3.3 INSTRUMENTATION

3.3.1 Protection System (PS)

LCO 3.3.1 The PS sensors, manual actuation switches, signal processors, and actuation devices specified in Table 3.3.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.1-1.

ACTIONS

---------- NOTE ----------
Separate Condition entry is allowed for each sensor, manual actuation switch, signal processor, and actuation device.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more sensors inoperable.	A.1 ----------NOTE---------- Only applicable for Table 3.3.1-1, Component A.21. ---------- Place inoperable sensor in trip. AND A.2 ----------NOTE---------- Not applicable for Table 3.3.1-1, Component A.21. ---------- Place inoperable sensor in lockout.	1 hour 4 hours
B. One or more manual actuation switches inoperable.	B.1 Restore manual actuation switch to OPERABLE status.	48 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more acquisition and processing units (APUs) inoperable due to the Setpoint Control Program requirements for one or more Trip/Actuation Functions not met.	C.1 ----------NOTE---------- Only applicable for APUs associated with Table 3.3.1-2, Trip/Actuation Functions B.10.a and B.10.b. ---------- Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources - Operating," and LCO 3.8.2, "AC Sources - Shutdown," for emergency diesel generator (EDG) made inoperable by inoperable APU.	1 hour
	AND	
	C.2 ----------NOTE---------- Not applicable for APUs associated with Table 3.3.1-2, Trip/Actuation Functions B.10.a and B.10.b. ---------- Place the Trip/Actuation Function in the associated APU in lockout.	24 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more signal processors inoperable for reasons other than Condition C.	D.1 ----------NOTE---------- Only applicable for APUs associated with Table 3.3.1-2, Trip/Actuation Functions B.10.a and B.10.b. ---------- Enter applicable Conditions and Required Actions of LCO 3.8.1 and LCO 3.8.2 for EDG made inoperable by inoperable APU.	1 hour
	AND	
	D.2 ----------NOTE---------- Not applicable for APUs associated with Table 3.3.1-2, Trip/Actuation Functions B.10.a and B.10.b. ---------- Place inoperable signal processor in lockout.	4 hours
E. One or more actuation devices inoperable.	E.1 Restore actuation device to OPERABLE status.	48 hours
F. Required Action and associated Completion Time of Condition A, B, C, D, or E not met. OR Minimum functional capability specified in Table 3.3.1-1 not maintained.	F.1 Enter the Condition referenced in Table 3.3.1-1.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
G. As required by Required Action F.1 and referenced in Table 3.3.1-1.	G.1 Reduce THERMAL POWER to < 70% RTP.	2 hours
H. As required by Required Action F.1 and referenced in Table 3.3.1-1.	H.1 Reduce THERMAL POWER to < 10% RTP.	6 hours
I. As required by Required Action F.1 and referenced in Table 3.3.1-1.	I.1 Be in MODE 2.	6 hours
J. As required by Required Action F.1 and referenced in Table 3.3.1-1.	J.1 Be in MODE 3.	6 hours
K. As required by Required Action F.1 and referenced in Table 3.3.1-1.	K.1 Be in MODE 3. AND K.2 Open the reactor trip breakers.	6 hours 6 hours
L. As required by Required Action F.1 and referenced in Table 3.3.1-1.	L.1 Be in MODE 3. AND L.2 Reduce pressurizer pressure to < 2005 psia.	6 hours 12 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
M. As required by Required Action F.1 and referenced in Table 3.3.1-1.	M.1 Be in MODE 3. AND M.2 Be in MODE 4.	6 hours 12 hours
N. As required by Required Action F.1 and referenced in Table 3.3.1-1.	N.1 Be in MODE 3. AND N.2 Be in MODE 5.	6 hours 36 hours
O. As required by Required Action F.1 and referenced in Table 3.3.1-1.	O.1 Declare associated EDG inoperable.	Immediately
P. As required by Required Action F.1 and referenced in Table 3.3.1-1.	P.1 Declare associated Chemical and Volume Control System isolation valve(s) inoperable.	Immediately
Q. As required by Required Action F.1 and referenced in Table 3.3.1-1.	Q.1 Declare associated Pressurizer Safety Relief Valve(s) inoperable.	Immediately
R. As required by Required Action F.1 and referenced in Table 3.3.1-1.	R.1 Declare both Control Room Emergency Filtration trains inoperable.	Immediately
S. As required by Required Action F.1 and referenced in Table 3.3.1-1.	S.1 Open reactor trip breakers.	1 hour

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
T. As required by Required Action F.1 and referenced in Table 3.3.1-1.	T.1 Declare associated Actuation Logic Units inoperable. AND	Immediately
	T.2 Open reactor trip breakers.	1 hour

SURVEILLANCE REQUIREMENTS

----------NOTES----------

1. Refer to Table 3.3.1-1 to determine which SRs apply for each sensor, manual actuation switch, signal processor, or actuation device.

2. When a sensor, manual actuation switch, signal processor, or actuation device is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours provided the associated Trip/Actuation Function maintains functional capability.

SURVEILLANCE		FREQUENCY
SR 3.3.1.1	----------NOTE---------- Not required to be performed until 12 hours after THERMAL POWER ≥ 20% RTP. ---------- Compare results of calorimetric heat balance calculation to power range division output. Adjust power range division output if calorimetric heat balance calculations results exceed power range division output by more than +2% RTP.	24 hours

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.3.1.2	----------NOTE---------- Not required to be performed until 12 hours after THERMAL POWER ≥ 20% RTP. ---------- Perform CALIBRATION.	15 effective full power days
SR 3.3.1.3	Perform ACTUATION DEVICE OPERATIONAL TEST.	31 days
SR 3.3.1.4	Perform CALIBRATION consistent with Specification 5.5.18, “Setpoint Control Program (SCP).”	92 days
SR 3.3.1.5	Perform a SENSOR OPERATIONAL TEST.	24 months
SR 3.3.1.6	----------NOTE---------- Neutron detectors are excluded from CALIBRATION. ---------- Perform a CALIBRATION consistent with Specification 5.5.18, “Setpoint Control Program (SCP).”	24 months
SR 3.3.1.7	Perform EXTENDED SELF TESTS.	24 months
SR 3.3.1.8	Perform ACTUATION DEVICE OPERATIONAL TEST.	24 months
SR 3.3.1.9	Verify setpoints properly loaded in APUs.	24 months

Table 3.3.1-1 (page 1 of 3)
Protection System Sensors, Manual Actuation Switches,
Signal Processors, and Actuation Devices

COMPONENT	REQUIRED NUMBER OF SENSORS, SWITCHES, SIGNAL PROCESSORS, OR ACTUATION DEVICES	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	MINIMUMUM REQUIRED FOR FUNCTIONAL CAPABILITY	CONDITION	SURVEILLANCE REQUIREMENTS
A. Sensors					
1. 6.9 kV Bus Voltage	3 per EDG	1,2,3,4,(a)	2 per EDG	O	SR 3.3.1.5 SR 3.3.1.6
2. Boron Concentration - Chemical and Volume Control System (CVCS) Charging Line	4	3[(b)],4[(b)],5,6	2	P	SR 3.3.1.4 SR 3.3.1.5
3. Boron Temperature - CVCS Charging Line	4	3[(b)],4[(b)],5,6	2	P	SR 3.3.1.5 SR 3.3.1.6
4. CVCS Charging Line Flow	4	3[(b)],4[(b)],5[(b)]	2	P	SR 3.3.1.5 SR 3.3.1.6
5. Cold Leg Temperature (Narrow Range)	4	≥ 10% RTP	3	H	SR 3.3.1.5 SR 3.3.1.6
6. Cold Leg Temperature (Wide Range)	4	1,2[(c)]	3	J	SR 3.3.1.5 SR 3.3.1.6
	4	3,4,5,6[(b)]	2	P	SR 3.3.1.5 SR 3.3.1.6
7. Containment Pressure	4 per area	1,2,3	3 per area	M	SR 3.3.1.5 SR 3.3.1.6
8. Hot Leg Pressure (Wide Range)	4	1,2,3	3	M	SR 3.3.1.5 SR 3.3.1.6
	4	(d)	2	Q	SR 3.3.1.5 SR 3.3.1.6
9. Hot Leg Temperature (Narrow Range)	4 per division, 4 divisions	1,2[(c)]	3 per division, 3 divisions	J	SR 3.3.1.5 SR 3.3.1.6
10. Hot Leg Temperature (Wide Range)	4	3[(e)]	3	M	SR 3.3.1.5 SR 3.3.1.6

(a) When associated EDG is required to be OPERABLE by LCO 3.8.2, "AC Sources - Shutdown."

(b) With three or more reactor coolant pumps (RCPs) in operation.

(c) ≥ 10^{-5}% power on the intermediate range detectors.

(d) When Pressurizer Safety Relief Valves (PSRVs) are required to be OPERABLE per LCO 3.4.11, "Low Temperature Overpressure Protection (LTOP)."

(e) When Table 3.3.1-2, Trip/Actuation Function B.3.a is disabled.

Table 3.3.1-1 (page 2 of 3)
Protection System Sensors, Manual Actuation Switches,
Signal Processors, and Actuation Devices

COMPONENT	REQUIRED NUMBER OF SENSORS, SWITCHES, SIGNAL PROCESSORS, OR ACTUATION DEVICES	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	MINIMUMUM REQUIRED FOR FUNCTIONAL CAPABILITY	CONDITION	SURVEILLANCE REQUIREMENTS
11. Intermediate Range	4	1[(f)],2,3[(g)]	3	K	SR 3.3.1.5 SR 3.3.1.6
12. Power Range	2 per division, 4 divisions	1,2,3[(g)]	2 per division, 3 divisions	K	SR 3.3.1.1 SR 3.3.1.5 SR 3.3.1.6
13. Pressurizer Level (Narrow Range)	4	1,2,3	3	M	SR 3.3.1.5 SR 3.3.1.6
14. Pressurizer Pressure (Narrow Range)	4	1,2,3[(h)]	3	L	SR 3.3.1.5 SR 3.3.1.6
15. Radiation Monitor - Containment High Range	4	1,2,3,4	3	K	SR 3.3.1.5 SR 3.3.1.6
16. Radiation Monitor - Control Room HVAC Intake Activity	4	1,2,3,4	3	N	SR 3.3.1.5 SR 3.3.1.6
	4	5,6,(i)	3	R	SR 3.3.1.5 SR 3.3.1.6
17. RCP Current	3 per RCP	1,2,3	2 per RCP	M	SR 3.3.1.5 SR 3.3.1.6
18. RCP Delta P Sensors	2 per RCP	1,2,3	1 per RCP	M	SR 3.3.1.5 SR 3.3.1.6
19. RCP Speed	4	≥ 10% RTP	3	H	SR 3.3.1.5 SR 3.3.1.6
20. Reactor Coolant System (RCS) Loop Flow	4 per loop	1,2[(c)]	3 per loop	J	SR 3.3.1.5 SR 3.3.1.6
21. Reactor Trip Circuit Breaker Position Indication	4	1,2[(g)],3[g)]	3	M	SR 3.3.1.5 SR 3.3.1.8
22. Self-Powered Neutron Detectors	72	≥ 10% RTP	51	H	SR 3.3.1.2 SR 3.3.1.5

(c) ≥ 10^{-5} % power on the intermediate range detectors.

(f) ≤ 10% RTP.

(g) With the Reactor Control, Surveillance and Limitation (RCSL) System capable of withdrawing a Rod Cluster Control Assembly (RCCA) or one or more RCCAs not fully inserted.

(h) With pressurizer pressure ≥ 2005 psia.

(i) During movement of irradiated fuel assemblies.

Table 3.3.1-1 (page 3 of 3)
Protection System Sensors, Manual Actuation Switches,
Signal Processors, and Actuation Devices

COMPONENT	REQUIRED NUMBER OF SENSORS, SWITCHES, SIGNAL PROCESSORS, OR ACTUATION DEVICES	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	MINIMUMUM REQUIRED FOR FUNCTIONAL CAPABILITY	CONDITION	SURVEILLANCE REQUIREMENTS
23. Steam Generator (SG) Level (Narrow Range)	4 per SG	1,2[(j)],3[(j)]	3 per SG	M	SR 3.3.1.5 SR 3.3.1.6
24. SG Level (Wide Range)	4 per SG	1,2,3	3 per SG	M	SR 3.3.1.5 SR 3.3.1.6
25. SG Pressure	4 per SG	1,2,3	3 per SG	M	SR 3.3.1.5 SR 3.3.1.6
B. Manual Actuation Switches					
1. Reactor Trip	4	1,2,3[(g)]	3	K	SR 3.3.1.8
	4	4[(g)],5[(g)]	3	S	SR 3.3.1.8
2. Safety Injection System (SIS) Actuation	4	1,2,3,4	3	N	SR 3.3.1.8
3. SG Isolation	4 per SG	1,2,3	3 per SG	M	SR 3.3.1.8
C. Signal Processors					
1. Remote Acquisition Units (RAUs)	2 per division, 4 divisions	≥ 10% RTP	1 per division, 4 divisions	H	SR 3.3.1.5 SR 3.3.1.7
2. Acquisition and Processing Units (APUs)	5 per division, 4 divisions	Refer to Table 3.3.1-2	Refer to Table 3.3.1-2	Refer to Table 3.3.1-2	SR 3.3.1.5 SR 3.3.1.7 SR 3.3.1.9
3. Actuation Logic Units (ALUs)	4 per division, 4 divisions	1,2,3,4	3 per division, 4 divisions	N	SR 3.3.1.5 SR 3.3.1.7
	4 per division, 4 divisions	5,6,(i)	3 per division, 4 divisions	T	SR 3.3.1.5 SR 3.3.1.7
D. Actuation Devices					
1. Reactor Coolant Pump Bus and Trip Breakers	2 per pump	1,2,3,4	1 per pump	N	SR 3.3.1.8
2. Reactor Trip Circuit Breakers	4	1,2,3[(g)]	3	K	SR 3.3.1.3
3. Reactor Trip Contactors	4 per set, 23 sets	1,2,3[(g)]	3 per set, 23 sets	K	SR 3.3.1.3

(g) With the RCSL capable of withdrawing a RCCA or one or more RCCAs not fully inserted.

(i) During movement of irradiated fuel assemblies.

(j) Except when all main feedwater (MFW) isolation valves are closed.

Table 3.3.1-2 (page 1 of 6)
Acquisition and Processing Unit Requirements Referenced from Table 3.3.1-1

	TRIP/ACTUATION FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	MINIMUM REQUIRED FOR FUNCTIONAL CAPABILITY[a]	SETTING BASIS	CONDITION
A.	Reactor Trip				
1.a.	Low Departure from Nucleate Boiling Ratio (DNBR)	≥ 10% RTP	3 divisions	(b)	H
1.b.	Low DNBR and Imbalance or Rod Drop	≥ 10% RTP	3 divisions	(b)	H
1.c.	Variable Low DNBR and Rod Drop	≥ 10% RTP	3 divisions	(b)	H
1.d.	Low DNBR - High Quality	≥ 10% RTP	3 divisions	(b)	H
1.e.	Low DNBR - High Quality and Imbalance or Rod Drop	≥ 10% RTP	3 divisions	(b)	H
2.	High Linear Power Density	≥ 10% RTP	3 divisions	(b)	H
3.	High Neutron Flux Rate of Change (Power Range)	1,2,3[c]	3 divisions	≥ 13% RTP	K
4.	High Core Power Level	1,2[d]	3 divisions	≤ 116.7% RTP	J
5.	Low Saturation Margin	1,2[d]	3 divisions	≥ 0 Btu/lb	J
6.a.	Low-Low Reactor Coolant System (RCS) Loop Flow Rate in One Loop	≥ 70% RTP	3 divisions	≥ 50% Nominal Flow	G
6.b.	Low RCS Loop Flow Rate in Two Loops	≥ 10% RTP	3 divisions	≥ 86% Nominal Flow	H
7.	Low Reactor Coolant Pump (RCP) Speed	≥ 10% RTP	3 divisions	≥ 92% Nominal Speed	H
8.	High Neutron Flux (Intermediate Range)	1[e],2,3[c]	3 divisions	≤ 25% RTP	K

(a) A division is OPERABLE provided: a) the minimum sensors required for functional capability for all sensors providing input to the Trip/Actuation Function are OPERABLE; and b) the associated APU is OPERABLE.

(b) As specified in the COLR.

(c) With the RCSL System capable of withdrawing a RCCA or one or more RCCAs not fully inserted.

(d) ≥ 10^{-5}% power on the intermediate range detectors.

(e) ≤ 10% RTP.

Table 3.3.1-2 (page 2 of 6)
Acquisition and Processing Unit Requirements Referenced from Table 3.3.1-1

	TRIP/ACTUATION FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	MINIMUM REQUIRED FOR FUNCTIONAL CAPABILITY[a]	SETTING BASIS	CONDITION
9.	Low Doubling Time (Intermediate Range)	1[e],2,3[c]	3 divisions	≥ 10 Sec.	K
10.	Low Pressurizer Pressure	≥ 10% RTP	3 divisions	≥ 1950 psia	H
11.	High Pressurizer Pressure	1,2	3 divisions	≤ 2470 psia	J
12.	High Pressurizer Level	1,2	3 divisions	≤ 83% Measuring Range	J
13.	Low Hot Leg Pressure	1,2,3[c][f]	3 divisions	≥ 1895 psia	L
14.	Steam Generator (SG) Pressure Drop	1,2	3 divisions	≥ 29 psi/min; 177 psi<ss; Max 1088 psia	J
15.	Low SG Pressure	1,2,3[c][f]	3 divisions	≥ 650 psia	M
16.	High SG Pressure	1	3 divisions	≤ 1460 psia	I
17.	Low SG Level	1,2	3 divisions	≥ 3.5% Narrow Range	J
18.	High SG Level	1,2	3 divisions	≤ 80.5% Narrow Range	J
19.	High Containment Pressure	1,2	3 divisions	≤ 19.2 psia	J

(a) A division is OPERABLE provided: a) the minimum sensors required for functional capability for all sensors providing input to the Trip/Actuation Function are OPERABLE; and b) the associated APU is OPERABLE.

(c) With the RCSL System capable of withdrawing a RCCA or one or more RCCAs not fully inserted.

(e) ≤ 10% RTP.

(f) With pressurizer pressure ≥ 2005 psia.

Table 3.3.1-2 (page 3 of 6)
Acquisition and Processing Unit Requirements Referenced from Table 3.3.1-1

	TRIP/ACTUATION FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	MINIMUM REQUIRED FOR FUNCTIONAL CAPABILITY[a]	SETTING BASIS	CONDITION
B.	ENGINEERED SAFETY FEATURES ACTUATION SYSTEM (ESFAS) SIGNALS				
1.	Turbine Trip on Reactor Trip (RT)	1	3 divisions	RT for 1 sec.	I
2.a.	Main Feedwater Full Load Closure on Reactor Trip (All SGs)	1,2[g]	3 divisions	NA	J
2.b.	Main Feedwater Full Load Closure on High SG Level (Affected SGs)	1,2[g],3[g]	3 divisions	≤ 80.5% Narrow Range	M
2.c.	Startup and Shutdown Feedwater Isolation on SG Pressure Drop (All SGs)	1,2[h],3[h]	3 divisions	≥ 29 psi/min; 322 psi<ss; Max 943 psia	M
2.d.	Startup and Shutdown Feedwater Isolation on Low SG Pressure (All SGs)	1,2[h],3[f][h]	3 divisions	≥ 505 psia	L
2.e.	Startup and Shutdown Feedwater Isolation on High SG Level for Period of Time (Affected SGs)	1,2[h],3[h]	3 divisions	≤ 66.5% Narrow Range for 10 sec.	M
3.a.	Safety Injection System (SIS) Actuation on Low Pressurizer Pressure	1,2,3[j]	3 divisions	≥ 1613 psia	L
3.b.	SIS Actuation on Low Delta Psat	3[i]	3 divisions	≥ 39 psia	M
4.	RCP Trip on Low Delta P across RCP with SIS Actuation	1,2,3	3 divisions	≥ 75% Nominal Pressure	M
5.	Partial Cooldown Actuation on SIS Actuation	1,2,3	3 divisions	NA	M

(a) A division is OPERABLE provided: a) the minimum sensors required for functional capability for all sensors providing input to the Trip/Actuation Function are OPERABLE; and b) the associated APU is OPERABLE.

(f) With pressurizer pressure ≥ 2005 psia.

(g) Except when all MFW full load isolation valves are closed.

(h) Except when all MFW low load isolation valves are closed.

(i) When Trip/Actuation Function B.3.a is disabled.

Table 3.3.1-2 (page 4 of 6)
Acquisition and Processing Unit Requirements Referenced from Table 3.3.1-1

	TRIP/ACTUATION FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	MINIMUM REQUIRED FOR FUNCTIONAL CAPABILITY[a]	SETTING BASIS	CONDITION
6.a.	Emergency Feedwater System (EFWS) Actuation on Low-Low SG Level (All SGs)	1,2,3	3 divisions	≥ 29% Wide Range	M
6.b.	EFWS Actuation on Loss of Offsite Power (LOOP) and SIS Actuation (All SGs)	1,2	3 divisions	NA	J
6.c.	EFWS Isolation on High SG Level (Affected SG)	1,2,3	3 divisions	≤ 98% Wide Range	M
7.a.	Main Steam Relief Train (MSRT) Actuation on High SG Pressure	1,2,3	3 divisions	≤ 1460 psia	M
7.b.	MSRT Isolation on Low SG Pressure	1,2,3[f]	3 divisions	≥ 505 psia	L
8.a.	Main Steam Isolation Valve (MSIV) Closure on SG Pressure Drop (All SGs)	1,2,3	3 divisions	≥ 29 psi/min; 177 psi<ss; Max 1088 psia	M
8.b.	MSIV Closure on Low SG Pressure (All SGs)	1,2,3[j]	3 divisions	≥ 650 psia	L
9.a.	Containment Isolation (Stage 1) on High Containment Pressure	1,2,3	3 divisions	≤ 19.2 psia	M
9.b.	Containment Isolation (Stage 1) on SIS Actuation	1,2,3,4	3 divisions	NA	N
9.c.	Containment Isolation (Stage 2) on High-High Containment Pressure	1,2,3	3 divisions	≤ 38.3 psia	M
9.d.	Containment Isolation (Stage 1) on High Containment Radiation	1,2,3,4	3 divisions	≤ 100 x background	N

(a) A division is OPERABLE provided: a) the minimum sensors required for functional capability for all sensors providing input to the Trip/Actuation Function are OPERABLE; and b) the associated APU is OPERABLE.

(f) With pressurizer pressure ≥ 2005 psia.

(j) Except when all MSIVs are closed.

Table 3.3.1-2 (page 5 of 6)
Acquisition and Processing Unit Requirements Referenced from Table 3.3.1-1

	TRIP/ACTUATION FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	MINIMUM REQUIRED FOR FUNCTIONAL CAPABILITY[a]	SETTING BASIS	CONDITION
10.a.	Emergency Diesel Generator (EDG) Start on Degraded Grid Voltage	1,2,3,4,(k)	NA	≥ 6089 V and ≤ 6486 V; ≥ 6.5 sec. and ≤ 12 sec. w/SIS, ≥ 6.5 sec. and ≤ 300 sec. wo/SIS	NA
10.b.	EDG Start on LOOP	1,2,3,4,(k)	NA	≥ 4692 V and ≤ 5085 V; ≥ 0.17 sec. and ≤ 7 sec.	NA
11.a.	Chemical and Volume Control System (CVCS) Charging Line Isolation on High-High Pressurizer Level	1,2,3	3 divisions	≤ 88% Measuring Range	M
11.b.	CVCS Charging Line Isolation on Anti-Dilution Mitigation (ADM) at Shutdown Condition (RCP not operating)	5[l],6	3 divisions	(b)	P
11.c.	CVCS Charging Line Isolation on ADM at Standard Shutdown Conditions	3,4[m],5[m]	3 divisions	(b)	P

(a) A division is OPERABLE provided: a) the minimum sensors required for functional capability for all sensors providing input to the Trip/Actuation Function are OPERABLE; and b) the associated APU is OPERABLE.

(b) As specified in the COLR.

(k) When associated EDG is required to be OPERABLE by LCO 3.8.2.

(l) With two or less RCPs in operation.

(m) With three or more RCPs in operation.

Table 3.3.1-2 (page 6 of 6)
Acquisition and Processing Unit Requirements Referenced from Table 3.3.1-1

	TRIP/ACTUATION FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	MINIMUM REQUIRED FOR FUNCTIONAL CAPABILITY[(a)]	SETTING BASIS	CONDITION
12.a.	Pressurizer Safety Relief Valve (PSRV) Actuation - First Valve	(n)	3 divisions	(o)	Q
12.b.	PSRV Actuation - Second Valve	(n)	3 divisions	(o)	Q
13.	Control Room Heating, Ventilation, and Air Conditioning Reconfiguration to Recirculation Mode on High Intake Activity	1,2,3,4	3 divisions	$\leq$ 3 x background	N
		5,6,(p)	3 divisions	$\leq$ 3 x background	R

(a) A division is OPERABLE provided: a) the minimum sensors required for functional capability for all sensors providing input to the Trip/Actuation Function are OPERABLE; and b) the associated APU is OPERABLE.

(n) When the PSRVs are required to be OPERABLE by LCO 3.4.11.

(o) The LTOP arming temperature is specified in the PTLR.

(p) During movement of irradiated fuel assemblies.

3.3 INSTRUMENTATION

3.3.2 Post Accident Monitoring (PAM) Instrumentation

LCO 3.3.2 The PAM instrumentation for each Function in Table 3.3.2-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

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

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one required division inoperable.	A.1 Restore required division to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action in accordance with Specification 5.6.5.	Immediately
C. One or more Functions with two required division inoperable.	C.1 Restore one division to OPERABLE status.	7 days
D. Required Action and associated Completion Time of Condition C not met.	D.1 Be in MODE 3. AND D.2 Be in MODE 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

----------NOTE----------

This SR applies to each PAM instrumentation Function.

SURVEILLANCE		FREQUENCY
SR 3.3.2.1	Perform CALIBRATION	24 months
SR 3.3.2.2	Perform SENSOR OPERATIONAL TEST of the Safety Information and Control System division performing the PAM functions listed in Table 3.3.2-1.	24 months

Table 3.3.2-1 (page 1 of 1)
Post Accident Monitoring Instrumentation

	FUNCTION	REQUIRED NUMBER OF DIVISIONS
1.	Cold Leg Temperature (Wide Range)	1 per loop
2.	Containment Isolation Valve Position Indication	2[(a)(b)]
3.	Containment Pressure	2
4.	Emergency Feedwater Storage Pool Level	1 per pool
5.	Emergency Feedwater System Flow	1 per loop
6.	Extra Boration System Flow	2
7.	Hot Leg Injection Flow	1 per loop
8.	Hot Leg Pressure (Wide Range)	1 per loop
9.	Hot Leg Temperature (Wide Range)	1 per loop
10.	In-containment Refueling Water Storage Tank Level	2
11.	Incore Temperature	2 per quadrant
12.	Power Range Monitors	2
13.	Pressurizer Level	2
14.	Radiation Monitor - Containment High Range	2
15.	Radiation Monitor - Main Steam Line Activity	1 per line
16.	Source Range Monitors	2
17.	Steam Generator Level (Wide Range)	2 per SG
18.	Steam Generator Pressure	2 per SG

(a) Not required for isolation valves whose associated penetration is isolated by at least one closed and deactivated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.

(b) Only one position indication division is required for penetration flow paths with only one installed control room indication division.

3.3 INSTRUMENTATION

3.3.3 Remote Shutdown System (RSS)

LCO 3.3.3 The RSS Functions 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 Functions 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

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.3.1	Verify each required control circuit and transfer switch is capable of performing the intended function.	24 months

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.3.2	----------NOTE---------- Neutron detectors are excluded from the CALIBRATION. ---------- Perform CALIBRATION for each required instrument division.	24 months
SR 3.3.3.3	Perform SENSOR OPERATIONAL TEST of each required Safety Information and Control System division performing the Remote Shutdown System functions.	24 months