

E. PROPOSED TECHNICAL SPECIFICATION CHANGES

(AFFECTED PAGES ARE PROVIDED IN THE  
ORDER OF ASCENDING PAGE NUMBERS.)

## INSTRUMENTATION

### FIRE DETECTION INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

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3.3.7.9 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3.7.9-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument is required to be OPERABLE.

#### ACTION:

With the number of OPERABLE <sup>Function A or Function B</sup> fire detection instruments less than the Minimum Instruments OPERABLE requirement of Table 3.3.7.9-1:

- a. Within 1 hour, <sup>Function A or room(s) with Function B</sup> establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside the containment, steam tunnel or drywell, then inspect the primary containment at least once per 8 hours or monitor the containment, steam tunnel and/or drywell air temperature at least once per hour at the locations listed in Specification 3.7.8, 4.6.1.8 and 4.6.2.6.
- b. Restore the minimum number of instruments to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the instrument(s) to OPERABLE status.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.3.7.9.1 Each of the above required fire detection instruments which are accessible during unit operation shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST. Fire detectors which are not accessible during unit operation shall be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

4.3.7.9.2 The NFPA Standard 72D supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months.

TABLE 3.3.7.9-1

FIRE DETECTION INSTRUMENTATION

INSTRUMENT LOCATION			MINIMUM INSTRUMENTS OPERABLE*			
			ZONE <sup>(1)</sup>	HEAT <sup>(2)</sup>	FLAME	SMOKE <sup>(3)</sup>
a. Containment Building						
1. Return Duct Mounted Detectors			NA	NA	NA	3
b. Control Building						
ROOM NO.	ELEV.	ROOM NAME				
1. OC202	111'	DIV I SWGR RM	1-4	6	NA	4
2. OC207	111'	DIV I BATTERY RM	1-4	NA	NA	1
3. OC208	111'	DIV II REMOTE SHUTDOWN PANEL ROOM	1-27	1	NA	1
4. OC208A	111'	DIV I REMOTE SHUTDOWN PANEL ROOM	1-27	1	NA	1
5. OC209	111'	DIV III BATTERY RM	1-5	NA	NA	1
6. OC210	111'	DIV III SWGR RM	1-5	4	NA	2
7. OC211	111'	DIV II BATTERY RM	1-6	NA	NA	1
8. OC215	111'	DIV II SWGR RM	1-6	7	NA	4
9. OC307	131'	ELECTRICAL CHASE	1-10	NA	NA	1
10. OC306	131'	ELECTRICAL CHASE	1-10	NA	NA	1
11. OC302	133'	HYAL EQUIP. ROOM	1-11	NA	NA	13
12. OC402	140'	CABLE SPREADING RM	1-15	7	NA	10
13. OC403	149'	COMPUTER ROOM	1-14	12	NA	7
14. OC407	149'	INSTR. MOTOR GEN ROOM	1-15	2	NA	1
15. OC503 OC504	161'	CONTROL ROOM	1-18	NA	NA	16
16. OC702	181'	CABLE SPREADING RM	1-23	12	NA	14
17. OC703	181'	CONTROL CAB. ROOM	1-24	4	NA	6
18. OC707	181'	INSTR MOTOR GEN. RM	1-23	NA	NA	1

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\* The fire detection instruments located within the primary containment are not required to be OPERABLE during the performance of Type A Containment Leakage Rate Tests.

- (1) Zones apply only to smoke detectors.
- (2) Heat detectors provide warning and activation of automatic extinguishing systems.
- (3) Smoke detectors provide early warning capability.

TABLE 3.3.7.9-1 (Continued)  
FIRE DETECTION INSTRUMENTATION

<u>INSTRUMENT LOCATION</u>			<u>MINIMUM INSTRUMENTS OPERABLE*</u>				
<u>ROOM NO.</u>	<u>ELEV.</u>	<u>ROOM NAME</u>	<u>ZONE</u> <sup>(1)</sup>	<u>HEAT</u> <sup>(2)</sup>	<u>FLAME</u>	<u>SMOKE</u> <sup>(3)</sup>	
c. Auxiliary Building							
1.	1A102	93'	RHR 'A' HT EX RM	2-4	NA	NA	1
2.	1A103	93'	RHR 'A' PUMP RM	2-4	NA	NA	2
3.	1A104	93'	RCIC PUMP RM	2-4	NA	NA	2
4.	1A105	93'	RHR 'B' PUMP RM	2-4	NA	NA	2
5.	1A106	93'	RHR 'B' HT EX RM	2-4	NA	NA	1
6.	1A109	93'	HPCS PUMP RM	2-17	NA	NA	2
7.	1A111	93'	PIPING PENETRATION RM	2-17	NA	NA	1
8.	1A114	93'	FAN COIL AREA	2-14	NA	NA	4
9.	1A115	93'	PIPING PENETRATION RM	2-14	NA	NA	1
10.	1A116	93'	PIPING PENETRATION RM	2-14	NA	NA	1
11.	1A117	93'	MISC. EQUIP AREA	2-14	NA	NA	4
12.	1A118	93'	RHR 'C' PUMP ROOM	2-14	NA	NA	2
13.	1A119	93'	LPCS PUMP ROOM	2-14	NA	NA	2
14.	1A120	93'	CCW PUMP AND HX AREA	2-14	NA	NA	3
15.	1A121	103'	EAST CORRIDOR	2-17	NA	NA	5
16.	1A122	103'	SOUTH CORRIDOR	2-17 2-14	NA NA	NA NA	3 0
17.	1A123	103'	NORTH CORRIDOR	2-17 2-14	NA NA	NA NA	5 0
18.	1A201	119'	EAST CORRIDOR	2-18	NA	NA	6
19.	1A202	119'	RHR 'A' HX RM	2-4	NA	NA	1
20.	1A203	119'	PIPING PENETRATION RM	2-4	NA	NA	2
21.	1A204	119'	PIPING PENETRATION RM	2-4	NA	NA	2
22.	1A205	119'	PIPING PENETRATION RM	2-4	NA	NA	2
23.	1A206	119'	RHR 'B' HX RM	2-4	NA	NA	1
24.	1A207	119'	ELECT. SWGR ROOM	2-4	3	NA	2
25.	1A208	119'	ELECT. SWGR ROOM	2-4	3	NA	2
26.	1A209	115'	RWCU RECIRC PUMP 'A' RM	2-4	NA	NA	1
27.	1A210	115'	RWCU RECIRC PUMP 'B' RM	2-4	NA	NA	1
28.	1A211	119'	NORTH CORRIDOR	2-18 2-2	NA NA	NA NA	14 0
29.	1A215	119'	SOUTH CORRIDOR	2-2	NA	NA	5
30.	1A219	119'	ELECT. SWGR RM	2-3	2	NA	2

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**TABLE 3.3.7.9-1 (Continued)**  
**FIRE DETECTION INSTRUMENTATION**

INSTRUMENT LOCATION			MINIMUM INSTRUMENTS OPERABLE*				
ROOM NO.	ELEV.	ROOM NAME	ZONE <sup>(1)</sup>	HEAT <sup>(2)</sup>	FLAME	SMOKE <sup>(3)</sup>	
c. Auxiliary Building (Continued)							
31.	1A220	119'	PIPING PENETRATION RM	2-3	NA	NA	1
32.	1A221	119'	ELECT. SWGR RM	2-3	2	NA	2
33.	1A222	119'	WEST CORRIDOR	2-2	NA	NA	18
34.	1A301	139'	NORTHEAST CORRIDOR	2-6	NA	NA	2
35.	1A302	139'	SOUTHEAST CORRIDOR	2-6	NA	NA	1
36.	1A303	139'	RHR 'A' HX RM	2-6	NA	NA	1
37.	1A304	139'	PIPING PENETRATION RM	2-6	NA	NA	1
38.	1A305	139'	STEAM TUNNEL	2-20	NA	NA	2
39.	1A306	139'	PIPING PENETRATION RM	2-6	NA	NA	1
40.	1A307	139'	RHR 'B' HX RM	2-6	NA	NA	1
41.	1A308	139'	ELECT. PENETRATION RM	2-6	3	NA	2
42.	1A309	139'	ELECT. PENETRATION RM	2-6 2-6	3	NA	2 3
43.	1A314	139'	SOUTH CORRIDOR	2-19 2-6	NA NA	NA NA	3 0
44.	1A316	139'	NORTH CORRIDOR	2-6	NA	NA	12
45.	1A318	139'	ELECT. PENETRATION RM	2-5	2	NA	2
46.	1A319	139'	RPV INSTR. TEST RM	2-5	NA	NA	1
47.	1A320	139'	ELECT. PENETRATION RM	2-5	2	NA	2
48.	1A321	139'	MCC AREA	2-19	NA	NA	2
49.	1A322	139'	CENTRIFUGAL CHILLER AREA	2-19	NA	NA	4
50.	1A323	139'	SGTS AREA	2-19	NA	NA	1
51.	1A324	139'	HVAC EQUIP AREA	2-13	NA	NA	1
52.	1A326	139'	SGTS AREA	2-19	NA	NA	1
53.	1A401	166'	NORTHEAST CORRIDOR	2-8	NA	NA	3
54.	1A402	166'	STEAM TUNNEL ROOF	2-8	NA	NA	3
55.	1A403	166'	SOUTHEAST CORRIDOR	2-8	NA	NA	2
56.	1A404	166'	UNASSIGNED AREA	2-8	NA	NA	1
57.	1A405	166'	CNTMT VENT. EQUIP RM	2-8	NA	NA	1
58.	1A406	166'	CNTMT EXHAUST FILTER AND VENT ROOM	2-8	NA	NA	1

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**TABLE 3.3.7.9-1 (Continued)**  
**FIRE DETECTION INSTRUMENTATION**

INSTRUMENT LOCATION			MINIMUM INSTRUMENTS OPERABLE*			
ROOM NO.	ELEV.	ROOM NAME	ZONE <sup>(1)</sup>	HEAT <sup>(2)</sup>	FLAME	SMOKE <sup>(3)</sup>
<b>c. Auxiliary Building (Continued)</b>						
59.	1A407	166' MCC AREA	2-8	2	NA	1
60.	1A410	166' MCC AREA	2-8	2	NA	1
61.	1A417	166' NORTH CORRIDOR	2-8	NA	NA	14
62.	1A420	166' SOUTH CORRIDOR	2-7	NA	NA	4
63.	1A424	166' SET DOWN AREA	2-7	NA	NA	1
			2-8	NA	NA	1
64.	1A428	166' WEST CORRIDOR	2-7	NA	NA	4
65.	1A432	166' FPC AND CU PUMP RM	2-7	NA	NA	1
66.	1A434	166' PASSAGE	2-7	NA	NA	1
67.	1A519	185' STORAGE AREA	2-9	NA	NA	4
68.	1A527	185' LOAD CENTER AREA	2-9	NA	NA	5
69.	1A539	185' CABLE CHASE	2-15	NA	NA	1
70.	1A602	208'10" STORAGE AREA	2-13	NA	NA	6
71.	1A603	208'10" PASSAGE	2-13	NA	NA	3
72.	1A604	208'10" FUEL HANDLING AREA	2-13	NA	NA	12
73.	1A606	245' HVAC EQUIP AREA	2-13	NA	NA	3
<b>d. Diesel Generator Building</b>						
1.	Unit 1 El. 158'-0" HPCS Generator		2-10	7	6	NA
2.	Unit 1 El. 158'-0" Bus B Generator		2-11	7	6	NA
3.	Unit 1 El. 158'-0" Bus A Generator		2-12	7	6	NA
<b>e. Standby Service Water Pump House</b>						
1.	1M110	Pump House A	2-1	NA	NA	1
2.	1M112	Valve Room A	2-1	NA	NA	1
3.	2M110	Pump House B	2-1	NA	NA	1
4.	2M112	Valve Room B	2-1	NA	NA	1
<b>f. Charcoal Filter Trains</b>						
1.	Standby Gas Treatment System Filter Train, Auxiliary Building El. 139'-0"		NA	1 (Allison Thermistor Wire)	NA	NA
2.	Control Room Standby Fresh Air System Filter Train, Control Building El. 133'-0"		NA	1 (Allison Thermistor Wire)	NA	NA

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TABLE 3.3.7.9-1  
FIRE DETECTION INSTRUMENTATION

<u>INSTRUMENT LOCATION</u>	<u>MINIMUM INSTRUMENTS OPERABLE*</u>		
	<u>HEAT</u> <u>(X/Y)</u>	<u>FLAME(1)</u> <u>(X/Y)</u>	<u>SMOKE(1)</u> <u>(X/Y)</u>
<b>a. <u>CONTAINMENT BUILDING #</u></b>			
1. Return Duct Mounted Detectors			3/0
<u>ROOM</u> <u>ELEV</u> <u>ROOM NAME</u>			
<b>b. <u>CONTROL BUILDING</u></b>			
1. Zone 1-3			12/0
OC103    93'		Emergency Laundry Rm	
OC109    93'		Decontamination Area	
OC115    93'		Corridor	
OC116    93'		Hot Machine Shop	
OC117    93'		Corridor	
OC128    93'		Hot Water Heater Rm	
2. Zone 1-4			6/0
OC201    111'		Stairwell	
OC202    111'		Div I Swgr Rm	0/6(CO <sub>2</sub> )
OC207    111'		Div I Battery Rm	

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\* (X/Y): X - is number of Function A (early warning fire detection and notification only) instruments.  
Y - is number of Function B (actuation of fire suppression systems and early warning and notification) instruments.

# The fire detection instruments located within the primary containment are not required to be OPERABLE during the performance of Type A Containment Leakage Rate Tests.

- (1) Smoke and flame detectors provide only early warning capability with the exception of:
- (a) Zone 1-27 detectors trip closed the door between the OC208/CC208A Remote Shutdown panel rooms.
  - (b) Containment building return duct mounted detectors trip the containment cooler fans.
  - (c) Zone 1-11 and 1-13 detectors initiate the control building purge fan system.
  - (d) Control Room HVAC Intake Plenum Detectors trip the control room A/C units unless a control room emergency filtration system isolation mode automatic actuation signal is present.

**TABLE 3.3.7.9-1  
FIRE DETECTION INSTRUMENTATION**

<u>ROOM</u>	<u>ELEV</u>	<u>ROOM NAME</u>	<u>MINIMUM INSTRUMENTS OPERABLE*</u>		
			<u>HEAT</u> (X/Y)	<u>FLAME</u> <sup>(1)</sup> (X/Y)	<u>SMOKE</u> <sup>(1)</sup> (X/Y)
3. Zone 1-5					3/0
OC209	111'	Div III Battery Rm			
OC210	111'	Div III Swgr Rm	0/4(CO <sub>2</sub> )		
4. Zone 1-6					7/0
OC211	111'	Div II Battery Rm			
OC215	111'	Div II Swgr Rm	0/7(CO <sub>2</sub> )		
OC216	111'	West Corridor			
5. Zone 1-10					2/0
OC306	133'	Electrical Chase			
OC307	133'	Electrical Chase			
6. Zone 1-11					13/0
OC302	133'	HVAC Equipment Rm			
OC308	133'	Corridor			
7. Zone 1-12					2/0
OC304	133'	Electrical Space			
OC305	133'	Electrical Space			
OC412	133'	Electrical Space			
8. Zone 1-13					16/0
OC303	133'	HVAC Equipment Rm			
9. Zone 1-14					9/0
OC402A	148'	HVAC Chase			
OC403	148'	Computer Room	0/12(Halon)		
OC410	148'	Battery Room			
10. Zone 1-15					15/0
OC401	148'	Corridor			
OC402	148'	Lower Cable Spreading Room	0/7(CO <sub>2</sub> )		
OC407	148'	Instr. Motor Gen Rm	0/2(CO <sub>2</sub> )		
OC408	148'	Corridor			
OC409	148'	Electrical Chase			

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TABLE 3.3.7.9-1  
FIRE DETECTION INSTRUMENTATION

<u>ROOM</u>	<u>ELEV</u>	<u>ROOM NAME</u>	<u>MINIMUM INSTRUMENTS OPERABLE*</u>		
			<u>HEAT</u> <u>(X/Y)</u>	<u>FLAME</u> <sup>(1)</sup> <u>(X/Y)</u>	<u>SMOKE</u> <sup>(1)</sup> <u>(X/Y)</u>
11. Zone 1-18					31/0
OC502	166'	U-2 Instr. Rack Area			
OC503	166'	Control Rm			
OC504	166'	U-1 Inst Rack Area			
OC516	166'	Electrical Space			
OC517	166'	Electrical Space			
12. Zone 1-19					9/0
OC506	166'	Shower and Drying Area			
OC507	166'	Aux Instrument Shop			
OC509	166'	Corridor			
OC510	166'	Office			
OC511	166'	Dining Area			
OC512	166'	Kitchen			
OC514	166'	Locker Room			
OC515	166'	Corridor			
13. Zone 1-20					1/0
OC708A	189'	HVAC Chase			
14. Zone 1-21					2/0
OC518	166'	Electrical Chase			
OC611	177'	Electrical Chase			
15. Zone 1-22					16/0
OC601	177'	Viewing Gallery			
OC602	177'	Corridor No. 1			
OC603	177'	Emergency Dormitory			
OC604	177'	Computer			
OC605	177'	Janitor's Closet			
OC608	177'	Technical Support			
OC608B	177'	HVAC Chase			
OC613	177'	Corridor			
OC614	177'	Corridor			
OC616	177'	Storage Closet			
OC617	177'	Electrical Chase			
OC618	177'	Electrical Chase			
OC619	177'	Electrical Chase			
OC03	177'	Stair			

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TABLE 3.3.7.9-1  
FIRE DETECTION INSTRUMENTATION

<u>ROOM</u>	<u>ELEV</u>	<u>ROOM NAME</u>	<u>MINIMUM INSTRUMENTS OPERABLE*</u>		
			<u>HEAT</u> <u>(X/Y)</u>	<u>FLAME</u> <sup>(1)</sup> <u>(X/Y)</u>	<u>SMOKE</u> <sup>(1)</sup> <u>(X/Y)</u>
16. Zone 1-23					21/0
OC702	189'	Upper Cable Spreading Room	0/12(CO <sub>2</sub> )		
OC706	189'	West Corridor			
OC707	189'	Instr. Motor Gen Rm			
OC709	189'	Electrical Chase			
OC711	189'	Passage			
OC712	189'	HVAC Room			
17. Zone 1-24					6/0
OC703	189'	Control Cabinet Area	4/0(CO <sub>2</sub> )		
18. Zone 1-27					2/0
OC208	111'	Div II Remote Shutdown Panel	0/1(CO <sub>2</sub> )		
OC208A	111'	Div I Remote Shutdown Panel	0/1(CO <sub>2</sub> )		
19. Control Room HVAC Intake Plenum Mounted Detectors					2/0
c. <u>AUXILIARY BUILDING</u>					
1. Zone 2-2					23/0
1A211	119'	North Corridor (Partial)			
1A215	119'	South Corridor (Partial)			
1A222	119'	West Corridor			
2. Zone 2-3					5/0
1A219	119'	Electrical Swgr Rm	0/2(CO <sub>2</sub> )		
1A220	119'	Piping Penetration Rm			
1A221	119'	Electrical Swgr Rm	0/2(CO <sub>2</sub> )		
3. Zone 2-4					22/0
1A102	93'	RHR "A" Heat Ex Rm			
1A103	93'	RHR "A" Pump Rm			
1A104	93'	RCIC Pump Rm			
1A105	93'	RHR "B" Pump Rm			
1A106	93'	RHR "B" Heat Ex Rm			
1A128	108'	RHR "A" Heat Ex Rm			

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**TABLE 3.3.7.9-1  
FIRE DETECTION INSTRUMENTATION**

<u>ROOM</u>	<u>ELEV</u>	<u>ROOM NAME</u>	<u>MINIMUM INSTRUMENTS OPERABLE*</u>		
			<u>HEAT</u> (X/Y)	<u>FLAME</u> <sup>(1)</sup> (X/Y)	<u>SMOKE</u> <sup>(1)</sup> (X/Y)
<b>3. Zone 2-4 (Continued)</b>					
1A129	108'	RHR "B" Heat Ex Rm			
1A202	119'	RHR "A" Heat Ex Rm			
1A203	119'	Piping Penetration Rm			
1A204	119'	Piping Penetration Rm			
1A205	119'	Piping Penetration Rm			
1A206	119'	RHR "B" Heat Ex Rm			
1A207	119'	Electrical Swgr Rm	0/3(CO <sub>2</sub> )		
1A208	119'	Electrical Swgr Rm	0/3(CO <sub>2</sub> )		
1A209	115'	RWCU Recirc Pump "A" Rm			
1A210	115'	RWCU Recirc Pump "B" Rm			
1A223	128'	Passage			
					5/0
<b>4. Zone 2-5</b>					
1A318	139'	Electrical Penetration Room	0/2(CO <sub>2</sub> )		
1A319	139'	RPV Instr Test Rm			
1A320	139'	Electrical Penetration Room	0/2(CO <sub>2</sub> )		
					26/0
<b>5. Zone 2-6</b>					
1A301	139'	East Corridor			
1A302	139'	Southeast Corridor			
1A303	139'	RHR "A" Heat Ex Rm			
1A304	139'	Piping Penetration Rm			
1A306	139'	Piping Penetration Rm			
1A307	139'	RHR "B" Heat Ex Rm			
1A308	139'	Electrical Penetration Room	0/3(CO <sub>2</sub> )		
1A309	139'	Electrical Penetration Room	0/3(CO <sub>2</sub> )		
1A314	139'	South Corridor (Partial)			
1A316	139'	North Corridor (Partial)			
					11/0
<b>6. Zone 2-7</b>					
1A417	166'	North Corridor (Partial)			
1A420	166'	South Corridor (Partial)			
1A424	166'	Set Down Area (Partial)			
1A428	166'	West Corridor			
1A432	166'	FPC & CU Pump Rm			
1A434	166'	South Passage			

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**TABLE 3.3.7.9-1  
FIRE DETECTION INSTRUMENTATION**

<u>ROOM</u>	<u>ELEV</u>	<u>ROOM NAME</u>	<u>MINIMUM INSTRUMENTS OPERABLE*</u>		
			<u>HEAT</u> (X/Y)	<u>FLAME</u> <sup>(1)</sup> (X/Y)	<u>SMOKE</u> <sup>(1)</sup> (X/Y)
7. Zone 2-8					25/0
1A401	166'	Northeast Corridor			
1A402	166'	Steam Tunnel Roof			
1A403	166'	Southeast Corridor			
1A404	166'	Unassigned Area			
1A405	166'	Containment Vent. Equip Room			
1A406	166'	Containment Exhaust Filter Rm			
1A407	166'	MCC Area	0/2(CO <sub>2</sub> )		
1A410	166'	MCC Area	0/2(CO <sub>2</sub> )		
1A417	166'	North Corridor (Partial)			
1A420	166'	South Corridor (Partial)			
1A424	166'	Set Down Area (Partial)			
8. Zone 2-9					10/0
1A519	185'	Storage Area			
1A524	195'	Platform			
1A527	185'	Load Center Area			
1A529	185'	FPC & CU Rm			
1A538	185'	Platform			
9 Zone 2-13					31/0
1A602	208'	Storage Area			
1A603	208'	Passage			
1A604	208'	Fuel Handling Area			
1A606	245'	HVAC Equip Area			
10. Zone 2-14					17/0
1A114	93'	Fan Coil Area (Partial)			
1A115	93'	Piping Penetration Rm			
1A116	93'	Piping Penetration Rm			
1A117	93'	Misc Equip Area (Partial)			
1A118	93'	RHR "C" Pump Room			
1A119	93'	LPCS Pump Room			
1A120	93'	CCW Pump & Heat Ex Rm			
1A122	103'	South Corridor (Partial)			
1A123	103'	North Corridor (Partial)			
11. Zone 2-15					1/0
1A539	185'	Cable Chase			

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TABLE 3.3.7.9-1  
FIRE DETECTION INSTRUMENTATION

<u>ROOM</u>	<u>ELEV</u>	<u>ROOM NAME</u>	<u>MINIMUM INSTRUMENTS OPERABLE*</u>		
			<u>HEAT</u> (X/Y)	<u>FLAME</u> <sup>(1)</sup> (X/Y)	<u>SMOKE</u> <sup>(1)</sup> (X/Y)
12. Zone 2-17					16/0
1A101	93'	Passage			
1A109	93'	HPCS Pump Rm			
1A111	93'	Piping Penetration Rm			
1A114	93'	Fan Coil Area (Partial)			
1A117	93'	Misc. Equip. Area (Partial)			
1A121	103'	East Corridor			
1A122	103'	South Corridor (Partial)			
1A123	103'	North Corridor (Partial)			
13. Zone 2-18					20/0
1A201	119'	East Corridor			
1A211	119'	North Corridor (Partial)			
1A215	119'	South Corridor (Partial)			
14. Zone 2-19					13/0
1A314	139'	South Corridor (Partial)			
1A316	139'	North Corridor (Partial)			
1A321	139'	MCC Area			
1A322	139'	Centrifugal Chiller Area			
1A323	139'	SGTS Area			
1A324	139'	HVAC Equip Area			
1A326	139'	SGTS Area			
15. Zone 2-20					2/0
1A305	139'	Steam Tunnel			
d. <u>DIESEL GENERATOR BUILDING</u>					
1. Zone 2-10				6/0	3/0
1D301	133'	Corridor		0/3 (Deluge)	
1D304	133'	Day Tank Area			
1D306	133'	Div III Diesel Gen Room			
1D401	158'	Div III Diesel Gen Room		0/7 (Deluge)	
2. Zone 2-11				6/0	
1D303	133'	Day Tank Area			
1D308	133'	Div II Diesel Gen Room			
1D402	158'	Div II Diesel Gen Room		0/7 (Deluge)	

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TABLE 3.3.7.9-1  
FIRE DETECTION INSTRUMENTATION

<u>ROOM</u>	<u>ELEV</u>	<u>ROOM NAME</u>	<u>MINIMUM INSTRUMENTS OPERABLE*</u>		
			<u>HEAT</u> (X/Y)	<u>FLAME</u> <sup>(1)</sup> (X/Y)	<u>SMOKE</u> <sup>(1)</sup> (X/Y)
3. Zone 2-12				6/0	
1D302	133'	Day Tank Area			
1D310	133'	Div I Diesel Gen Room			
1D403	158'	Div I Diesel Gen Room	0/7 (Deluge)		
e. <u>STANDBY SERVICE WATER PUMP HOUSE</u>					
1. Zone 2-1					4/0
1M110	133'	SSW Pump Rm A			
1M112	133'	SSW Valve Rm A			
2M110	133'	SSW Pump Rm B			
2M112	133'	SSW Valve Rm B			
f. <u>CHARCOAL FILTER TRAINS</u>					
1. Standby Gas Treatment System Filter Trains A & B				2/0 (Allison Thermistor Wire)	
Auxiliary Building El. 139'					
2. Control Room Standby Fresh Air System Filter Trains A & B				2/0 (Allison Thermistor Wire)	
Control Building El. 133'					
g. <u>CONTROL BUILDING (PGCC HALON SYSTEMS)</u>					
OC503	166'	Control Room (Unit 1 side)			
Module/Halon Panel					
		1H13-U700/1H13-P900	0/10		10/0
		1H13-U701/1H13-P901	0/10		15/0
		1H13-U702/1H13-P902	0/9		14/0
		1H13-U703/1H13-P903	0/11		17/0
		1H13-U720/1H13-P920	0/7		13/0
		SH13-U730/1H13-P930	0/11		12/0
		1H13-U738/1H13-P938	0/10		12/0
		SH13-U739/5H13-P939	0/5		14/0

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**TABLE 3.3.7.9-1  
FIRE DETECTION INSTRUMENTATION**

<u>ROOM</u>	<u>ELEV</u>	<u>ROOM NAME</u>	<u>MINIMUM INSTRUMENTS OPERABLE*</u>		
			<u>HEAT</u> (X/Y)	<u>FLAME</u> <sup>(1)</sup> (X/Y)	<u>SMOKE</u> <sup>(1)</sup> (X/Y)
OC504	166'	Unit 1 Instrument Rack Area			
		Module/Halon Panel			
		1H13-U710/1H13-P910	0/8		15/0
		1H13-U711/1H13-P911	0/8		14/0
		1H13-U712/1H13-P912	0/8		9/0
		1H13-U714/1H13-P914	0/10		13/0
		1H13-U732/1H13-P932	0/8		14/0
		1H13-U733/1H13-P933	0/8		13/0
		1H13-U734/1H13-P934	0/8		13/0
		1H13-U735/1H13-P935	0/8		11/0
OC703	189'	Unit 1 Instrument Rack Area			
		Module/Halon Panel			
		1H13-U713/1H13-P913	0/9		15/0
		1H13-U715/1H13-P915	0/8		10/0
		1H13-U717/1H13-P917	0/8		15/0
		1H13-U736/1H13-P936	0/8		14/0
		1H13-U737/1H13-P937	0/8		10/0

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## REACTOR COOLANT SYSTEM

### SURVEILLANCE REQUIREMENTS

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4.4.4 The reactor coolant shall be determined to be within the specified chemistry limit by:

- a. Measurement prior to pressurizing the reactor during each startup, if not performed within the previous 72 hours.
- b. Analyzing a sample of the reactor coolant:
  1. Chlorides at least once per:
    - a) 72 hours, and
    - b) 8 hours whenever conductivity is greater than the limit in Table 3.4.4-1.
  2. Conductivity at least once per 72 hours.
  3. pH at least once per:
    - a) 72 hours, and
    - b) 8 hours whenever conductivity is greater than the limit in Table 3.4.4-1.
- c. Continuously recording the conductivity of the reactor coolant, or, when the continuous recording conductivity monitor is inoperable ~~for up to 31 days~~, obtaining an in-line conductivity measurement at least once per:
  1. 4 hours in OPERATIONAL CONDITIONS 1, 2 and 3, and
  2. 24 hours at all other times.
- d. Performance of a CHANNEL CHECK of the continuous conductivity monitor with an in-line flow cell at least once per:
  1. 7 days, and
  2. 24 hours whenever conductivity is greater than the limit in Table 3.4.4-1.



PLANT SYSTEMS

3/4.7.6 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

LIMITING CONDITION FOR OPERATION

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3.7.6.1 The fire suppression water system shall be OPERABLE with:

- a. At least two OPERABLE fire suppression fire pumps, each with a capacity of 1500 gpm, with their discharge aligned to the fire suppression header,
- b. Separate fire water storage tanks, each with a minimum contained volume of 210,000 gallons, and
- c. An OPERABLE flow path capable of taking suction from the "A" fire water storage tank and the "B" fire water storage tank and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves, the last valve ahead of the water flow alarm device on each sprinkler or hose standpipe and the last valve ahead of the deluge valve on each deluge or spray system required to be OPERABLE per Specifications 3.7.6.2, 3.7.6.5, and 3.7.6.6.

APPLICABILITY: At all times.

ACTION:

- a. With one of the above <sup>the inoperable equipment</sup> required fire pumps and/or one fire water storage tank inoperable, restore ~~at least two fire pumps and two fire water storage tanks~~ to OPERABLE status within 7 days or, ~~in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the plans and procedures to be used to restore the inoperable equipment to OPERABLE status or to provide an alternate backup pump or supply. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.~~
- b. With the fire suppression water system otherwise inoperable,
  1. <sup>e</sup> Establish a backup fire suppression water system within 24 hours. ~~and~~
  2. ~~In lieu of any other report required by Specification 6.9.1, submit a Special Report in accordance with Specification 6.9.2:~~
    - a) ~~By telephone within 24 hours,~~
    - b) ~~Confirmed by telegraph, mailgram or facsimile transmission no later than the first working day following the event, and~~
    - c) ~~In writing within 14 days following the event, outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.~~

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PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.7.6.1.1 The fire suppression water system shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying the minimum contained water supply volume.
- b. At least once per 31 days by starting the electric motor driven fire suppression pump and operating it for at least 15 minutes.
- c. At least once per 31 days by verifying that each valve, manual, power operated or automatic, in the flow path is in its correct position.
- d. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
- e. At least once per 12 months by *PERFORMANCE OF A SYSTEM FLUSH.*
- f. ~~g.~~ At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:
  - 1. Verifying that each automatic valve in the flow path actuates to its correct position,
  - 2. Verifying that each fire suppression pump develops at least 1500 gpm at a system head of 275 feet,
  - 3. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel, and
  - 4. Verifying that each fire suppression pump starts sequentially to maintain the fire suppression water system pressure greater than or equal to 120 psig.
- g. ~~h.~~ At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.

4.7.6.1.2 The diesel driven fire suppression pump shall be demonstrated OPERABLE:

- a. At least once per 31 days by:
  - 1. Verifying the fuel storage tank contains at least 300 gallons of fuel.
  - 2. Starting the diesel driven pump from ambient conditions and operating for greater than or equal to 30 minutes.

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PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS Continued)

- b. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
- c. At least once per 18 months:
  - 1. By performing a system functional test which includes simulated automatic actuation of the system, and:
    - a) Verifying that the automatic valves in the flow path actuate to their correct positions on a test signal, and
    - b) Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.
  - 2. By a visual inspection of the dry pipe spray and sprinkler headers to verify their integrity, and
  - 3. By a visual inspection of each nozzle's spray area to verify that the spray pattern is not obstructed.

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CO<sub>2</sub> SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.6.3 The following low pressure CO<sub>2</sub> systems shall be OPERABLE:

<u>Area</u>	<u>Location</u>	<u>System Number</u>
Electrical Penetration Room	Auxiliary Bldg. E1. 139' <sup>0</sup> / <sub>8</sub> "	N1P64D201A, B, C, D   27
Electrical Penetration Room	Auxiliary Bldg. E1. 119'0"	N1P64D200A, B, C, D
Control Cabinet Room	Control Bldg. E1. 189'0"	N1P64D216
Division I Switchgear Room	Control Bldg. E1. 111'0"	N1P64D207
Division III Switchgear Room	Control Bldg. E1. 111'0"	N1P64D209
Division II Switchgear Room	Control Bldg. E1. 111'0"	N1P64D208
Emergency Shutdown Panel Rm	Control Bldg. E1. 111'0"	N1P64D212
Motor Generator Room	Control Bldg. E1. 148'0"	N1P64D214B   46
Electrical Switchgear Room	Auxiliary Bldg. E1. 166'0"	N1P64D217A, B
Lower Cable Spreading Room	Control Bldg. E1. 148'0"	N1P64D213
Upper Cable Spreading Room	Control Bldg. E1. 189'0"	N1P64D215

APPLICABILITY: Whenever equipment protected by the CO<sub>2</sub> systems is required to be OPERABLE.

ACTION:

- a. With one or more of the above required CO<sub>2</sub> systems inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol. ~~Restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.~~
- b. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS

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4.7.6.3.1 Each of the above required CO<sub>2</sub> systems shall be demonstrated OPERABLE at least once per 31 days by verifying that each valve, manual, power operated or automatic, in the flow path is in its correct position. Position verification of differential pressure selector valves is not required, however, the valves' release levers shall be verified to be in the correct position.

4.7.6.3.2 Each of the above required low pressure CO<sub>2</sub> systems shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying the CO<sub>2</sub> storage tank level to be greater than ~~50%~~<sup>60%</sup> and pressure to be greater than 275 psig, and
- b. At least once per 18 months by:
  - 1. Verifying that the system valves and associated ventilation system fire damper logic actuates automatically or manually, if applicable, upon receipt of a simulated actuation signal (actual CO<sub>2</sub> release, electrothermal link burning, and differential pressure valve opening may be excluded from this test), and
  - 2. Flow from each nozzle by performance of a "Puff Test", and
  - 3. Exercising each ventilation system fire damper to the closed position and verifying the dampers move freely.

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PLANT SYSTEMS

HALON SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.6.4 The following Halon systems shall be OPERABLE with the storage tanks having at least 95% of full charge weight and 90% of full charge pressure:

- a. Control Building, elev. 148'0", Computer and Control Panel Room
- b. Control Building, elev. 166'0", PGCC Under Floor Area
- c. Control Cabinet Room, elev. 189'0", PGCC Under Floor Area

APPLICABILITY: Whenever equipment protected by the Halon systems is required to be OPERABLE.

ACTION:

- a. With one or more of the above required Halon systems inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol. ~~Restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.~~
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

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SURVEILLANCE REQUIREMENTS

4.7.6.4 Each of the above required Halon systems shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve, manual, power operated or automatic, in the flow path is in its correct position. ~~except for hazard area selector valves F497G and F497H,~~
- b. At least once per 6 months by verifying Halon storage tank weight and pressure.
- c. At least once per 18 months by:
  - 1. Verifying that the system, including associated ventilation system fire damper logic, actuates automatically upon receipt of a simulated actuation signal (Actual Halon release, Halon bottle initiator valve acuation, and electro-thermal link burning may be excluded from the test), and
  - 2. Performance of a flow test through headers and nozzles to assure no blockage, and
  - 3. Exercising each ventilation system fire dampers to the closed position and verifying the dampers move freely.

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## PLANT SYSTEMS

### FIRE HOSE STATIONS

#### LIMITING CONDITION FOR OPERATION

3.7.6.5 The fire hose stations shown in Table 3.7.6.5-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

#### ACTION:

- a. With one or more of the fire hose stations shown in Table 3.7.6.5-1 inoperable, route an additional fire hose of equal or greater diameter to the unprotected area(s) from an OPERABLE hose station within 1 hour if the inoperable fire hose is the primary means of fire suppression; otherwise, route the additional hose within 24 hours. ~~Restore the inoperable hose station(s) to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.~~
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable

#### SURVEILLANCE REQUIREMENTS

4.7.6.5 Each of the fire hose stations shown in Table 3.7.6.5-1 shall be demonstrated OPERABLE:

- a. At least once per 31 days by a visual inspection of the fire hose stations accessible during plant operation to assure all required equipment is at the station.
- b. At least once per 18 months by:
  1. Visual inspection of the fire hose stations not accessible during plant operation to assure all required equipment is at the station.
  2. Removing the hose for inspection and re-racking, and
  3. Inspecting all gaskets and replacing any degraded gaskets in the couplings.
- c. At least once per 3 years by:
  1. Partially opening each hose station valve to verify valve OPERABILITY and no flow blockage.
  2. Conducting a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater.



TABLE 3.7.6.5-1 (Continued)

FIRE HOSE STATIONS.

<u>LOCATION</u>	<u>ELEVATION</u>	<u>HOSE RACK IDENTIFICATION</u>
<u>CONTAINMENT</u>		
M. 7-7.9	120'-10"	22A
H. 8-8.1	135'-4"	23A
J. 1-8.1	161'-10"	23B
J. 8-7.2	184'-6"	23C
J. 4-7.5	208'-10"	23D
M. 2-7.2	135'-4"	24A
M. 8-7.9	161'-10"	24B
M. 2-7.2	184'-6"	24C
N-8.2	208'-10"	24D
M. 6-12.4	135'-4"	25A
N. 2-11.5	161'-10"	25B
N. 3-11.3	208'-10"	25C
J. 1-12.0	135'-4"	26A
J-11.6	161'-10"	26B
K. 2-13.1	184'-6"	26C
J-11.8	208'-10"	26D
<u>CONTROL BUILDING</u>		
J. 9-18.8	133'-0"	53A
K. 2-18.8	111'-0"	53B
K. 1-18.8	93'-0"	53C
G. 1-18.4	93'-0"	54A
G. 1-18.4	111'-0"	54B
G. 2-18.4	133'-0"	54C
G. 1-18.7	148'-0"	54D
G. 2-18.8	166'-0"	54E
G. 1-18.7	189'-0"	54F
K. 2-18.8	148'-0"	55A
K. 2-18.8	166'-0"	55B
K. 2-18.8	189'-0"	55D
<u>DIESEL GENERATOR BUILDING</u>		
R-10.6	133'-0"	66A
R-8.4	133'-0"	66B

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## PLANT SYSTEMS

### YARD FIRE HYDRANTS AND HYDRANT HOSE HOUSES

#### LIMITING CONDITION FOR OPERATION

3.7.6.6 The yard fire hydrants and associated hydrant hose houses shown in Table 3.7.6.6-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the yard fire hydrants is required to be OPERABLE.

#### ACTION:

- a. With one or more of the yard fire hydrants or associated hydrant hose houses shown in Table 3.7.6.6-1 inoperable, route sufficient additional lengths of fire hose of equal or greater diameter located in an adjacent OPERABLE hydrant hose house to provide service to the unprotected area(s) within 24 hours. ~~Restore the inoperable hydrant(s) and/or hose OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.~~
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

4.7.6.6 Each of the yard fire hydrants and associated hydrant hose houses shown in Table 3.7.6.6-1 shall be demonstrated OPERABLE:

- a. At least once per 31 days by visual inspection of the hydrant hose house to assure all required equipment is at the hose house.
- b. At least once per 6 months, during March, April or May and during September, October or November, by visually inspecting each yard fire hydrant and verifying that the hydrant barrel is dry and that the hydrant is not damaged:
- c. At least once per 12 months by:
  1. Conducting a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater.
  2. Replacement of all degraded gaskets in couplings.
  3. Performing a flow check of each hydrant.

## PLANT SYSTEMS

### 3/4.7.7 FIRE RATED ASSEMBLIES

#### LIMITING CONDITION FOR OPERATION

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3.7.7 All fire rated assemblies (walls, floor/ceilings, cable tray enclosures and other fire barriers) separating safety related fire areas or separating portions of redundant systems important to safe shutdown within a fire area, and all sealing devices in fire rated assembly penetrations (fire doors, fire windows, fire dampers, cable and piping penetration seals and ventilation seals) shall be OPERABLE.

APPLICABILITY: At all times.

#### ACTION:

- a. With one or more of the above required fire rated assemblies and/or sealing devices inoperable, within one hour establish a continuous fire watch on at least one side of the affected assembly(s) and/or sealing device(s) or verify the OPERABILITY of fire detectors on at least one side of the inoperable assembly(s) and/or sealing device(s) and establish an hourly fire watch patrol. ~~Restore the inoperable fire rated assembly(s) and/or sealing device(s) to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperable fire rated assembly(s) and/or sealing device(s) and plans and schedule for restoring the fire rated assembly(s) and/or sealing device(s) to OPERABLE status.~~
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.7.7.1 Each of the above required fire rated assemblies and sealing devices shall be verified OPERABLE at least once per 18 months by performing a visual inspection of:

- a. The exposed surfaces of each fire rated assembly.
- b. Each fire window/fire damper and associated hardware.
- c. At least 10 percent of each type of sealed penetration. If apparent changes in appearance or abnormal degradations are found, a visual inspection of an additional 10 percent of each type of sealed penetration shall be made. This inspection process shall continue until a 10 percent sample with no apparent changes in appearance or abnormal degradation is found. *Samples shall be selected such that each penetration seal will be inspected at least once per 15 years.*

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INSTRUMENTATION

BASES

3/4.3.7.6 SOURCE RANGE MONITORS

The source range monitors provide the operator with information of the status of the neutron level in the core at very low power levels during startup and shutdown. At these power levels, reactivity additions should not be made without this flux level information available to the operator. When the intermediate range monitors are on scale adequate information is available without the SRMs and they can be retracted.

3/4.3.7.7 TRAVERSING IN-CORE PROBE SYSTEM

The OPERABILITY of the traversing in-core probe system with the specified minimum complement of equipment ensures that the measurements obtained from use of this equipment accurately represent the spatial neutron flux distribution of the reactor core.

3/4.3.7.8 CHLORINE DETECTION SYSTEM

The OPERABILITY of the chlorine detection system ensures that an accidental chlorine release will be detected promptly and the necessary protective actions will be automatically initiated to provide protection for control room personnel. Upon detection of a high concentration of chlorine, the control room emergency ventilation system will automatically be placed in the isolation mode of operation to provide the required protection. The detection systems required by this specification are consistent with the recommendations of Regulatory Guide 1.95 "Protection of Nuclear Power Plant Control Room Operators against an Accidental Chlorine Release", Revision 1, January 1977.

3/4.3.7.9 FIRE DETECTION INSTRUMENTATION

~~OPERABILITY of the fire detection instrumentation ensures that adequate warning capability is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Prompt detection of fires will reduce the potential for damage to safety-related equipment and is an integral element in the overall facility fire protection program.~~

~~In the event that a portion of the fire detection instrumentation is inoperable, increasing the frequency of fire watch patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.~~

3/4.3.7.10 LOOSE-PART DETECTION SYSTEM

The OPERABILITY of the loose-part detection system ensures that sufficient capability is available to detect loose metallic parts in the primary system and avoid or mitigate damage to primary system components. The allowable out-of-service times and surveillance requirements are consistent with the recommendations of Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981.

REPLACE WITH ATTACHED INSERT

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Insert as Bases 3/4.3.7.9, Page B 3/4 3-5

3/4.3.7.9 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the detection instrumentation ensures that both adequate warning capability is available for prompt detection of fires and that fire suppression systems, that are actuated by fire detectors, will discharge extinguishing agent in a timely manner. Prompt detection and suppression of fires will reduce the potential for damage to safety-related equipment and is an integral element in the overall facility fire protection program.

In the event that a portion of the fire detection instrumentation is inoperable, increasing the frequency of fire watch patrols in the affected area(s), or zone(s), is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.

## PLANT SYSTEMS

### BASES

#### 3/4.7.5 SEALED SOURCE CONTAMINATION

The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from byproduct, source, and special nuclear material sources will not exceed allowable intake values. Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism, i.e., sealed sources within radiation monitoring or boron measuring devices, are considered to be stored and need not be tested unless they are removed from the shielded mechanism.

#### 3/4 7.6 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, CO<sub>2</sub> systems, Halon systems and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The surveillance requirements provide assurances that the minimum OPERABILITY requirements of the fire suppression systems are met. An allowance is made for ensuring a sufficient volume of Halon in the Halon storage tanks by verifying the weight and pressure of the tanks.

In the event the fire suppression water system becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant. ~~The requirement for a twenty-four hour report to the Commission provides for prompt evaluation of the acceptability of the corrective measures to provide adequate fire suppression capability for the continued protection of the nuclear plant.~~

The surveillance requirements for spray and sprinkler systems provide for periodic visual inspections to ensure that temporary structures/objects do not impair the spray patterns which have been established in accordance with the GGNS fire protection design requirements.