7 PLANT SYSTEMS

3.7.14 Penetration Room Exhaust Air Cleanup System (PREACS)

LCO 3.7.14 Two PREACS trains shall be OPERABLE.

- NOTE -

The penetration room boundary may be opened intermittently under administrative control.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One PREACS train inoperable.	A.1 Restore PREACS train to OPERABLE status.	7 days
B. Two PREACS trains inoperable due to inoperable penetration room boundary.	B.1 Restore penetration room boundary to OPERABLE status.	24 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours
	<u>AND</u> C.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.14.1 Operate each PREACS train for [\geq 10 continuous hours with heaters operating or (for systems without heaters) \geq 15 minutes].	31 days

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.14.2	Perform required PREACS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.14.3	[Verify each PREACS train actuates on an actual or simulated actuation signal.	[18] months]
SR 3.7.14.4	[Verify one PREACS train can maintain a pressure \leq [-0.125] inches water gauge relative to atmospheric pressure during the [post accident] mode of operation at a flow rate of \leq [3000] cfm.	[18] months on a STAGGERED TEST BASIS]
SR 3.7.14.5	[Verify each PREACS filter bypass damper can be closed.	[18] months]

3.7 PLANT SYSTEMS

3.7.15 Fuel Storage Pool Water Level

LCO 3.7.15 The fuel storage pool water level shall be \geq 23 ft over the top of irradiated fuel assemblies seated in the storage racks.

APPLICABILITY: During movement of irradiated fuel assemblies in the fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel storage pool water level not within limit.	A.1 ----- - NOTE - LCO 3.0.3 is not applicable. ----- Suspend movement of irradiated fuel assemblies in the fuel storage pool.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.15.1	Verify the fuel storage pool water level is \geq 23 ft above the top of the irradiated fuel assemblies seated in the storage racks.	7 days

3.7 PLANT SYSTEMS

3.7.16 [Fuel Storage Pool Boron Concentration]

LCO 3.7.16 The fuel storage pool boron concentration shall be \geq [2300] ppm.

APPLICABILITY: When fuel assemblies are stored in the fuel storage pool and a fuel storage pool verification has not been performed since the last movement of fuel assemblies in the fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME	
A. Fuel storage pool boron concentration not within limit.	<p style="text-align: center;">----- - NOTE - LCO 3.0.3 is not applicable. -----</p>		
	A.1 Suspend movement of fuel assemblies in the fuel storage pool.		Immediately
	<u>AND</u>		
	A.2.1 Initiate action to restore fuel storage pool boron concentration to within limit.		Immediately
<u>OR</u>			
A.2.2 Initiate action to perform a fuel storage pool verification.	Immediately		

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.16.1	Verify the fuel storage pool boron concentration is within limit.	7 days

3.7 PLANT SYSTEMS

3.7.17 [Spent Fuel Pool Storage]

LCO 3.7.17 The combination of initial enrichment and burnup of each fuel assembly stored in [Region 2] shall be within the Acceptable [Burnup Domain] of Figure 3.7.17-1 or in accordance with Specification 4.3.1.1.

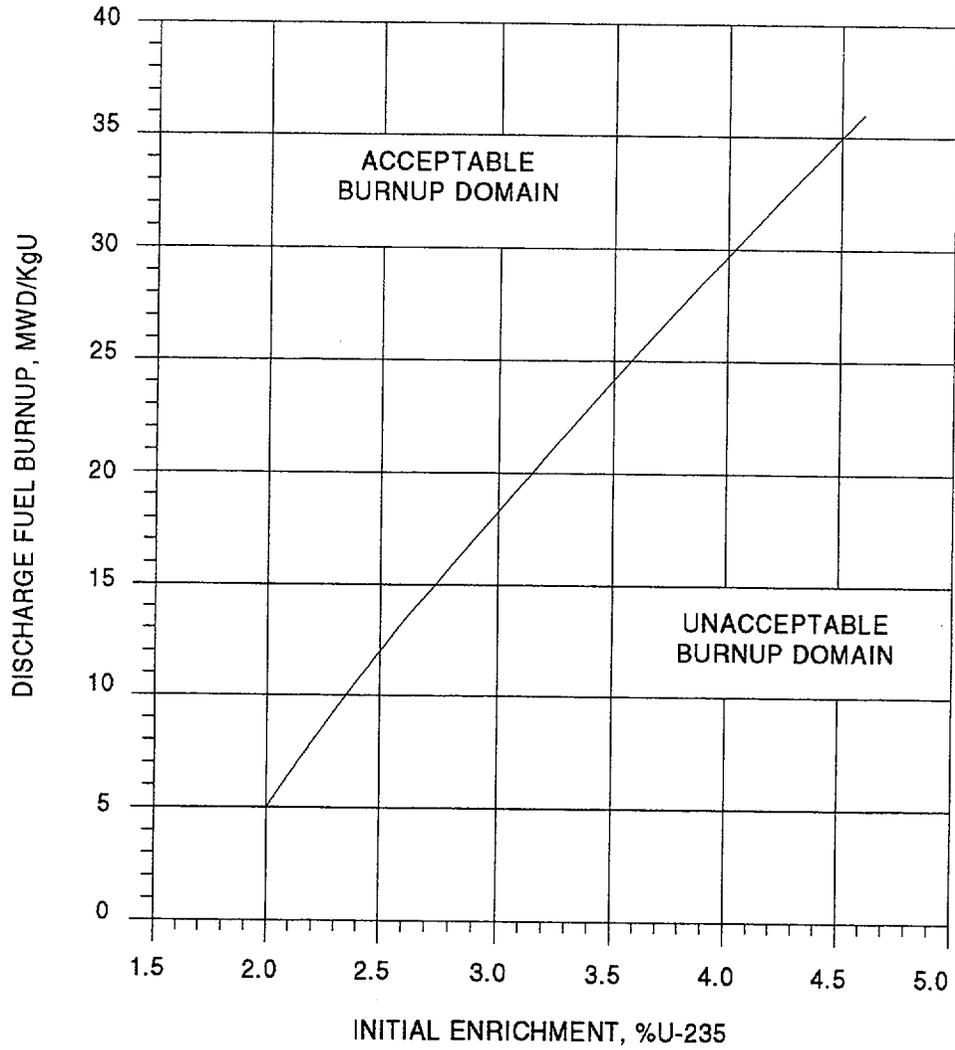
APPLICABILITY: Whenever any fuel assembly is stored in [Region 2] of the spent fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of the LCO not met.	<p>A.1</p> <p style="text-align: center;">----- - NOTE - ----- LCO 3.0.3 is not applicable. -----</p> <p>Initiate action to move the noncomplying fuel assembly from [Region 2].</p>	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.17.1 Verify by administrative means the initial enrichment and burnup of the fuel assembly is in accordance with Figure 3.7.17-1 or Specification 4.3.1.1.	Prior to storing the fuel assembly in [Region 2]



Not to be used for Operation.
For illustration purposes only.

Figure 3.7.17-1 (page 1 of 1)
Fuel Assembly Burnup Limits in Region 2

3.7 PLANT SYSTEMS

3.7.18 Secondary Specific Activity

LCO 3.7.18 The specific activity of the secondary coolant shall be $\leq [0.10] \mu\text{Ci/gm}$
DOSE EQUIVALENT I-131.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Specific activity not within limit.	A.1 Be in MODE 3.	6 hours
	<u>AND</u>	
	A.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.18.1 Verify the specific activity of the secondary coolant is $\leq [0.10] \mu\text{Ci/gm}$ DOSE EQUIVALENT I-131.	31 days

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,
- b. Two diesel generators (DGs) capable of supplying the onsite Class 1E power distribution subsystem(s), and
- [c. Automatic load sequencers for Train A and Train B.]

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One [required] offsite circuit inoperable.	A.1 Perform SR 3.8.1.1 for [required] OPERABLE offsite circuit.	1 hour
	<u>AND</u>	<u>AND</u>
	A.2 Declare required feature(s) with no offsite power available inoperable when its redundant required feature(s) is inoperable.	Once per 8 hours thereafter
	<u>AND</u>	24 hours from discovery of no offsite power to one train concurrent with inoperability of redundant required feature(s)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p>A.3 Restore [required] offsite circuit to OPERABLE status.</p>	<p>72 hours</p> <p><u>AND</u></p> <p>6 days from discovery of failure to meet LCO</p>
<p>B. One [required] DG inoperable.</p>	<p>B.1 Perform SR 3.8.1.1 for the [required] offsite circuit(s).</p> <p><u>AND</u></p> <p>B.2 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>B.3.1 Determine OPERABLE DG(s) is not inoperable due to common cause failure.</p> <p><u>OR</u></p> <p>B.3.2 Perform SR 3.8.1.2 for OPERABLE DG(s).</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>[24] hours</p> <p>[24] hours</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p>B.4 Restore [required] DG to OPERABLE status.</p>	<p>72 hours</p> <p><u>AND</u></p> <p>6 days from discovery of failure to meet LCO</p>
<p>C. Two [required] offsite circuits inoperable.</p>	<p>C.1 Declare required feature(s) inoperable when its redundant required feature(s) is inoperable.</p> <p><u>AND</u></p> <p>C.2 Restore one [required] offsite circuit to OPERABLE status.</p>	<p>12 hours from discovery of Condition C concurrent with inoperability of redundant required features</p> <p>24 hours</p>
<p>D. One [required] offsite circuit inoperable.</p> <p><u>AND</u></p> <p>One [required] DG inoperable.</p>	<p>----- - NOTE - Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems - Operating," when Condition D is entered with no AC power source to any train. -----</p> <p>D.1 Restore [required] offsite circuit to OPERABLE status.</p> <p><u>OR</u></p> <p>D.2 Restore [required] DG to OPERABLE status.</p>	<p>12 hours</p> <p>12 hours</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two [required] DGs inoperable.	E.1 Restore one [required] DG to OPERABLE status.	2 hours
<p>----- - REVIEWER'S NOTE - This Condition may be deleted if the unit design is such that any sequencer failure mode will only affect the ability of the associated DG to power its respective safety loads following a loss of offsite power independent of, or coincident with, a Design Basis Event. -----</p>	F.1 Restore [required] [automatic load sequencer] to OPERABLE status.	[12] hours]
F. [One [required] [automatic load sequencer] inoperable.		
G. Required Action and-associated Completion Time of Condition A, B, C, D, E, or [F] not met.	G.1 Be in MODE 3.	6 hours
	<u>AND</u> G.2 Be in MODE 5.	36 hours
H. Three or more [required] AC sources inoperable.	H.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.1.1 Verify correct breaker alignment and indicated power availability for each [required] offsite circuit.	7 days

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.2</p> <p style="text-align: center;">----- - NOTES - -----</p> <ol style="list-style-type: none"> 1. All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading. [2. A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this SR as recommended by the manufacturer. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.7 must be met.] <p style="text-align: center;">-----</p> <p>Verify each DG starts from standby conditions and achieves steady state voltage \geq [3740] V and \leq [4580] V, and frequency \geq [58.8] Hz and \leq [61.2] Hz.</p>	<p>31 days</p>
<p>SR 3.8.1.3</p> <p style="text-align: center;">----- - NOTES - -----</p> <ol style="list-style-type: none"> 1. DG loadings may include gradual loading as recommended by the manufacturer. 2. Momentary transients outside the load range do not invalidate this test. 3. This Surveillance shall be conducted on only one DG at a time. 4. This SR shall be preceded by and immediately follow without shutdown a successful performance of SR 3.8.1.2 or SR 3.8.1.7. <p style="text-align: center;">-----</p> <p>Verify each DG is synchronized and loaded and operates for \geq 60 minutes at a load \geq [4500] kW and \leq [5000] kW.</p>	<p>31 days</p>
<p>SR 3.8.1.4</p> <p>Verify each day tank [and engine mounted tank] contains \geq [220] gal of fuel oil.</p>	<p>31 days</p>
<p>SR 3.8.1.5</p> <p>Check for and remove accumulated water from each day tank [and engine mounted tank].</p>	<p>[31] days</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.6	Verify the fuel oil transfer system operates to [automatically] transfer fuel oil from storage tank[s] to the day tank [and engine mounted tank].	[92] days
SR 3.8.1.7	<p>----- - NOTE - All DG starts may be preceded by an engine prelube period. -----</p> <p>Verify each DG starts from standby condition and achieves:</p> <p>a. In \leq [10] seconds, voltage \geq [3740] V and frequency \geq [58.8] Hz and</p> <p>b. Steady state voltage \geq [3740] V and \leq [4580] V, and frequency \geq [58.8] Hz and \leq [61.2] Hz.</p>	184 days
SR 3.8.1.8	<p>----- - NOTE - [This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. -----</p> <p>Verify [automatic [and] manual] transfer of AC power sources from the normal offsite circuit to each alternate [required] offsite circuit.</p>	[18] months]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.9</p> <p style="text-align: center;">----- - NOTES - -----</p> <p>[1. This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced.</p> <p>2. If performed with the DG synchronized with offsite power, it shall be performed at a power factor \leq [0.9]. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable.]</p> <p>-----</p> <p>Verify each DG rejects a load greater than or equal to its associated single largest post-accident load, and:</p> <p>a. Following load rejection, the frequency is \leq [63] Hz,</p> <p>b. Within [3] seconds following load rejection, the voltage is \geq [3740] V and \leq [4580] V, and</p> <p>c. Within [3] seconds following load rejection, the frequency is \geq [58.8] Hz and \leq [61.2] Hz.</p>	<p>[18] months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.10</p> <p style="text-align: center;">----- - NOTES - -----</p> <p>[1. This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced.</p> <p>2. If performed with DG synchronized with offsite power, it shall be performed at a power factor \leq [0.9]. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable.]</p> <p>-----</p> <p>Verify each DG does not trip and voltage is maintained \leq [5000] V during and following a load rejection of \geq [4500] kW and \leq [5000] kW.</p>	<p>[18] months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.11 -----</p> <p style="text-align: center;">- NOTES -</p> <ol style="list-style-type: none"> 1. All DG starts may be preceded by an engine prelube period. 2. This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. <p>-----</p> <p>Verify on an actual or simulated loss of offsite power signal:</p> <ol style="list-style-type: none"> a. De-energization of emergency buses, b. Load shedding from emergency buses, c. DG auto-starts from standby condition and: <ol style="list-style-type: none"> 1. Energizes permanently connected loads in \leq [10] seconds, 2. Energizes auto-connected shutdown loads through [automatic load sequencer], 3. Maintains steady state voltage \geq [3740] V and \leq [4580] V, 4. Maintains steady state frequency \geq [58.8] Hz and \leq [61.2] Hz, and 5. Supplies permanently connected [and auto-connected] shutdown loads for \geq 5 minutes. 	<p>[18] months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.12 -----</p> <p style="text-align: center;">- NOTES -</p> <p>[1. All DG starts may be preceded by prelube period.</p> <p>2. This Surveillance shall not normally be performed in MODE 1 or 2. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced.</p> <p>-----</p> <p>Verify on an actual or simulated Engineered Safety Feature (ESF) actuation signal each DG auto-starts from standby condition and:</p> <p>a. In \leq [10] seconds after auto-start and during tests, achieves voltage \geq [3740] V and frequency \geq [58.8] Hz,</p> <p>b. Achieves steady state voltage \geq [3740] V and \leq [4580] V and frequency \geq [58.8] Hz and \leq [61.2] Hz,</p> <p>c. Operates for \geq 5 minutes,</p> <p>d. Permanently connected loads remain energized from the offsite power system, and</p> <p>e. Emergency loads are energized [or auto-connected through the automatic load sequencer] from the offsite power system.</p>	<p>[18] months]</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.13 -----</p> <p style="text-align: center;">- NOTE -</p> <p>[This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced.]</p> <p>-----</p> <p>Verify each DG's automatic trips are bypassed on [actual or simulated loss of voltage signal on the emergency bus concurrent with an actual or simulated ESF actuation signal] except:</p> <ul style="list-style-type: none"> a. Engine overspeed, b. Generator differential current, [c. Low lube oil pressure, d. High crankcase pressure, and e. Start failure relay.] 	<p>[18] months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.14</p> <p style="text-align: center;">----- - NOTES - -----</p> <ol style="list-style-type: none"> 1. Momentary transients outside the load and power factor ranges do not invalidate this test. 2. This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. 3. If performed with DG synchronized with offsite power, it shall be performed at a power factor \leq [0.9]. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable. <p>-----</p> <p>Verify each DG operating at a power factor \leq [0.9] operates for \geq 24 hours:</p> <ol style="list-style-type: none"> a. For \geq [2] hours loaded \geq [5250] kW and \leq [5500] kW and b. For the remaining hours of the test loaded \geq [4500] kW and \leq [5000] kW. 	<p>[18] months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.15 -----</p> <p style="text-align: center;">- NOTES -</p> <p>1. This Surveillance shall be performed within 5 minutes of shutting down the DG after the DG has operated \geq [2] hours loaded \geq [4500] kW and \leq [5000] kW.</p> <p style="padding-left: 40px;">Momentary transients outside of load range do not invalidate this test.</p> <p>2. All DG starts may be preceded by an engine prelube period.</p> <p>-----</p> <p>Verify each DG starts and achieves:</p> <p>a. In \leq [10] seconds, voltage \geq [3740] V and frequency \geq [58.8] Hz and</p> <p>b. Steady state voltage \geq [3740] V, and \leq [4580] V and frequency \geq [58.8] Hz and \leq [61.2] Hz.</p>	<p>[18] months</p>
<p>SR 3.8.1.16 -----</p> <p style="text-align: center;">- NOTE -</p> <p>This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced.</p> <p>-----</p> <p>Verify each DG:</p> <p>a. Synchronizes with offsite power source while loaded with emergency loads upon a simulated restoration of offsite power,</p> <p>b. Transfers loads to offsite power source, and</p> <p>c. Returns to ready-to-load operation.</p>	<p>[18] months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.17 -----</p> <p style="text-align: center;">- NOTE -</p> <p>[This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced.]</p> <p>-----</p> <p>Verify, with a DG operating in test mode and connected to its bus, an actual or simulated ESF actuation signal overrides the test mode by:</p> <p>a. Returning DG to ready-to-load operation and</p> <p>b. [Automatically energizing the emergency load from offsite power].</p>	<p>[18] months]</p>
<p>SR 3.8.1.18 -----</p> <p style="text-align: center;">- NOTE -</p> <p>[This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced.]</p> <p>-----</p> <p>Verify interval between each sequenced load block is within \pm [10% of design interval] for each emergency [and shutdown] load sequencer.</p>	<p>[18] months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.19 -----</p> <p style="text-align: center;">- NOTES -</p> <ol style="list-style-type: none"> 1. All DG starts may be preceded by an engine prelube period. 2. This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. <p>-----</p> <p>Verify on an actual or simulated loss of offsite power signal in conjunction with an actual or simulated ESF actuation signal:</p> <ol style="list-style-type: none"> a. De-energization of emergency buses, b. Load shedding from emergency buses, and c. DG auto-starts from standby condition and: <ol style="list-style-type: none"> 1. Energizes permanently connected loads in \leq [10] seconds, 2. Energizes auto-connected emergency loads through load sequencer, 3. Achieves steady state voltage \geq [3740] V and \leq [4580] V, 4. Achieves steady state frequency \geq [58.8] Hz and \leq [61.2] Hz, and 5. Supplies permanently connected [and auto-connected] emergency loads for \geq 5 minutes. 	<p>[18] months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.20</p> <p style="text-align: center;">----- - NOTE - All DG starts may be preceded by an engine prelube period. -----</p> <p>Verify when started simultaneously from standby condition, each DG achieves:</p> <p>a. In \leq [10] seconds, voltage \geq [3740] V and frequency \geq [58.8] Hz and</p> <p>b. Steady state voltage \geq [3744] V and \leq [4576] V, and frequency \geq [58.8] Hz and \leq [61.2] Hz.</p>	<p>10 years</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.2 AC Sources - Shutdown

LCO 3.8.2 The following AC electrical power sources shall be OPERABLE:

- a. One qualified circuit between the offsite transmission network and the onsite Class 1E AC electrical power distribution subsystem(s) required by LCO 3.8.10, "Distribution Systems - Shutdown" and
- b. One diesel generator (DG) capable of supplying one train of the onsite Class 1E AC electrical power distribution subsystem(s) required by LCO 3.8.10.

APPLICABILITY: MODES 5 and 6,
During movement of [recently] irradiated fuel assemblies.

ACTIONS

- NOTE -

LCO 3.0.3 is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One required offsite circuit inoperable.</p>	<p style="text-align: center;">----- - NOTE - Enter applicable Conditions and Required Actions of LCO 3.8.10, with one required train de-energized as a result of Condition A. -----</p> <p>A.1 Declare affected required feature(s) with no offsite power available inoperable.</p> <p><u>OR</u></p>	<p>Immediately</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p>A.2.1 Suspend CORE ALTERATIONS.</p> <p><u>AND</u></p> <p>A.2.2 Suspend movement of [recently] irradiated fuel assemblies.</p> <p><u>AND</u></p> <p>A.2.3 Suspend operations involving positive reactivity additions that could result in loss of required SDM or boron concentration.</p> <p><u>AND</u></p> <p>A.2.4 Initiate action to restore required offsite power circuit to OPERABLE status.</p>	<p>Immediately</p> <p>Immediately</p> <p>Immediately</p> <p>Immediately</p>
<p>B. One required DG inoperable.</p>	<p>B.1 Suspend CORE ALTERATIONS.</p> <p><u>AND</u></p> <p>B.2 Suspend movement of [recently] irradiated fuel assemblies.</p> <p><u>AND</u></p> <p>B.3 Suspend operations involving positive reactivity additions that could result in loss of required SDM or boron concentration.</p> <p><u>AND</u></p>	<p>Immediately</p> <p>Immediately</p> <p>Immediately</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	B.4 Initiate action to restore required DG to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.8.2.1</p> <p style="text-align: center;">----- - NOTES - -----</p> <ol style="list-style-type: none"> The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.9 through SR 3.8.1.11, SR 3.8.1.13 through SR 3.8.1.16, [SR 3.8.1.18], and SR 3.8.1.19. SR 3.8.1.12 and SR 3.8.1.19 are not required to be met when associated ECCS subsystems(s) are not required to be OPERABLE per LCO 3.5.3, "ECCS-Shutdown." <p style="text-align: center;">-----</p> <p>For AC sources required to be OPERABLE, the SRs of Specification 3.8.1, "AC Sources - Operating," except SR 3.8.1.8, SR 3.8.1.17, and SR 3.8.1.20, are applicable.</p>	<p>In accordance with applicable SRs</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.3 Diesel Fuel Oil, Lube Oil, and Starting Air

LCO 3.8.3 The stored diesel fuel oil, lube oil, and starting air subsystem shall be within limits for each required diesel generator (DG).

APPLICABILITY: When associated DG is required to be OPERABLE.

ACTIONS

- NOTE -

Separate Condition entry is allowed for each DG.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more DGs with fuel level < [33,000] gal and > [28,285] gal in storage tank.	A.1 Restore fuel oil level to within limits.	48 hours
B. One or more DGs with lube oil inventory < [500] gal and > [425] gal.	B.1 Restore lube oil inventory to within limits.	48 hours
C. One or more DGs with stored fuel oil total particulates not within limit.	C.1 Restore fuel oil total particulates to within limits.	7 days
D. One or more DGs with new fuel oil properties not within limits.	D.1 Restore stored fuel oil properties to within limits.	30 days
E. One or more DGs with starting air receiver pressure < [225] psig and ≥ [125] psig.	E.1 Restore starting air receiver pressure to ≥ [225] psig.	48 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>F. Required Action and associated Completion Time not met.</p> <p><u>OR</u></p> <p>One or more DGs with diesel fuel oil, lube oil, or starting air subsystem not within limits for reasons other than Condition A, B, C, D, or E.</p>	<p>F.1 Declare associated DG inoperable.</p>	<p>Immediately</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.3.1	Verify each fuel oil storage tank contains \geq [33,000] gal of fuel.	31 days
SR 3.8.3.2	Verify lubricating oil inventory is \geq [500] gal.	31 days
SR 3.8.3.3	Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4	Verify each DG air start receiver pressure is \geq [225] psig.	31 days
SR 3.8.3.5	Check for and remove accumulated water from each fuel oil storage tank.	[31] days

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 DC Sources - Operating

LCO 3.8.4 The Train A and Train B DC electrical power subsystems shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One [or two] battery charger[s on one train] inoperable.	A.1 Restore battery terminal voltage to greater than or equal to the minimum established float voltage.	2 hours
	<u>AND</u>	
	A.2 Verify battery float current \leq [2] amps.	Once per [12] hours
	<u>AND</u>	
	A.3 Restore battery charger[s] to OPERABLE status.	7 days
[B. One [or two] batter[y][ies on one train] inoperable.	B.1 Restore batter[y][ies] to OPERABLE status	[2] hours]
C. One DC electrical power subsystem inoperable for reasons other than Condition A [or B].	C.1 Restore DC electrical power subsystem to OPERABLE status.	[2] hours
D. Required Action and Associated Completion Time not met.	D.1 Be in MODE 3.	6 hours
	<u>AND</u>	
	D.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.4.1	Verify battery terminal voltage is greater than or equal to the minimum established float voltage.	7 days
SR 3.8.4.2	<p>Verify each battery charger supplies \geq [400] amps at greater than or equal to the minimum established float voltage for \geq [8] hours.</p> <p><u>OR</u></p> <p>Verify each battery charger can recharge the battery to the fully charged state within [24] hours while supplying the largest combined demands of the various continuous steady state loads, after a battery discharge to the bounding design basis event discharge state.</p>	[18] months
SR 3.8.4.3	<p>-----</p> <p style="text-align: center;">- NOTES -</p> <p>1. The modified performance discharge test in SR 3.8.6.6 may be performed in lieu of SR 3.8.4.3.</p> <p>2. This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced.</p> <p>-----</p> <p>Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.</p>	[18] months

3.8 ELECTRICAL POWER SYSTEMS

3.8.5 DC Sources - Shutdown

LCO 3.8.5 [DC electrical power subsystem shall be OPERABLE to support the DC electrical power distribution subsystem(s) required by LCO 3.8.10, "Distribution Systems - Shutdown."]

[One DC electrical power subsystem shall be OPERABLE.]

- REVIEWER'S NOTE -

This second option above applies for plants having a pre-ITS licensing basis (CTS) for electrical power requirements during shutdown conditions that required only one DC electrical power subsystem to be OPERABLE. Action A the bracketed optional wording in Condition B are also eliminated for this case. The first option above is adopted for plants that have a licensing basis (CTS) requiring the same level of DC electrical power subsystem support as is required for power operating conditions.

APPLICABILITY: MODES 5 and 6,
During movement of [recently] irradiated fuel assemblies.

ACTIONS

- NOTE -

LCO 3.0.3 is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
[A. One [or two] battery charger[s on one train] inoperable. <u>AND</u>	A.1 Restore battery terminal voltage to greater than or equal to the minimum established float voltage. <u>AND</u>	2 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>The redundant train battery and charger[s] OPERABLE.</p>	<p>A.2 Verify battery float current \leq [2] amps.</p> <p><u>AND</u></p> <p>A.3 Restore battery charger[s] to OPERABLE status.</p>	<p>Once per [12] hours</p> <p>7 days]</p>
<p>B. One [or more] required DC electrical power subsystem[s] inoperable [for reasons other than Condition A</p> <p><u>OR</u></p> <p>Required Action and associated Completion Time of Condition A not met].</p>	<p>B.1 Declare affected required feature(s) inoperable.</p> <p><u>OR</u></p> <p>B.2.1 Suspend CORE ALTERATIONS.</p> <p><u>AND</u></p> <p>B.2.2 Suspend movement of [recently] irradiated fuel assemblies.</p> <p><u>AND</u></p> <p>B.2.3 Suspend operations involving positive reactivity additions that could result in loss of required SDM or boron concentration.</p> <p><u>AND</u></p> <p>B.2.4 Initiate action to restore required DC electrical power subsystems to OPERABLE status.</p>	<p>Immediately</p> <p>Immediately</p> <p>Immediately</p> <p>Immediately</p> <p>Immediately</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.8.5.1</p> <p>----- - NOTE - The following SRs are not required to be performed: SR 3.8.4.2 and SR 3.8.4.3. -----</p> <p>For DC sources required to be OPERABLE, the following SRs are applicable:</p> <p>SR 3.8.4.1 SR 3.8.4.2 SR 3.8.4.3</p>	<p>In accordance with applicable SRs</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.6 Battery Parameters

- REVIEWER'S NOTE -

Licensees must implement a program, as specified in Specification 5.5.17, to monitor battery parameters that is based on the recommendations of IEEE Standard 450-1995, "IEEE Recommended Practice For Maintenance, Testing, And Replacement Of Vented Lead-Acid Batteries For Stationary Applications."

LCO 3.8.6 Battery parameters for Train A and Train B batteries shall be within limits.

APPLICABILITY: When associated DC electrical power subsystems are required to be OPERABLE.

ACTIONS

- NOTE -

Separate Condition entry is allowed for each battery.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One [or two] batter[y][ies on one train] with one or more battery cells float voltage < [2.07] V.	A.1 Perform SR 3.8.4.1. <u>AND</u>	2 hours
	A.2 Perform SR 3.8.6.1. <u>AND</u>	2 hours
	A.3 Restore affected cell voltage ≥ [2.07] V.	24 hours
B. One [or two] batter[y][ies on one train] with float current > [2] amps.	B.1 Perform SR 3.8.4.1. <u>AND</u>	2 hours
	B.2 Restore battery float current to ≤ [2] amps.	[12] hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>----- - NOTE - Required Action C.2 shall be completed if electrolyte level was below the top of plates. -----</p> <p>C. One [or two] batter[y][ies on one train] with one or more cells electrolyte level less than minimum established design limits.</p>	<p>----- - NOTE - Required Actions C.1 and C.2 are only applicable if electrolyte level was below the top of plates. -----</p> <p>C.1 Restore electrolyte level to above top of plates</p> <p><u>AND</u></p> <p>C.2 Verify no evidence of leakage.</p> <p><u>AND</u></p> <p>C.3 Restore electrolyte level to greater than or equal to minimum established design limits.</p>	<p>8 hours</p> <p>12 hours</p> <p>31 days</p>
<p>D. One [or two] batter[y][ies on one train] with pilot cell electrolyte temperature less than minimum established design limits.</p>	<p>D.1 Restore battery pilot cell temperature to greater than or equal to minimum established design limits</p>	<p>12 hours</p>
<p>E. One or more batteries in redundant trains with battery parameters not within limits.</p>	<p>E.1 Restore battery parameters for batteries in one train to within limits.</p>	<p>2 hours</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>F. Required Action and associated Completion Time of Condition A, B, C, D, or E not met.</p> <p><u>OR</u></p> <p>One [or two] batter[y][ies on one train] with one or more battery cells float voltage < [2.07] V and float current > [2] amps.</p>	<p>F.1 Declare associated battery inoperable.</p>	<p>Immediately</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.8.6.1 -----</p> <p style="text-align: center;">- NOTE -</p> <p>Not required to be met when battery terminal voltage is less than the minimum established float voltage of SR 3.8.4.1.</p> <p>-----</p> <p>Verify each battery float current is \leq [2] amps.</p>	<p>7 days</p>
<p>SR 3.8.6.2 Verify each battery pilot cell voltage is \geq [2.07] V.</p>	<p>31 days</p>
<p>SR 3.8.6.3 Verify each battery connected cell electrolyte level is greater than or equal to minimum established design limits.</p>	<p>31 days</p>
<p>SR 3.8.6.4 Verify each battery pilot cell temperature is greater than or equal to minimum established design limits.</p>	<p>31 days</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Inverters - Operating

LCO 3.8.7 The required Train A and Train B inverters shall be OPERABLE.

- NOTE -

[[One/two] inverter[s] may be disconnected from [its/their] associated DC bus for \leq 24 hours to perform an equalizing charge on [its/their] associated [common] battery, provided:

- a. The associated AC vital bus(es) [is/are] energized from [its/their] [Class 1E constant voltage source transformers] [inverter using internal AC source], and
 - b. All other AC vital buses are energized from their associated OPERABLE inverters.]
-

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One [required] inverter inoperable.	<p>A.1</p> <p>----- - NOTE - Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems - Operating" with any AC vital bus de-energized. -----</p> <p>Restore inverter to OPERABLE status.</p>	24 hours
B. Required Action and associated Completion Time not met.	<p>B.1 Be in MODE 3.</p> <p><u>AND</u></p>	6 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.7.1	Verify correct inverter voltage, [frequency], and alignment to required AC vital buses.	7 days

3.8 ELECTRICAL POWER SYSTEMS

3.8.8 Inverters - Shutdown

LCO 3.8.8 [Inverters shall be OPERABLE to support the onsite Class 1E AC vital bus electrical power distribution subsystem(s) required by LCO 3.8.10, "Distribution Systems - Shutdown."]

[One] inverter[s] shall be OPERABLE.]

- REVIEWER'S NOTE -

This second option above applies for plants having a pre-ITS licensing basis (CTS) for electrical power requirements during shutdown conditions that required only [one] inverter to be OPERABLE. The "[or more]" optional wording in Condition A is also eliminated for this case. The first option above is adopted for plants that have a licensing basis (CTS) requiring the same level of DC electrical power subsystem/inverter support as is required for power operating conditions.

APPLICABILITY: MODES 5 and 6,
During movement of [recently] irradiated fuel assemblies.

ACTIONS

- NOTE -

LCO 3.0.3 is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One [or more] [required] inverter[s] inoperable.	A.1 Declare affected required feature(s) inoperable.	Immediately
	<u>OR</u>	
	A.2.1 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u>	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	A.2.2 Suspend movement of [recently] irradiated fuel assemblies. <u>AND</u>	Immediately
	A.2.3 Suspend operations involving positive reactivity additions that could result in loss of required SDM or boron concentration. <u>AND</u>	Immediately
	A.2.4 Initiate action to restore required inverters to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.8.1 Verify correct inverter voltage, [frequency,] and alignments to required AC vital buses.	7 days

3.8 ELECTRICAL POWER SYSTEMS

3.8.9 Distribution Systems - Operating

LCO 3.8.9 Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One or more AC electrical power distribution subsystems inoperable.</p>	<p style="text-align: center;">----- - NOTE - Enter applicable Conditions and Required Actions of LCO 3.8.4, "DC Sources - Operating," for DC trains made inoperable by inoperable power distribution subsystems. -----</p> <p>A.1 Restore AC electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>8 hours</p> <p><u>AND</u></p> <p>16 hours from discovery of failure to meet LCO</p>
<p>B. One or more AC vital buses inoperable.</p>	<p>B.1 Restore AC vital bus subsystem(s) to OPERABLE status.</p>	<p>2 hours</p> <p><u>AND</u></p> <p>16 hours from discovery of failure to meet LCO</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more DC electrical power distribution subsystems inoperable.	C.1 Restore DC electrical power distribution subsystem(s) to OPERABLE status.	2 hours <u>AND</u> 16 hours from discovery of failure to meet LCO
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3.	6 hours
	<u>AND</u> D.2 Be in MODE 5.	36 hours
E. Two or more electrical power distribution subsystems inoperable that result in a loss of safety function.	E.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.9.1 Verify correct breaker alignments and voltage to [required] AC, DC, and AC vital bus electrical power distribution subsystems.	7 days

3.8 ELECTRICAL POWER SYSTEMS

3.8.10 Distribution Systems - Shutdown

LCO 3.8.10 The necessary portion of AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE to support equipment required to be OPERABLE.

APPLICABILITY: MODES 5 and 6,
During movement of [recently] irradiated fuel assemblies.

ACTIONS

- NOTE -

LCO 3.0.3 is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required AC, DC, or AC vital bus electrical power distribution subsystems inoperable.	A.1 Declare associated supported required feature(s) inoperable.	Immediately
	<u>OR</u>	
	A.2.1 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u>	
	A.2.2 Suspend movement of [recently] irradiated fuel assemblies.	Immediately
	<u>AND</u>	
	A.2.3 Suspend operations involving positive reactivity additions that could result in loss of required SDM or boron concentration.	Immediately
	<u>AND</u>	

3.9 REFUELING OPERATIONS

3.9.1 Boron Concentration

LCO 3.9.1 Boron concentrations of the Reactor Coolant System, the refueling canal, and the refueling cavity shall be maintained within the limit specified in the COLR.

APPLICABILITY: MODE 6.

- NOTE -

Only applicable to the refueling canal and refueling canal and refueling cavity when connected to the RCS.

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]

- REVIEWER'S NOTE -

This Technical Specification is not required for units that have analyzed a boron dilution event in MODE 6. It is required for those units that have not analyzed a boron dilution event in MODE 6. For units which have not analyzed a boron dilution event in MODE 6, the isolation of all unborated water sources is required to preclude this event from occurring.

LCO 3.9.2 Each valve used to isolate unborated water sources 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
A. ----- - NOTE - Required Action A.3 must be completed whenever Condition A is entered. ----- One or more valves not secured in closed position.	A.1 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u>	
	A.2 Initiate actions to secure valve in closed position.	Immediately
	<u>AND</u>	
	A.3 Perform SR 3.9.1.1.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.2.1	Verify each valve that isolates unborated water sources is secured in the closed position.	31 days

3.9 REFUELING OPERATIONS

3.9.3 Nuclear Instrumentation

LCO 3.9.3 Two source range neutron flux monitors shall be OPERABLE.

AND

[One source range audible [alarm] [count rate] circuit shall be OPERABLE.]

APPLICABILITY: MODE 6.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One [required] source range neutron flux monitor inoperable.	A.1 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u> A.2 Suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet the boron concentration of LCO 3.9.1.	Immediately
B. Two [required] source range neutron flux monitors inoperable.	B.1 Initiate action to restore one source range neutron flux monitor to OPERABLE status.	Immediately
	<u>AND</u> B.2 Perform SR 3.9.1.1.	Once per 12 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>----- - REVIEWER'S NOTE - Condition C is included only for plants that assume a boron dilution event is mitigated by operator response to an audible source range indication. -----</p> <p>C. [Required source range audible [alarm] [count rate] circuit inoperable.</p>	<p>C.1 Initiate action to isolate unborated water sources.</p>	<p>Immediately]</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.3.1	Perform CHANNEL CHECK.	12 hours
SR 3.9.3.2	<p>----- - NOTE - Neutron detectors are excluded from CHANNEL CALIBRATION. -----</p> <p>Perform CHANNEL CALIBRATION.</p>	[18] months

3.9 REFUELING OPERATIONS

3.9.4 Containment Penetrations

LCO 3.9.4 The containment penetrations shall be in the following status:

- a. The equipment is hatch closed and held in place by [four] bolts,
- b. One door in each air lock is [capable of being] closed, and
- c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere is either:
 - 1. Closed by a manual or automatic isolation valve, blind flange, or equivalent or
 - 2. Capable of being closed by an OPERABLE Containment Purge and Exhaust Isolation System.

- NOTE -

Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere may be unisolated under administrative controls.

APPLICABILITY: During movement of [recently] irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment penetrations not in required status.	A.1 Suspend movement of [recently] irradiated fuel assemblies within containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.4.1	Verify each required containment penetration is in the required status.	7 days
SR 3.9.4.2	<p style="text-align: center;">----- - NOTE - Not required to be met for containment purge and exhaust valve(s) in penetrations closed to comply with LCO 3.9.4.c.1. -----</p> <p>Verify each required containment purge and exhaust valve actuates to the isolation position on an actual or simulated actuation signal.</p>	[18] months

3.9 REFUELING OPERATIONS

3.9.5 Residual Heat Removal (RHR) and Coolant Circulation - High Water Level

LCO 3.9.5 One RHR loop shall be OPERABLE and in operation.

- NOTE -

The required RHR loop may be not in operation for ≤ 1 hour per 8 hour period, provided no operations are permitted that would cause introduction into the Reactor Coolant System, coolant with boron concentration less than that required to meet the minimum required boron concentration of LCO 3.9.1.

APPLICABILITY: MODE 6 with the water level ≥ 23 ft above the top of reactor vessel flange.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. RHR loop requirements not met.	A.1 Suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet the boron concentration of LCO 3.9.1.	Immediately
	<u>AND</u>	
	A.2 Suspend loading irradiated fuel assemblies in the core.	Immediately
	<u>AND</u>	
	A.3 Initiate action to satisfy RHR loop requirements.	Immediately
	<u>AND</u>	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p>A.4 Close equipment hatch and secure with [four] bolts.</p> <p><u>AND</u></p> <p>A.5 Close one door in each air lock.</p> <p><u>AND</u></p> <p>A.6.1 Close each penetration providing direct access from the containment atmosphere to the outside atmosphere with a manual or automatic isolation valve, blind flange, or equivalent.</p> <p><u>OR</u></p> <p>A.6.2 Verify each penetration is capable of being closed by an OPERABLE Containment Purge and Exhaust Isolation System.</p>	<p>4 hours</p> <p>4 hours</p> <p>4 hours</p> <p>4 hours</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.9.5.1 Verify one RHR loop is in operation and circulating reactor coolant at a flow rate of \geq [2800] gpm.</p>	<p>12 hours</p>

3.9 REFUELING OPERATIONS

3.9.6 Residual Heat Removal (RHR) and Coolant Circulation - Low Water Level

LCO 3.9.6 Two RHR loops shall be OPERABLE, and one RHR loop shall be in operation.

- NOTES -

1. All RHR pumps may be de-energized for ≤ 15 minutes when switching from one train to another provided:
 - a. The core outlet temperature is maintained > 10 degrees F below saturation temperature,
 - b. No operations are permitted that would cause a reduction of the Reactor Coolant System boron concentration, and
 - c. No draining operations to further reduce RCS water volume are permitted.
2. One required RHR loop may be inoperable for up to 2 hours for surveillance testing, provided that the other RHR loop is OPERABLE and in operation.

APPLICABILITY: MODE 6 with the water level < 23 ft above the top of reactor vessel flange.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Less than the required number of RHR loops OPERABLE.	A.1 Initiate action to restore required RHR loops to OPERABLE status.	Immediately
	<u>OR</u>	
	A.2 Initiate action to establish ≥ 23 ft of water above the top of reactor vessel flange.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. No RHR loop in operation.</p>	<p>B.1 Suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet the boron concentration of LCO 3.9.1.</p>	<p>Immediately</p>
	<p><u>AND</u></p>	
	<p>B.2 Initiate action to restore one RHR loop to operation.</p>	<p>Immediately</p>
	<p><u>AND</u></p>	
	<p>B.3 Close equipment hatch and secure with [four] bolts.</p>	<p>4 hours</p>
	<p><u>AND</u></p>	
	<p>B.4 Close one door in each air lock.</p>	<p>4 hours</p>
	<p><u>AND</u></p>	
	<p>B.5.1 Close each penetration providing direct access from the containment atmosphere to the outside atmosphere with a manual or automatic isolation valve, blind flange, or equivalent.</p>	<p>4 hours</p>
	<p><u>OR</u></p>	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	B.5.2 Verify each penetration is capable of being closed by an OPERABLE Containment Purge and Exhaust Isolation System.	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 \geq [2800] 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

3.9 REFUELING OPERATIONS

3.9.7 Refueling Cavity Water Level

LCO 3.9.7 Refueling cavity water level shall be maintained \geq 23 ft above the top of reactor vessel flange.

APPLICABILITY: During movement of irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Refueling cavity water level not within limit.	A.1 Suspend movement of irradiated fuel assemblies within containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.9.7.1 Verify refueling cavity water level is \geq 23 ft above the top of reactor vessel flange.	24 hours

4.0 DESIGN FEATURES

4.1 Site Location

[Text description of site location.]

4.2 Reactor Core

4.2.1 Fuel Assemblies

The reactor shall contain [157] fuel assemblies. Each assembly shall consist of a matrix of [Zircalloy or ZIRLO] fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO_2) as fuel material. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.

4.2.2 [Control Rod] Assemblies

The reactor core shall contain [48] [control rod] assemblies. The control material shall be [silver indium cadmium, boron carbide, or hafnium metal] as approved by the NRC.

4.3 Fuel Storage

4.3.1 Criticality

4.3.1.1 The spent fuel storage racks are designed and shall be maintained with:

- a. Fuel assemblies having a maximum U-235 enrichment of [4.5] weight percent,
 - b. $k_{\text{eff}} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in [Section 9.1 of the FSAR],
 - [c. A nominal [9.15] inch center to center distance between fuel assemblies placed in [the high density fuel storage racks],]
 - [d. A nominal [10.95] inch center to center distance between fuel assemblies placed in [low density fuel storage racks],]
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4.0 DESIGN FEATURES

4.3 Fuel Storage (continued)

- [e. New or partially spent fuel assemblies with a discharge burnup in the "acceptable range" of Figure [3.7.17-1] may be allowed unrestricted storage in [either] fuel storage rack(s), and]
- [f. New or partially spent fuel assemblies with a discharge burnup in the "unacceptable range" of Figure [3.7.17-1] will be stored in compliance with the NRC approved [specific document containing the analytical methods, title, date, or specific configuration or figure].]

4.3.1.2 The new fuel storage racks are designed and shall be maintained with:

- a. Fuel assemblies having a maximum U-235 enrichment of [4.5] weight percent,
- b. $k_{\text{eff}} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in [Section 9.1 of the FSAR],
- c. $k_{\text{eff}} \leq 0.98$ if moderated by aqueous foam, which includes an allowance for uncertainties as described in [Section 9.1 of the FSAR], and
- d. A nominal [10.95] inch center to center distance between fuel assemblies placed in the storage racks.

4.3.2 Drainage

The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation [23 ft].

4.3.3 Capacity

The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than [1737] fuel assemblies.

5.0 ADMINISTRATIVE CONTROLS

5.1 Responsibility

- REVIEWER'S NOTES -

1. Titles for members of the unit staff shall be specified by use of an overall statement referencing an ANSI Standard acceptable to the NRC staff from which the titles were obtained, or an alternative title may be designated for this position. Generally, the first method is preferable; however, the second method is adaptable to those unit staffs requiring special titles because of unique organizational structures.
 2. The ANSI Standard shall be the same ANSI Standard referenced in Section 5.3, Unit Staff Qualifications. If alternative titles are used, all requirements of these Technical Specifications apply to the position with the alternative title as apply with the specified title. Unit staff titles shall be specified in the Final Safety Analysis Report or Quality Assurance Plan. Unit staff titles shall be maintained and revised using those procedures approved for modifying/revising the Final Safety Analysis Report or Quality Assurance Plan.
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5.1.1 The plant manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.

The plant manager or his designee shall approve, prior to implementation, each proposed test, experiment or modification to systems or equipment that affect nuclear safety.

5.1.2 The [Shift Supervisor (SS)] shall be responsible for the control room command function. During any absence of the [SS] from the control room while the unit is in MODE 1, 2, 3, or 4, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the [SS] from the control room while the unit is in MODE 5 or 6, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.

5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

5.2.1 Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear power plant.

- a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements including the plant-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications shall be documented in the [FSAR/QA Plan],
- b. The plant manager shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant,
- c. A specified corporate officer shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety, and
- d. The individuals who train the operating staff, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their independence from operating pressures.

5.2.2 Unit Staff

The unit staff organization shall include the following:

- a. A non-licensed operator shall be assigned to each reactor containing fuel and an additional non-licensed operator shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4.

- REVIEWER'S NOTE -

Two unit sites with both units shutdown or defueled require a total of three non-licensed operators for the two units.

5.2 Organization

5.2.2 Unit Staff (continued)

- b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
- c. A radiation protection technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
- d. Administrative procedures shall be developed and implemented to limit the working hours of personnel who perform safety related functions (e.g., [licensed Senior Reactor Operators (SROs), licensed Reactor Operators (ROs), health physicists, auxiliary operators, and key maintenance personnel]).

The controls shall include guidelines on working hours that ensure adequate shift coverage shall be maintained without routine heavy use of overtime.

Any deviation from the above guidelines shall be authorized in advance by the plant manager or the plant manager's designee, in accordance with approved administrative procedures, and with documentation of the basis for granting the deviation. Routine deviation from the working hour guidelines shall not be authorized.

Controls shall be included in the procedures to require a periodic independent review be conducted to ensure that excessive hours have not be assigned.

- e. The operations manager or assistant operations manager shall hold an SRO license.
 - f. An individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.
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5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

- REVIEWER'S NOTE -

Minimum qualifications for members of the unit staff shall be specified by use of an overall qualification statement referencing an ANSI Standard acceptable to the NRC staff or by specifying individual position qualifications. Generally, the first method is preferable; however, the second method is adaptable to those unit staffs requiring special qualification statements because of unique organizational structures.

- 5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of [Regulatory Guide 1.8, Revision 2, 1987, or more recent revisions, or ANSI Standard acceptable to the NRC staff]. [The staff not covered by Regulatory Guide 1.8 shall meet or exceed the minimum qualifications of Regulations, Regulatory Guides, or ANSI Standards acceptable to NRC staff].
- 5.3.2 For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed reactor operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).
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5.0 ADMINISTRATIVE CONTROLS

5.4 Procedures

- 5.4.1 Written procedures shall be established, implemented, and maintained covering the following activities:
- a. The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978,
 - b. The emergency operating procedures required to implement the requirements of NUREG-0737 and to NUREG-0737, Supplement 1, as stated in [Generic Letter 82-33],
 - c. Quality assurance for effluent and environmental monitoring,
 - d. Fire Protection Program implementation, and
 - e. All programs specified in Specification 5.5.
-
-

5.0 ADMINISTRATIVE CONTROLS

5.5 Programs and Manuals

The following programs shall be established, implemented, and maintained.

5.5.1 Offsite Dose Calculation Manual (ODCM)

- a. The ODCM shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the radiological environmental monitoring program, and
- b. The ODCM shall also contain the radioactive effluent controls and radiological environmental monitoring activities, and descriptions of the information that should be included in the Annual Radiological Environmental Operating, and Radioactive Effluent Release Reports required by Specification [5.6.2] and Specification [5.6.3].

Licensee initiated changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
 1. Sufficient information to support the change(s) together with the appropriate analyses or evaluations justifying the change(s) and
 2. A determination that the change(s) maintain the levels of radioactive effluent control required by 10 CFR 20.1302, 40 CFR 190, 10 CFR 50.36a, and 10 CFR 50, Appendix I, and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations,
- b. Shall become effective after the approval of the plant manager, and
- c. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

5.5 Programs and Manuals

5.5.2 Primary Coolant Sources Outside Containment

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include [Recirculation Spray, Safety Injection, Chemical and Volume Control, gas stripper, and Hydrogen Recombiner]. The program shall include the following:

- a. Preventive maintenance and periodic visual inspection requirements and
- b. Integrated leak test requirements for each system at least once per [18] months.

The provisions of SR 3.0.2 are applicable.

5.5.3 [Post Accident Sampling

- REVIEWER'S NOTE -

This program may be eliminated based on the implementation of WCAP-14986, Rev. 1, "Post Accident Sampling System Requirements: A Technical Basis," and the associated NRC Safety Evaluation dated June 14, 2000.

This program provides controls that ensure the capability to obtain and analyze reactor coolant, radioactive gases, and particulates in plant gaseous effluents and containment atmosphere samples under accident conditions. The program shall include the following:

- a. Training of personnel,
- b. Procedures for sampling and analysis, and
- c. Provisions for maintenance of sampling and analysis equipment.]

5.5.4 Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

5.5 Programs and Manuals

5.5.4 Radioactive Effluent Controls Program (continued)

- a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,
- b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to ten times the concentration values in Appendix B, Table 2, Column 2 to 10 CFR 20.1001-20.2402,
- c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM,
- d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas, conforming to 10 CFR 50, Appendix I,
- e. Determination of cumulative dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days. Determination of projected dose contributions from radioactive effluents in accordance with the methodology in the ODCM at least every 31 days,
- f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I,
- g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the site boundary shall be in accordance with the following:
 1. For noble gases: a dose rate \leq 500 mrem/yr to the whole body and a dose rate \leq 3000 mrem/yr to the skin and
 2. For iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days: a dose rate \leq 1500 mrem/yr to any organ,
- h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I,

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5.5.4 Radioactive Effluent Controls Program (continued)

- i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I, and
- j. Limitations on the annual dose or dose commitment to any member of the public, beyond the site boundary, due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency.

5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the FSAR, Section [], cyclic and transient occurrences to ensure that components are maintained within the design limits.

5.5.6 [Pre-Stressed Concrete Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation in pre-stressed concrete containments, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. The program shall include baseline measurements prior to initial operations. The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with [Regulatory Guide 1.35, Revision 3, 1989].

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Tendon Surveillance Program inspection frequencies.]

5.5.7 Reactor Coolant Pump Flywheel Inspection Program

This program shall provide for the inspection of each reactor coolant pump flywheel per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975.

In lieu of Position C.4.b(1) and C.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle one-half of the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheels may be conducted at approximately 10 year intervals coinciding with the Inservice Inspection schedule as required by ASME Section XI.

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5.5.7 Reactor Coolant Pump Flywheel Inspection Program (continued)

- REVIEWER'S NOTES -

1. The inspection interval and scope for RCP flywheels stated above can be applied to plants that satisfy the staff requirements in the safety evaluation of Topical Report, WCAP-14535A, "Topical Report on Reactor Coolant Pump Flywheel Inspection Elimination."
2. Licensees shall confirm that the flywheels are made of SA 533 B material. Further, licensees having Group-15 flywheels (as determined in WCAP-14535A, "Topical Report on Reactor Coolant Pump Flywheel Inspection Elimination") need to demonstrate that material properties of their A516 material is equivalent to SA 533 B material, and its reference temperature, RT, is less than 30 °F.
3. For flywheels not made of SA 533 B or A516 material, licensees need to either demonstrate that the flywheel material properties are bounded by those of SA 533 B material, or provide the minimum specified ultimate tensile stress, the fracture toughness, and the reference temperature, RT_{NDT}, for that material. For the latter, the licensees should employ these material properties, and use the methodology in the topical report, as extended in the two responses to the staff's RAI, to provide an assessment to justify a change in inspection schedule for their plants.
4. Licensees with Group-10 flywheels need to confirm that their flywheels have an adequate shrink fit to preclude loss of shrink fit of the flywheel at the maximum overspeed, or to provide an evaluation demonstrating that no detrimental effects would occur if the shrink fit was lost as maximum overspeed.

5.5.8 Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components. The program shall include the following:

- a. Testing frequencies specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as follows:

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

Weekly

Required Frequencies for
performing inservice testing
activities

At least once per 7 days

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5.5.8 Inservice Testing Program (continued)

ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities	Required Frequencies for performing inservice testing activities
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

- b. The provisions of SR 3.0.2 are applicable to the above required frequencies for performing inservice testing activities,
- c. The provisions of SR 3.0.3 are applicable to inservice testing activities, and
- d. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any TS.

5.5.9 Steam Generator (SG) Tube Surveillance Program

- REVIEWER'S NOTE -

The Licensee's current licensing basis steam generator tube surveillance requirements shall be relocated from the LCO and included here. An appropriate administrative controls program format should be used.

The provisions of SR 3.0.2 are applicable to the SG Tube Surveillance Program test frequencies.

5.5.10 Secondary Water Chemistry Program

This program provides controls for monitoring secondary water chemistry to inhibit SG tube degradation and low pressure turbine disc stress corrosion cracking. The program shall include:

- a. Identification of a sampling schedule for the critical variables and control points for these variables,
- b. Identification of the procedures used to measure the values of the critical variables,

5.5 Programs and Manuals

5.5.10 Secondary Water Chemistry Program (continued)

- c. Identification of process sampling points, which shall include monitoring the discharge of the condensate pumps for evidence of condenser in leakage,
- d. Procedures for the recording and management of data,
- e. Procedures defining corrective actions for all off control point chemistry conditions, and
- f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events, which is required to initiate corrective action.

5.5.11 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in [Regulatory Guide], and in accordance with [Regulatory Guide 1.52, Revision 2, ASME N510-1989, and AG-1].

- a. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < [0.05]% when tested in accordance with [Regulatory Guide 1.52, Revision 2, and ASME N510-1989] at the system flowrate specified below [± 10%].

ESF Ventilation System	Flowrate
[]	[]

- b. Demonstrate for each of the ESF systems that an inplace test of the charcoal adsorber shows a penetration and system bypass < [0.05]% when tested in accordance with [Regulatory Guide 1.52, Revision 2, and ASME N510-1989] at the system flowrate specified below [± 10%].

ESF Ventilation System	Flowrate
[]	[]

- c. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal adsorber, when obtained as described in [Regulatory Guide 1.52, Revision 2], shows the methyl iodide penetration less than the value specified below when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86 °F) and the relative humidity specified below.

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5.5.11 Ventilation Filter Testing Program (continued)

ESF Ventilation System	Penetration	RH	Face Velocity (fps)
[]	[See Reviewer's Note]	[See Reviewer's Note]	[See Reviewer's Note]

- REVIEWER'S NOTE -

The use of any standard other than ASTM D3803-1989 to test the charcoal sample may result in an overestimation of the capability of the charcoal to adsorb radioiodine. As a result, the ability of the charcoal filters to perform in a manner consistent with the licensing basis for the facility is indeterminate.

ASTM D 3803-1989 is a more stringent testing standard because it does not differentiate between used and new charcoal, it has a longer equilibration period performed at a temperature of 30 °C (86 °F) and a relative humidity (RH) of 95% (or 70% RH with humidity control), and it has more stringent tolerances that improve repeatability of the test.

Allowable Penetration = $[(100\% - \text{Methyl Iodide Efficiency} * \text{for Charcoal Credited in Licensee's Accident Analysis}) / \text{Safety Factor}]$

When ASTM D3803-1989 is used with 30 °C (86 °F) and 95% RH (or 70% RH with humidity control) is used, the staff will accept the following:

Safety factor ≥ 2 for systems with or without humidity control.

Humidity control can be provided by heaters or an NRC-approved analysis that demonstrates that the air entering the charcoal will be maintained less than or equal to 70 percent RH under worst-case design-basis conditions.

If the system has a face velocity greater than 110 percent of 0.203 m/s (40 ft/min), the face velocity should be specified.

*This value should be the efficiency that was incorporated in the licensee's accident analysis which was reviewed and approved by the staff in a safety evaluation.

- d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested in accordance with [Regulatory Guide 1.52, Revision 2, and ASME N510-1989] at the system flowrate specified below [$\pm 10\%$].

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5.5.11 Ventilation Filter Testing Program (continued)

ESF Ventilation System	Delta P	Flowrate
[]	[]	[]

- [e. Demonstrate that the heaters for each of the ESF systems dissipate the value specified below [$\pm 10\%$] when tested in accordance with [ASME N510-1989].

ESF Ventilation System	Wattage]
[]	[]

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

5.5.12 Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides controls for potentially explosive gas mixtures contained in the [Waste Gas Holdup System], [the quantity of radioactivity contained in gas storage tanks or fed into the offgas treatment system, and the quantity of radioactivity contained in unprotected outdoor liquid storage tanks]. The gaseous radioactivity quantities shall be determined following the methodology in [Branch Technical Position (BTP) ETSB 11-5, "Postulated Radioactive Release due to Waste Gas System Leak or Failure"]. The liquid radwaste quantities shall be determined in accordance with [Standard Review Plan, Section 15.7.3, "Postulated Radioactive Release due to Tank Failures"].

The program shall include:

- a. The limits for concentrations of hydrogen and oxygen in the [Waste Gas Holdup System] and a surveillance program to ensure the limits are maintained. Such limits shall be appropriate to the system's design criteria (i.e., whether or not the system is designed to withstand a hydrogen explosion),
- b. A surveillance program to ensure that the quantity of radioactivity contained in [each gas storage tank and fed into the offgas treatment system] is less than the amount that would result in a whole body exposure of ≥ 0.5 rem to any individual in an unrestricted area, in the event of [an uncontrolled release of the tanks' contents], and
- c. A surveillance program to ensure that the quantity of radioactivity contained in all outdoor liquid radwaste tanks that are not surrounded by liners, dikes,

5.5 Programs and Manuals

5.5.12 Explosive Gas and Storage Tank Radioactivity Monitoring Program (continued)

or walls, capable of holding the tanks' contents and that do not have tank overflows and surrounding area drains connected to the [Liquid Radwaste Treatment System] is less than the amount that would result in concentrations less than the limits of 10 CFR 20, Appendix B, Table 2, Column 2, at the nearest potable water supply and the nearest surface water supply in an unrestricted area, in the event of an uncontrolled release of the tanks' contents.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Explosive Gas and Storage Tank Radioactivity Monitoring Program surveillance frequencies.

5.5.13 Diesel Fuel Oil Testing Program

A diesel fuel oil testing program to implement required testing of both new fuel oil and stored fuel oil shall be established. The program shall include sampling and testing requirements, and acceptance criteria, all in accordance with applicable ASTM Standards. The purpose of the program is to establish the following:

- a. Acceptability of new fuel oil for use prior to addition to storage tanks by determining that the fuel oil has:
 1. An API gravity or an absolute specific gravity within limits,
 2. A flash point and kinematic viscosity within limits for ASTM 2D fuel oil, and
 3. A clear and bright appearance with proper color,
- b. Within 31 days following addition of the new fuel oil to storage tanks, verify that the properties of the new fuel oil, other than those addressed in a., above, are within limits for ASTM 2D fuel oil, and
- c. Total particulate concentration of the fuel oil is ≤ 10 mg/l when tested every 31 days in accordance with ASTM D-2276, Method A-2 or A-3.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Diesel Fuel Oil Testing Program test frequencies.

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5.5.14 Technical Specifications (TS) Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

- a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.
- b. Licensees may make changes to Bases without prior NRC approval provided the changes do not require either of the following:
 1. A change in the TS incorporated in the license or
 2. A change to the updated FSAR or Bases that requires NRC approval pursuant to 10 CFR 50.59.
- c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the FSAR.
- d. Proposed changes that meet the criteria of Specification 5.5.14b above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71(e).

5.5.15 Safety Function Determination Program (SFDP)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate actions may be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

- a. Provisions for cross train checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected,
- b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists,
- c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities, and

5.5 Programs and Manuals

5.5.15 Safety Function Determination Program (continued)

- d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, and assuming no concurrent loss of offsite power, or no concurrent loss of onsite diesel generator(s), a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

- a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable, or
- b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable, or
- c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. 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 loss of safety function is caused by the inoperability of a single Technical Specification support system, the appropriate Conditions and Required Actions to enter are those of the support system.

5.5.16 Containment Leakage Rate Testing Program

[OPTION A]

- a. A program shall establish the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option A, as modified by approved exemptions.
- b. The maximum allowable containment leakage rate, L_a , at P_a , shall be []% of containment air weight per day.
- c. Leakage rate acceptance criteria are:
1. Containment leakage rate acceptance criterion is $\leq 1.0 L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $< 0.60 L_a$ for the Type B and C tests and $< 0.75 L_a$ for Type A tests.
 2. Air lock testing acceptance criteria are:

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5.5.16 Containment Leakage Rate Testing Program (continued)

- a) Overall air lock leakage rate is $\leq [0.05 L_a]$ when tested at $\geq P_a$.
- b) For each door, leakage rate is $\leq [0.01 L_a]$ when pressurized to $[\geq 10 \text{ psig}]$.
- d. The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.
- e. Nothing in these Technical Specifications shall be construed to modify the testing Frequencies required by 10 CFR 50, Appendix J.

[OPTION B]

- a. A program shall establish the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September, 1995, [as modified by the following exceptions:
 - 1. . . .]
- b. The calculated peak containment internal pressure for the design basis loss of coolant accident, P_a , is [45 psig]. The containment design pressure is [50 psig].
- c. The maximum allowable containment leakage rate, L_a , at P_a , shall be []% of containment air weight per day.
- d. Leakage rate acceptance criteria are:
 - 1. Containment leakage rate acceptance criterion is $1.0 L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $< 0.60 L_a$ for the Type B and C tests and $\leq 0.75 L_a$ for Type A tests.
 - 2. Air lock testing acceptance criteria are:
 - a) Overall air lock leakage rate is $\leq [0.05 L_a]$ when tested at $\geq P_a$.
 - b) For each door, leakage rate is $\leq [0.01 L_a]$ when pressurized to $[\geq 10 \text{ psig}]$.

5.5 Programs and Manuals

5.5.16 Containment Leakage Rate Testing Program (continued)

- e. The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.
- f. Nothing in these Technical Specifications shall be construed to modify the testing Frequencies required by 10 CFR 50, Appendix J.

[OPTION A/B Combined]

- a. A program shall establish the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J. [Type A][Type B and C] test requirements are in accordance with 10 CFR 50, Appendix J, Option A, as modified by approved exemptions. [Type B and C][Type A] test requirements are in accordance with 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. The 10 CFR 50, Appendix J, Option B test requirements shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September, 1995 [,as modified by the following exemptions:
 - 1. . . .]
- b. The calculated peak containment internal pressure for the design basis loss of coolant accident, P_a , [45 psig]. The containment design pressure is [50 psig].
- c. The maximum allowable containment leakage rate, L_a , at P_a , shall be []% of containment air weight per day.
- d. Leakage rate acceptance criteria are:
 - 1. Containment leakage rate acceptance criterion is $\leq 1.0 L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $< 0.60 L_a$ for the Type B and C tests and [$< 0.75 L_a$ for Option A Type A tests][$\leq 0.75 L_a$ for Option B Type A tests].
 - 2. Air lock testing acceptance criteria are:
 - a) Overall air lock leakage rate is $\leq [0.05 L_a]$ when tested at $\geq P_a$.
 - b) For each door, leakage rate is $\leq [0.01 L_a]$ when pressurized to [≥ 10 psig].

5.5 Programs and Manuals

5.5.16 Containment Leakage Rate Testing Program (continued)

- e. The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.
- f. Nothing in these Technical Specifications shall be construed to modify the testing Frequencies required by 10 CFR 50, Appendix J.

5.5.17 Battery Monitoring and Maintenance Program

This Program provides for battery restoration and maintenance, based on [the recommendations of IEEE Standard 450-1995, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications," or of the battery manufacturer] including the following:

- a. Actions to restore battery cells with float voltage < [2.13] V, and
 - b. Actions to equalize and test battery cells that had been discovered with electrolyte level below the minimum established design limit.
-

5.0 ADMINISTRATIVE CONTROLS

5.6 Reporting Requirements

The following reports shall be submitted in accordance with 10 CFR 50.4.

5.6.1 Occupational Radiation Exposure Report

- REVIEWER'S NOTE -

[A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.]

A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors), for whom monitoring was performed, receiving an annual deep dose equivalent > 100 mrem and the associated collective deep dose equivalent (reported in person - rem) according to work and job functions (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance [describe maintenance], waste processing, and refueling). This tabulation supplements the requirements of 10 CFR 20.2206. The dose assignments to various duty functions may be estimated based on pocket ionization chamber, thermoluminescence dosimeter (TLD), electronic dosimeter, or film badge measurements. Small exposures totaling < 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total deep dose equivalent received from external sources should be assigned to specific major work functions. The report covering the previous calendar year shall be submitted by April 30 of each year. [The initial report shall be submitted by April 30 of the year following the initial criticality.]

5.6.2 Annual Radiological Environmental Operating Report

- REVIEWER'S NOTE -

[A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.]

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 15 of each year. The report shall include summaries, interpretations, and analyses of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in the Offsite Dose Calculation Manual (ODCM), and in 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

The Annual Radiological Environmental Operating Report shall include the results of analyses of all radiological environmental samples and of all

5.6 Reporting Requirements

5.6.2 Annual Radiological Environmental Operating Report (continued)

environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the ODCM, as well as summarized and tabulated results of these analyses and measurements [in the format of the table in the Radiological Assessment Branch Technical Position, Revision 1, November 1979]. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted in a supplementary report as soon as possible.

5.6.3 Radioactive Effluent Release Report

- REVIEWER'S NOTE -

[A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.]

The Radioactive Effluent Release Report covering the operation of the unit in the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the ODCM and Process Control Program and in conformance with 10 CFR 50.36a and 10 CFR Part 50, Appendix I, Section IV.B.1.

5.6.4 Monthly Operating Reports

Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis no later than the 15th of each month following the calendar month covered by the report.

5.6.5 CORE OPERATING LIMITS REPORT (COLR)

- a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:

[The individual specifications that address core operating limits must be referenced here.]

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (continued)

- b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

[Identify the Topical Report(s) by number and title or identify the staff Safety Evaluation Report for a plant specific methodology by NRC letter and date. The COLR will contain the complete identification for each of the TS referenced topical reports used to prepare the COLR (i.e., report number, title, revision, date, and any supplements).]

- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

5.6.6 Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)

- a. RCS pressure and temperature limits for heat up, cooldown, low temperature operation, criticality, and hydrostatic testing, LTOP arming, and PORV lift settings as well as heatup and cooldown rates shall be established and documented in the PTLR for the following:

[The individual specifications that address RCS pressure and temperature limits must be referenced here.]

- b. The analytical methods used to determine the RCS pressure and temperature limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

[Identify the NRC staff approval document by date.]

- c. The PTLR shall be provided to the NRC upon issuance for each reactor vessel fluence period and for any revision or supplement thereto.

5.6 Reporting Requirements

5.6.6 RCS PRESSURE AND TEMPERATURE LIMITS REPORT (continued)

- REVIEWER'S NOTE -

The methodology for the calculation of the P-T limits for NRC approval should include the following provisions:

1. The methodology shall describe how the neutron fluence is calculated (reference new Regulatory Guide when issued).
 2. The Reactor Vessel Material Surveillance Program shall comply with Appendix H to 10 CFR 50. The reactor vessel material irradiation surveillance specimen removal schedule shall be provided, along with how the specimen examinations shall be used to update the PTLR curves.
 3. Low Temperature Overpressure Protection (LTOP) System lift setting limits for the Power Operated Relief Valves (PORVs), developed using NRC-approved methodologies may be included in the PTLR.
 4. The adjusted reference temperature (ART) for each reactor beltline material shall be calculated, accounting for radiation embrittlement, in accordance with Regulatory Guide 1.99, Revision 2.
 5. The limiting ART shall be incorporated into the calculation of the pressure and temperature limit curves in accordance with NUREG-0800 Standard Review Plan 5.3.2, Pressure-Temperature Limits.
 6. LTOP arming temperature limit development methodology.
 7. The minimum temperature requirements of Appendix G to 10 CFR Part 50 shall be incorporated into the pressure and temperature limit curves.
 8. Licensees who have removed two or more capsules should compare for each surveillance material the measured increase in reference temperature (RT_{NDT}) to the predicted increase in RT_{NDT} ; where the predicted increase in RT_{NDT} is based on the mean shift in RT_{NDT} plus the two standard deviation value ($2\sigma_{\Delta}$) specified in Regulatory Guide 1.99, Revision 2. If the measured value exceeds the predicted value (increase $RT_{NDT} + 2\sigma_{\Delta}$), the licensee should provide a supplement to the PTLR to demonstrate how the results affect the approved methodology.
-

5.6 Reporting Requirements

5.6.7 Post Accident Monitoring Report

When a report is required by Condition B or G of LCO 3.3.[3], "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

5.6.8 [Tendon Surveillance Report

Any abnormal degradation of the containment structure detected during the tests required by the Pre-stressed Concrete Containment Tendon Surveillance Program shall be reported to the NRC within 30 days. The report shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedures, the tolerances on cracking, and the corrective action taken.]

5.6.9 [Steam Generator Tube Inspection Report]

- REVIEWER'S NOTES -

1. Reports required by the Licensee's current licensing basis regarding steam generator tube surveillance requirements shall be included here. An appropriate administrative controls format should be used.
 2. These reports may be required covering inspection, test, and maintenance activities. These reports are determined on an individual basis for each unit and their preparation and submittal are designated in the Technical Specifications.
-

5.0 ADMINISTRATIVE CONTROLS

[5.7 High Radiation Area]

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601(a) and (b) of 10 CFR Part 20:

- 5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation
- a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.
 - b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.
 - c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.
 - d. Each individual or group entering such an area shall possess:
 1. A radiation monitoring device that continuously displays radiation dose rates in the area, or
 2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or
 3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or
 4. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,
 - (i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that

5.7 High Radiation Area

5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

- (ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with individuals in the area who are covered by such surveillance.
- e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

- a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry, and, in addition:
 - 1. All such door and gate keys shall be maintained under the administrative control of the shift supervisor, radiation protection manager, or his or her designees, and
 - 2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.
- b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.
- c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation

5.7 High Radiation Area

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

- d. Each individual group entering such an area shall possess:
1. A radiation monitoring device that continuously integrates the radiation rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or
 2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or
 3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,
 - (i) Be under surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or
 - (ii) Be under surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, or personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area.
 4. In those cases where options (2) and (3), above, are impractical or determined to be inconsistent with the "As Low As is Reasonably Achievable" principle, a radiation monitoring device that continuously displays radiation dose rates in the area.
- e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and

5.7 High Radiation Area

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

- f. Such individual areas that are within a larger area where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate, nor continuously guarded, but shall be barricaded, conspicuously posted, and a clearly visible flashing light shall be activated at the area as a warning device.
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10. SUPPLEMENTARY NOTES

11. ABSTRACT *(200 words or less)*

This NUREG contains the improved Standard Technical Specifications (STS) for Westinghouse plants. Revision 2 incorporates the cumulative changes to Revision 1, which was published in April 1995. The changes reflected in Revision 2 resulted from the experience gained from license amendment applications to convert to these improved STS or to adopt partial improvements to existing technical specifications. This publication is the result of extensive public technical meetings and discussions among the Nuclear Regulatory Commission (NRC) staff and various nuclear power plant licensees, Nuclear Steam Supply System (NSSS) Owners Groups, and the Nuclear Energy Institute (NEI). The improved STS were developed based on the criteria in the Final Commission Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, dated July 22, 1993 (58FR39132), which was subsequently codified by changes to Section 36 of Part 50 of Title 10 of the Code of Federal Regulations (10CFR50.36) (60 FR 36953). The Commission continues to place the highest priority on requests for complete conversions to the improved STS. Licensees adopting portions of the improved STS to existing technical specifications should adopt all related requirements, as applicable, to achieve a high degree of standardization and consistency.

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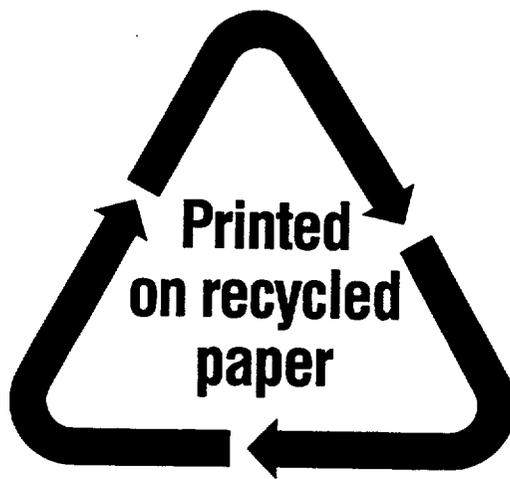
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