3.3 INSTRUMENTATION

3.3.3 Post Accident Monitoring (PAM) Instrumentation

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

APPLICABILITY: According to Table 3.3.3-1.

ACTIONS

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

	CONDITION		REQUIRED ACTION	COMPLETION TIME
A.	------------NOTE------------ Not applicable to Functions 3, 4, 15, and 17. ------------------------------- One or more Functions with one required channel inoperable.	A.1	Restore required channel to OPERABLE status.	30 days
B.	Required Action and associated Completion Time of Condition A not met.	B.1	Initiate action in accordance with Specification 5.9.8.	Immediately

(continued)

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

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

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

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required unless otherwise stated.

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

a.   MODE 3 within 7 hours;

b.   MODE 4 within 13 hours; and

c.   MODE 5 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

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

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

LCO 3.0.4   When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:

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

(continued)

3.0 LCO APPLICABILITY

LCO 3.0.4
(continued)

b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; exceptions to this Specification are stated in the individual Specifications, or

c. When an allowance is stated in the individual value, parameter, or other Specification.

This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

LCO 3.0.5

Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

LCO 3.0.6

When a supported system LCO is not met solely due to a support system LCO not being met, the Conditions and Required Actions associated with this supported system are not required to be entered. Only the support system LCO ACTIONS are required to be entered. This is an exception to LCO 3.0.2 for the supported system. In this event, additional evaluations and limitations may be required in accordance with Specification 5.7.2.18, "Safety Function Determination Program (SFDP)." If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

(continued)

3.0 SR APPLICABILITY

SR 3.0.3 (continued)	When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.
SR 3.0.4	Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 3.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4.

This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit. |

3.1 REACTIVITY CONTROL SYSTEMS

3.1.1 SHUTDOWN MARGIN (SDM) - T_{avg} > 200°F

LCO 3.1.1   SDM shall be $\geq$ 1.6% $\Delta k/k$.

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

ACTIONS

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

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.1.1.1 Verify SDM is $\geq$ 1.6% $\Delta k/k$.	24 hours

3.1 REACTIVITY CONTROL SYSTEMS

3.1.2 SHUTDOWN MARGIN (SDM)-$T_{avg} \leq 200°F$

LCO 3.1.2   The SDM shall be $\geq 1.0\%$ $\Delta k/k$.

APPLICABILITY: MODE 5.

ACTIONS

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

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.1.2.1 Verify SDM is $\geq 1.0\%$ $\Delta k/k$.	24 hours

3.3 INSTRUMENTATION

3.3.4 Remote Shutdown System

LCO 3.3.4   The Remote Shutdown System Functions in Table 3.3.4-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

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

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

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 RCS Loops - MODE 5, Loops Not Filled

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

---NOTES---
1.   All RHR pumps may be de-energized for ≤ 15 minutes when switching
        from one loop to another provided:

        a.   The core outlet temperature is maintained > 10°F below
                saturation temperature.

        b.   No operations are permitted that would cause a reduction of the
                RCS boron concentration; and

        c.   No draining operations to further reduce the RCS water volume
                are permitted.

2.   One RHR loop may be inoperable for ≤ 2 hours for surveillance testing
        provided that the other RHR loop is OPERABLE and in operation.

APPLICABILITY: MODE 5 with RCS loops not filled.

ACTIONS

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

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.11 Pressurizer Power Operated Relief Valves (PORVs)

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

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

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

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

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.12 Cold Overpressure Mitigation System (COMS)

LCO 3.4.12   A COMS System shall be OPERABLE with a maximum of one charging pump
                    and no safety injection pump capable of injecting into the RCS and the
                    accumulators isolated and either a or b below.

           a.   Two RCS relief valves, as follows:

                    1.   Two power operated relief valves (PORVs) with lift settings within
                           the limits specified in the PTLR, or

                    2.   One PORV with a lift setting within the limits specified in the
                           PTLR and the RHR suction relief valve with a setpoint
                           $\geq$ 436.5 psig and $\leq$ 463.5 psig.

           b.   The RCS depressurized and an RCS vent capable of relieving > 475 gpm
                    water flow.

---NOTES---
   1.   Two charging pumps may be made capable of injecting for less than or equal to one hour
         for pump swap operations.

   2.   Accumulator may be unisolated when accumulator pressure is less than the maximum
         RCS Pressure for the existing RCS cold leg temperature allowed by the P/T limit curves
         provided in the PTLR.

APPLICABILITY: MODES 4 and 5,
                   MODE 6 when the reactor vessel head is on.

ACTIONS

--NOTE--
LCO 3.0.4.b is not applicable when entering MODE 4.

	CONDITION		REQUIRED ACTION	COMPLETION TIME
A.	One or more safety injection pumps capable of injecting into the RCS.	A.1	Initiate action to verify no safety injection pumps are capable of injecting into the RCS.	Immediately
B.	Two or more charging pumps capable of injecting into the RCS.	B.1	Initiate action to verify a maximum of one charging pump is capable of injecting into the RCS.	Immediately
C.	An accumulator not isolated when the accumulator pressure is greater than or equal to the maximum RCS pressure for existing cold leg temperature allowed in the PTLR.	C.1	Isolate affected accumulator.	1 hour

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.15 RCS Leakage Detection Instrumentation

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

                    a.   One containment pocket sump level monitor; and

                    b.   One lower containment atmosphere radioactivity monitor (gaseous and
                           particulate).

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required containment pocket sump level monitor inoperable.	A.1 Perform SR 3.4.13.1. AND A.2 Restore required containment pocket sump level monitor to OPERABLE status.	Once per 24 hours 30 days
		(continued)

ACTIONS (continued)

	CONDITION		REQUIRED ACTION	COMPLETION TIME
B.	Required containment · atmosphere radioactivity monitor inoperable.	B.1.1	Analyze grab samples of the containment atmosphere.	Once per 24 hours
			OR	
		B.1.2	Perform SR 3.4.13.1.	Once per 24 hours
		AND		
		B.2	Restore required containment atmosphere radioactivity monitor to OPERABLE status.	30 days
C.	Required Action and associated Completion Time not met.	C.1	Be in MODE 3.	6 hours
		AND		
		C.2	Be in MODE 5.	36 hours
D.	All required monitors inoperable.	D.1	Enter LCO 3.0.3.	Immediately

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.16 RCS Specific Activity

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

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. DOSE EQUIVALENT I-131 > 0.265 µCi/gm.	------------------NOTE------------------ LCO 3.0.4.c is applicable. -- A.1 Verify DOSE EQUIVALENT I-131 $\leq$ 21 µCi/gm AND A.2 Restore DOSE EQUIVALENT I-131 to within limit.	 Once per 4 hours 48 hours
B. Gross specific activity of the reactor coolant not within limit.	B.1 Perform SR 3.4.16.2. AND B.2 Be in MODE 3 with T_{avg} < 500°F.	4 hours 6 hours
		(continued)

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.2 ECCS - Operating

LCO 3.5.2   Two ECCS trains shall be OPERABLE.

---NOTES---
1.   In MODE 3, both safety injection (SI) pump flow paths may be isolated by closing the isolation valves for up to 2 hours to perform pressure isolation valve testing per SR 3.4.14.1.

2.   In MODE 3, the safety injection pumps and charging pumps may be made incapable of injecting to support transition into or from the Applicability of the LCO 3.4.12, Cold Overpressure Mitigation System (COMS) for up to four hours or until the temperature of all the RCS cold legs exceeds 375°F, whichever occurs first.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more trains inoperable. AND At least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available.	A.1 Restore train(s) to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	6 hours 12 hours

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.3 ECCS - Shutdown

LCO 3.5.3   One ECCS train shall be OPERABLE.

APPLICABILITY: MODE 4.

ACTIONS

--NOTE--
        LCO 3.0.4.b is not applicable to ECCS high head (centrifugal charging) subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required ECCS residual heat removal (RHR) subsystem inoperable.	-----------------------NOTE---------------------- The required ECCS residual heat removal (RHR) subsystem may be inoperable for up to 1 hour for surveillance testing of valves provided that alternate heat removal methods are available via the steam generators to maintain the Reactor Coolant System T_{avg} less than 350°F and provided that the required subsystem is capable of being manually realigned to the ECCS mode of operation from the main control room. --	
	A.1 Initiate action to restore required ECCS RHR subsystem to OPERABLE status.	Immediately
B. Required ECCS centrifugal charging subsystem inoperable.	B.1 Restore required ECCS centrifugal charging subsystem to OPERABLE status.	1 hour

(continued)

3.6 CONTAINMENT SYSTEMS

3.6.7 Hydrogen Recombiners

LCO 3.6.7   Two hydrogen recombiners shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

	CONDITION		REQUIRED ACTION	COMPLETION TIME
A.	One hydrogen recombiner inoperable.	A.1	Restore hydrogen recombiner to OPERABLE status.	30 days
B.	Two hydrogen recombiners inoperable.	B.1	Verify by administrative means that the hydrogen control function is maintained.	1 hour AND Once per 12 hours thereafter
		AND		
		B.2	Restore one hydrogen recombiner to OPERABLE status.	7 days
C.	Required Action and associated Completion Time not met.	C.1	Be in MODE 3.	6 hours

3.7 PLANT SYSTEMS

3.7.4 Atmospheric Dump Valves (ADVs)

LCO 3.7.4   Four 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 Restore required ADV line to OPERABLE status.	7 days
B. One train (two ADV lines) inoperable due to one train of ACAS inoperable.	B.1 Restore ADV lines to OPERABLE status.	72 hours
C. Two or more required ADV lines inoperable for reasons other than Condition B.	C.1 Restore all but one ADV line to OPERABLE status.	24 hours
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3. AND D.2 Be in MODE 4 without reliance upon steam generator for heat removal.	6 hours 18 hours

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

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

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One steam supply to turbine driven AFW pump inoperable.	A.1 Restore steam supply to OPERABLE status.	7 days AND 10 days from discovery of failure to meet the LCO
B. One AFW train inoperable in MODE 1, 2 or 3 for reasons other than Condition A.	B.1 Restore AFW train to OPERABLE status.	72 hours AND 10 days from discovery of failure to meet the LCO

(continued)

3.8 ELECTRICAL POWER SYSTEMS

3.8.1 AC Sources - Operating

LCO 3.8.1   The following AC electrical sources shall be OPERABLE:

          a.   Two qualified circuits between the offsite transmission network and the
                 onsite Class 1E AC Electrical Power Distribution System; and

          b.   Four diesel generators (DGs) capable of supplying the onsite Class 1E
                 AC Electrical Power Distribution System.

---NOTE---
          The C-S DG may be substituted for any of the required DGs.

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

ACTIONS

--NOTE---
                 LCO 3.0.4.b is not applicable to DGs.

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

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.

ACTIONS

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

SURVEILLANCE REQUIREMENTS

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

3.9 REFUELING OPERATIONS

3.9.2 Unborated Water Source Isolation Valves

LCO 3.9.2   Each valve used to isolate unborated water sources 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. AND A.2 Initiate action to secure valve in closed position. AND A.3 Perform SR 3.9.1.1.	Immediately Immediately 4 hours

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.

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. OR A.2 Initiate action to establish ≥ 23 ft of water above the top of reactor vessel flange. .	Immediately Immediately

(continued)