

3.6 CONTAINMENT SYSTEMS

3.6.1 Containment

LCO 3.6.1 Containment shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment inoperable.	A.1 Restore containment to OPERABLE status.	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 3.6.1.1	Perform required visual examinations and leakage rate testing except for containment air lock testing, in accordance with the Containment Leakage Rate Testing Program.	In accordance with the Containment Leakage Rate Testing Program
SR 3.6.1.2	Verify containment structural integrity in accordance with the Containment Post Tensioning Surveillance Program.	In accordance with the Containment Post Tensioning Surveillance Program

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3.6.2 Containment Air Locks

LCO 3.6.2 Two containment air locks shall be OPERABLE.

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

ACTIONS

-----NOTES-----

1. Entry and exit is permissible to perform repairs on the affected air lock components.
 2. Separate Condition entry is allowed for each air lock.
 3. Enter applicable Conditions and Required Actions of LCO 3.6.1, "Containment," when air lock leakage results in exceeding the overall containment leakage rate.
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CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One or more containment air locks with one containment air lock door inoperable.</p>	<p>-----NOTES-----</p> <ol style="list-style-type: none"> 1. Required Actions A.1, A.2, and A.3 are not applicable if both doors in the same air lock are inoperable and Condition C is entered. 2. Entry and exit is permissible for 7 days under administrative controls if both air locks are inoperable. <p>-----</p> <p>A.1 Verify the OPERABLE door is closed in the affected air lock.</p> <p><u>AND</u></p>	<p>1 hour</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.1	<p>-----NOTES-----</p> <ol style="list-style-type: none"> 1. An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test. 2. Results shall be evaluated against acceptance criteria applicable to SR 3.6.1.1. <p>-----</p> <p>Perform required air lock leakage rate testing in accordance with the Containment Leakage Rate Testing Program.</p>	In accordance with the Containment Leakage Rate Testing Program
SR 3.6.2.2	Verify only one door in the air lock can be opened at a time.	24 months

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3.6.3 Containment Isolation Valves

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 the Full Flow Purge 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.

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 D.</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><u>AND</u></p>	<p>4 hours</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p>A.2</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> 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> <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>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. -----NOTE----- Only applicable to penetration flow paths with two or more containment isolation valves. ----- One or more penetration flow paths with two or more containment isolation valves inoperable for reasons other than Condition D.</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>	<p>1 hour</p>
<p>C. -----NOTE----- Only applicable to penetration flow paths with only one containment isolation valve and a closed system. ----- 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. <u>AND</u></p>	<p>72 hours</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p>C.2 -----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. ----- Verify the affected penetration flow path is isolated.</p>	<p>Once per 31 days</p>
<p>D. One or more penetration flow paths with one or more purge valves not within purge valve leakage limits.</p>	<p>D.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>D.2 -----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. ----- Verify the affected penetration flow path is isolated.</p> <p><u>AND</u></p> <p>D.3 Perform SR 3.6.3.6 for the resilient seal purge valves closed to comply with Required Action D.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>E. Required Action and associated Completion Time not met.</p>	<p>E.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>E.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 Full Flow Purge valve is sealed closed, except for one full flow purge valve in a penetration flow path while in Condition D of this LCO.	31 days
SR 3.6.3.2	Verify each Low Flow Purge valve is closed, except when the Low Flow 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

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
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
SR 3.6.3.6	Perform leakage rate testing for Full Flow and Low Flow Purge valves with resilient seals.	184 days <u>AND</u> Within 92 days after opening the valve
SR 3.6.3.7	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.	24 months

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3.6.4 Containment Pressure

LCO 3.6.4 Containment pressure shall be ≥ -2.0 psig and $\leq +1.2$ 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 3.6.4.1 Verify containment pressure is within limits.	12 hours

3.6 CONTAINMENT SYSTEMS

3.6.5 Containment Air Temperature

- LCO 3.6.5 Containment average air temperature shall be:
- a. $\leq 86^{\circ}\text{F}$ for the containment service compartments, and
 - b. $\leq 122^{\circ}\text{F}$ for the containment equipment compartments.

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 3.6.5.1 Verify containment average air temperature is within limit.	24 hours

3.6 CONTAINMENT SYSTEMS

3.6.6 Shield Building

LCO 3.6.6 The Shield Building shall be OPERABLE.

-----NOTE-----

The Shield Building envelope may be opened intermittently under administrative control.

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 3.6.6.1 Verify annulus pressure is ≤ -0.25 inches water gauge.	12 hours

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.6.2	Verify each Shield Building access door is closed, except when the access opening is being used for entry and exit.	31 days
SR 3.6.6.3	Verify the annulus pressure can be drawn down to ≤ -0.25 inches water gauge using one Annulus Ventilation System (AVS) train in ≤ 305 seconds after a start signal.	24 months on a STAGGERED TEST BASIS for each AVS train
SR 3.6.6.4	Verify the annulus pressure can be maintained at ≤ -0.25 inches water gauge by one AVS train at a flow rate of ≤ 1295 cfm.	24 months on a STAGGERED TEST BASIS for each AVS train
SR 3.6.6.5	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

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3.6.7 Annulus Ventilation System (AVS)

LCO 3.6.7 Two AVS accident filtration trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One AVS accident filtration train inoperable.	A.1 Restore AVS accident filtration train to OPERABLE status.	7 days
B. One or more normal operation train isolation dampers inoperable.	B.1 Restore isolation damper to OPERABLE status.	24 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. <u>AND</u> C.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.7.1	Operate each AVS accident filtration train for ≥ 15 minutes with heaters energized.	31 days
SR 3.6.7.2	Perform required AVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.7.3	Verify each AVS accident filtration train actuates on an actual or simulated actuation signal.	24 months
SR 3.6.7.4	Verify that the normal operation train motor operated isolation dampers close on an actual or simulated isolation signal.	24 months

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3.6.8 pH Adjustment

LCO 3.6.8 The pH adjustment baskets shall contain $\geq 211 \text{ ft}^3$ of trisodium phosphate (TSP-C).

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. pH adjustment baskets contain $< 211 \text{ ft}^3$ of TSP-C	A.1 Restore pH adjustment baskets to $\geq 211 \text{ ft}^3$ of TSP-C.	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 3.6.8.1 Verify contained volume of TSP-C in the pH adjustment baskets is within limits.	24 months
SR 3.6.8.2 Verify that a sample from the TSP-C baskets provides adequate pH adjustment of In-Containment Refueling Water Storage Tank water.	24 months

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3.6.9 CONVECT System

LCO 3.6.9 The CONVECT System shall be OPERABLE.

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

ACTIONS

-----NOTE-----

Separate Condition entry is allowed for each Hydrogen Mixing Damper and rupture or convection foil.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Hydrogen Mixing Dampers (HMD) inoperable.	A.1 Restore HMD to OPERABLE status.	72 hours
B. One or more rupture or convection foils is inoperable.	B.1 Restore foil to OPERABLE status.	72 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 3.6.9.1	Verify each HMD opens automatically on an actual or simulated actuation signal.	24 months
SR 3.6.9.2	Verify, by visual inspection, each rupture and convection foil is in place, has no evidence of structural deterioration, and is not impaired by debris.	24 months

3.6 CONTAINMENT SYSTEMS

3.6.10 Reactor Containment Building (RCB) Compartment Doors

LCO 3.6.10 The RCB compartment doors listed in Table 3.6.10-1 shall be OPERABLE.

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

ACTIONS

-----NOTE-----

Separate Condition entry is allowed for each RCB compartment door.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A One or more RCB compartment doors inoperable.	A.1 Restore RCB compartment door to OPERABLE status.	72 hours
B. Required Action and associated Completion Time 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 3.6.10.1	Verify, by visual inspection, each RCB compartment door in Table 3.6.10-1 is not impaired by debris.	24 months
SR 3.6.10.2	Verify each Radiation Door in Table 3.6.10-1 begins to open at less than the indicated torque	24 months

Table 3.6.10-1

RCB Compartment Doors

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

Torque values required to open each Radiation Door at an assumed differential pressure of 2.9 psid +20% will be provided by the COL applicant.

RCB Elevation and Door Number	Door Function – Pressure Relief	Opening Torque
-8 ft Door 4	Non-Radiation Door, Blowout Panel	NA
-8 ft Door 7	Non-Radiation Door, Blowout Panel	NA
-8 ft Door 10	Non-Radiation Door, Blowout Panel	NA
-8 ft Door 11	Non-Radiation Door, Blowout Panel	NA
-8 ft Door 13	Non-Radiation Door, Blowout Panel	NA
-8 ft Door 14	Non-Radiation Door, Blowout Panel	NA
+5 ft Door 4	Radiation Door, Hinges Swing Open	[] ft-lb
+5 ft Door 5	Radiation Door, Hinges Swing Open	[] ft-lb
+5 ft Door 13	Radiation Door, Hinges Swing Open	[] ft-lb
+5 ft Door 14	Radiation Door, Hinges Swing Open	[] ft-lb
+29 ft Door 2	Radiation Door, Hinges Swing Open	[] ft-lb
+45 ft Door 2	Radiation Door, Hinges Swing Open	[] ft-lb
+45 ft Door 15	Non-Radiation Door, Blowout Panel	NA