3.7 PLANT SYSTEMS

3.7.1 Residual Heat Removal Service Water (RHRSW) Booster Pumps

LCO 3.7.1 Two RHRSW Booster Pumps shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One RHRSW booster pump inoperable	A.1 ----------NOTE---------- Enter applicable Conditions and Required Actions of LCO 3.6.2.3 and 3.6.2.4, for RHR containment cooling made inoperable by RHRSW booster pump. ---------- Restore RHRSW booster pump to OPERABLE status.	7 days
B. Both RHRSW booster pump inoperable.	B.1 ----------NOTE---------- Enter applicable Conditions and Required Actions of LCO 3.6.2.3 and 3.6.2.4 for RHR containment cooling made inoperable by RHRSW booster pump. ---------- Restore one RHRSW booster pump to OPERABLE status.	8 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3 AND C.2 Be in MODE 4	12 hours 36 hours

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE			FREQUENCY
SR	3.7.1.1	Verify each RHRSW 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 or can be aligned to the correct position.	31 days

3.7 PLANT SYSTEMS

3.7.2.1 Essential Service Water (ESW) System

LCO 3.7.2.1 The required ESW subsystem(s) shall be OPERABLE.

APPLICABILITY: When the systems supported by the ESW subsystem(s) require to be OPERABLE in MODE 5.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required ESW subsystem(s) inoperable	A.1 Enter applicable Conditions and Required Actions of LCO 3.7.2.2, “CSCCW System”, for CSCCW subsystem made inoperable by ESW.	Immediately

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE			FREQUENCY
SR	3.7.2.1.1	----------NOTE---------- Isolation of flow to individual components does not render ESW System inoperable. ---------- Verify each ESW subsystem manual, power operated, and automatic valve in the flow paths servicing safety related systems or components, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 days
SR	3.7.2.1.2	Verify each ESW subsystem actuates on an actual or simulated initiation signal.	18 months
SR	3.7.2.1.3	Verify each ESW pump delivers ≥ 304 lps (4816 gpm) against a pump discharge head ≥ 17.4m (57 ft) water as measured at pressure gauge PI-80	In accordance with the Pre-Defueled Service Testing Program or 18 months

3.7 PLANT SYSTEMS

3.7.2.2 Combination Structure Closed Cooling water (CSCCW) System

LCO 3.7.2.2 The required CSCCW subsystem(s) shall be OPERABLE.

APPLICABILITY: When the systems supported by the CSCCW require to be OPERABLE in MODE 5.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required CSCCW subsystem(s) inoperable	A.1 Enter applicable Conditions and Required Actions of LCO 3.8.2, “AC Sources — Shutdown”, for EDG made inoperable by CSCCW. AND A.2 Enter applicable Conditions and Required Actions of LCO 3.9.7, "Residual Heat Removal (RHR) High Water Level,” or 3.9.8" Residual Heat Removal (RHR)—Low Water Level” for RHR shutdown cooling and LCO 3.5.2 “ECCS—Shutdown” for ECCS system made inoperable by CSCCW.	Immediately Immediately

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.2.2.1	----------NOTE---------- Isolation of flow to individual components does not render CSCCW System inoperable. ---------- Verify each CSCCW 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 or can be aligned to the correct position.	31 days
SR 3.7.2.2.2	Verify each CSCCW subsystem actuates on actual or simulated initiation signal.	18 months
SR 3.7.2.2.3	Verify each CSCCW pump delivers $\geq$ 473 lps (7500 gpm) and shutoff head $\geq$ 24.3m (80ft)	In accordance with the Pre-Defueled Service Testing Program or 18 months

3.7 PLANT SYSTEMS

3.7.3 Control Room Emergency Filtration (CREF) Units

LCO 3.7. 3 Two CREF units shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 5(except maintenance surveillance cycle), During movement of irradiated fuel assemblies in the secondary containment, During CORE ALTERATIONS, During operations with a potential for draining the reactor vessel (OPDRVs) , During movement of heavy loads (the weight more than the combined weight of a single spent fuel assembly and its handling tool) over irradiated fuel assemblies in the secondary containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CREF Unit inoperable	A.1 Restore CREF unit to OPERABLE status.	7 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, or 3.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours
C. Required Action and associated Completion Time of Condition A not met in MODE 5, during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, during OPDRVs , or during movement of heavy loads over irradiated fuel assemblies in the secondary containment.	----------NOTE---------- LCO 3.0.3 is not applicable. ---------- C.1 Place OPERABLE CREF Unit in operation. OR C.2.1 Suspend movement of irradiated fuel assemblies in the secondary containment. AND	 Immediately Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. continued	C.2.2 Suspend CORE ALTERATIONS AND C.2.3 Initiate action to suspend OPDRVs. AND C.2.4----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Suspend movement of heavy loads over irradiated fuel assemblies in the secondary containment.	Immediately Immediately Immediately
D. Two CREF units inoperable in MODE 1, 2, or 3.	D.1 Enter LCO 3.0.3	Immediately
E. Two CREF Units Subsystems inoperable in MODE 5,during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, during OPDRVs , or during movement of heavy loads over irradiated fuel assemblies in the secondary containment.	----------NOTE---------- LCO 3.0.3 is not applicable. ---------- E.1 Suspend movement of irradiated fuel assemblies in the secondary containment. AND E.2 Suspend CORE ALTERATIONS. AND E.3 Initiate action to suspend OPDRVs. AND E.4 Suspend movement of heavy loads over irradiated fuel assemblies in the secondary containment.	 Immediately Immediately Immediately Immediately

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE			FREQUENCY
SR	3.7. 3.1	Operate each CREF unit subsystem for ≥ 15 minutes	31 days
SR	3.7. 3.2	Perform required CREF filter testing in accordance with the Ventilation Filter Testing Program (VFTP)	In accordance with the VFTP
SR	3.7. 3.3	Verify each CREF unit actuates on an actual or simulated initiation signal.	18 months

3.7 PLANT SYSTEMS

3.7.4 Control Room Air Conditioning (AC) System

LCO 3.7. 4 Two control room AC subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 5(except maintenance surveillance cycle), During movement of irradiated fuel assemblies in the secondary containment, During CORE ALTERATIONS, During operations with a potential for draining the reactor vessel (OPDRVs) , During movement of heavy loads (the weight more than the combined weight of a single spent fuel assembly and its handling tool) over irradiated fuel assemblies in the secondary containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One control room AC subsystem inoperable.	A.1 Restore control room AC subsystem to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, or 3.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours
C. Required Action and associated Completion Time of Condition A not met in MODE 5, during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONs, during OPDRVs, or during movement of heavy loads over irradiated fuel assemblies in the secondary containment.	----------NOTE---------- LCO 3.0.3 is not applicable. ---------- C.1 Place OPERABLE control room AC subsystem in operation. OR C.2.1 Suspend movement of irradiated fuel assemblies in the secondary containment. AND	 Immediately Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2.2 Suspend CORE ALTERATIONS. AND C.2.3 Initiate action to suspend OPDRVs. AND C.2.4 Suspend movement of heavy loads over irradiated fuel assemblies in the secondary containment.	Immediately Immediately Immediately
D. Two control room AC subsystems inoperable in MODE 1, 2, or 3.	D.1 Enter LCO 3.0.3	Immediately
E. Two control room AC subsystems inoperable in MODE 5,during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONs, during OPDRVs, or during movement of heavy loads over irradiated fuel assemblies in the secondary containment.	----------NOTE---------- LCO 3.0.3 is not applicable. ---------- E.1 Suspend movement of irradiated fuel assemblies in the secondary containment. AND E.2 Suspend CORE ALTERATIONS. AND E.3 Initiate action to suspend OPDRVs. AND E.4 Suspend movement of heavy loads over irradiated fuel assemblies in the secondary containment.	 Immediately Immediately Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE			FREQUENCY
SR	3.7. 4.1	Verify each control room AC subsystem has the capability to remove the assumed heat load.	18 months

3.7 PLANT SYSTEMS

3.7.5 Main Condenser Offgas

LCO 3.7.5 The gross gamma activity rate of the noble gases from the main Condenser Vacuum system shall be ≤ 6.57×10^9 Bq/sec. (177.5 mCi/sec.)

APPLICABILITY: MODE 1,
MODES 2 and 3 with any main steam line not isolated and steam jet ejector (SJAE) in operation.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Gross gamma activity rate of the noble gases not within limit.	A.1 Restore gross gamma activity rate of the noble gases to within limit.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Isolate all main steam lines. OR B.2 Isolate SJAE. OR B.3.1 Be in MODE 3. AND B.3.2 Be in MODE 4.	12 hours 12 hours 12 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE			FREQUENCY
SR	3.7.5.1	----------NOTE---------- Not Required to be performed until 31 days after any main steam line not isolated and SJAE in operation. ---------- Verify the gross gamma activity rate of the noble gases is $\leq 6.57 \times 10^9$ Bq/sec. (177.5 mCi/sec.).	31 days AND Once within 4 hours after a $\geq$ 50% increase in the nominal steady state fission gas release after factoring out increases due to changes in THERMAL POWER level

3.7 PLANT SYSTEMS

3.7.6 The Main Turbine Bypass System

LCO 3.7.6 The Main Turbine Bypass System shall be OPERABLE.
OR
LCO 3.2.2, "MINIMUM CRITICAL POWER RATIO (MCPR)," limits for an inoperable Main Turbine Bypass System, as specified in the COLR, are made applicable.

APPLICABILITY: THERMAL POWER ≥ 25% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of the LCO not met or Main Turbine Bypass System inoperable.	A.1 Satisfy the requirements of the LCO or restore Main Turbine Bypass System to OPERABLE status.	2 hours
B. Required Action and associated Completion Time not met	B.1 Reduce THERMAL POWER to < 25% RTP.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE			FREQUENCY
SR	3.7.6.1	Verify part-stroke exercising of each main turbine bypass valve.	31 days
SR	3.7.6.2	Perform a system functional test.	18 months
SR	3.7.6.3	Verify the TURBINE BYPASS SYSTEM RESPONSE TIME is within limits as following: a. Delay to open time within 0.1 second. b. 80% of full opening time within 0.3 second.	18 months

3.7 PLANT SYSTEMS

3.7.7 Spent Fuel Storage Pool Water Level

LCO 3.7.7 The spent fuel storage pool water level shall be ≥ 11.6 m (38 ft. l in) above the spent fuel pool bottom liner.

APPLICABILITY: MODE 5,
During movement of irradiated fuel assemblies in the spent fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Spent 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 spent fuel storage pool.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.7.1	Verify the spent fuel storage pool water level is ≥ 11.6 m (38 ft. l in) above the spent fuel pool bottom liner.	7 days