

ATTACHMENT

REQUESTED TECHNICAL SPECIFICATION CHANGES
NINE MILE POINT UNIT 2

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~~INSTRUMENTATION~~

~~MONITORING INSTRUMENTATION~~

~~FIRE DETECTION INSTRUMENTATION~~

~~LIMITING CONDITIONS FOR OPERATION~~

~~3.3.7.8 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3.7.8-1 shall be OPERABLE.~~

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

~~ACTION:~~

- ~~a. With any, but not more than one-half the total in any fire zone, Function N* fire detection instruments shown in Table 3.3.7.8-1 inoperable, restore the inoperable Function N* instrument(s) to OPERABLE status within 14 days or within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour.~~
- ~~b. With more than one-half the Function N* fire detection instruments in any fire zone shown in Table 3.3.7.8-1 inoperable or with any Functions S* or X* instruments shown in Table 3.3.7.8-1 inoperable, or with any two or more adjacent instruments shown in Table 3.3.7.8-1 inoperable, within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour.~~
- ~~c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.3.7.8.1 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.~~

~~4.3.7.8.2 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.~~

~~4.3.7.8.3 The non-supervised circuits associated with detector alarms between the instruments and the control room shall be demonstrated OPERABLE at least once per 31 days.~~

~~* These letters are found in the alpha-numeric fire zone designation and are explained in the footnote to Table 3.3.7.8-1~~

TABLE 3.3.7.8-1

FIRE DETECTION INSTRUMENTATION

<u>INSTRUMENT LOCATION</u>			<u>TOTAL NUMBER OF INSTRUMENTS**</u>			
<u>FIRE</u>						
<u>ZONE*</u>	<u>ROOM OR AREA</u>	<u>ELEV</u>	<u>HEAT</u>	<u>IONIZATION</u>	<u>PHOTOELECTRIC</u>	
<u>Reactor Building/Auxiliary Bays</u>						
201SW	CCP Ht Exch & LPCS Pump Room	175' 0"	NA	16	NA	
202SW	RHR Pump A Room	175' 0"	NA	7	NA	
203SW	RHR Ht Exch A Room	175' 0"	NA	6	NA	
204SW	RCIC Pump Room	175' 0"	6	NA	NA	
205NZ	HPCS Pump Room	175' 0"	NA	7	NA	
206SW	RHR Ht Exch B Room	175' 0"	NA	8	NA	
207SW	RHR Pump B Room	175' 0"	NA	7	NA	
208SW	RHR Pump C Room	175' 0"	NA	11	NA	
212SW	Gen Area North	175' 0" 196' 0"	13	34	NA	
213SW	Gen Area South	175' 0" 196' 0"	20	35	NA	
211SW	N Aux Bay Above Pump Rooms	198' 0"	NA	22	NA	
214SW	S Aux Bay Above Pump Rooms	198' 0"	NA	22	NA	
221SW	N Aux Bay Above Pump Rooms	215' 0"	NA	28	NA	
222SW	Gen Area 0°-180°	215' 0"	NA	39	NA	
223SW	Gen Area 180°-360°	215' 0"	NA	39	NA	
224SW	S Aux Bay Above Pump Rooms	215' 0"	NA	25	NA	
231SW	N Aux Bay Elect MCC Area	240' 0"	NA	31	NA	

~~TABLE 3.3.7.8-1 (Continued)~~

~~FIRE DETECTION INSTRUMENTATION~~

<u>INSTRUMENT LOCATION</u>			<u>TOTAL NUMBER OF INSTRUMENTS**</u>			
<u>FIRE</u>						
<u>ZONE*</u>	<u>ROOM OR AREA</u>	<u>ELEV</u>	<u>HEAT</u>	<u>IONIZATION</u>	<u>PHOTOELECTRIC</u>	
<u>Reactor Building/Auxiliary Bays (Continued)</u>						
232SW	Gen Area 0°-180°	240' 0"	5	32	NA	
238SW	Gen Area 180°-360°	240' 0"	1	32	NA	
239SW	S Aux Bay Elect MCC Area	240' 0"	NA	29	NA	
243SW	Gen Area 0°-180°	261' 0"	5	38	NA	
245SW	Gen Area 180°-360°	261' 0"	2	37	NA	
252SW	Gen Area 0°-180°	289' 0"	4	39	NA	
253XL	Elect Load Center Room	289' 0"	NA	6	NA	
255SW	Gen Area 180°-360°	289' 0"	4	33	NA	
261SW	Pipe Chase	306' 0"	14	NA	NA	
262SW	Gen Area 180°-360°	306' 0"	NA	26	NA	
271SW	Gen Area 0°-90°	328' 10"	NA	19	NA	
272SW	Gen Area 270°-360°	328' 10"	NA	19	NA	
273SW	Gen Area 90°-180°	328' 10"	NA	15	NA	
274SW	Gen Area 180°-270°	328' 10"	NA	19	NA	
281NZ	Gen Area 0°-360°	353' 10"	NA	84	NA	
<u>Control Building</u>						
305NW	Div I Riser Area	214' 0"	NA	4	NA	
306NW	Div I Cable Area	214' 0"	NA	13	NA	
307NZ	24 V Battery Room	214' 0"	NA	1	NA	
308NZ	24 V Battery Room	214' 0"	NA	1	NA	
309NW	Div II Cable Chase	214' 0"	NA	5	NA	

~~TABLE 3.3.7.8-1 (Continued)~~

~~FIRE DETECTION INSTRUMENTATION~~

<u>INSTRUMENT LOCATION</u>			<u>TOTAL NUMBER OF INSTRUMENTS</u>			
<u>FIRE</u>						
<u>ZONE*</u>	<u>ROOM OR AREA</u>	<u>ELEV</u>	<u>HEAT</u>	<u>IONIZATION</u>	<u>PHOTOELECTRIC</u>	
<u>Control Building (Continued)</u>						
311NZ	Computer Battery Room	214' 0"	NA	3	NA	
312NZ	Div II Cable Area	214' 0"	NA	9	NA	
321NW	Div I Riser Area	237' 0"	NA	4	NA	
322NW	Div I Cable Area	237' 0"	NA	14	NA	
323NW	Div II Cable Area	237' 0"	NA	15	NA	
324NW	Div II Riser Area	237' 0"	NA	4	NA	
325NW	Div I Cable Area	237' 0"	NA	5	NA	
326NW	Div II Cable Area	237' 0"	NA	5	NA	
327NW	Div III Cable Area	237' 0"	NA	6	NA	
331NW	Corridor	261' 0"	NA	20	NA	
332NW	Div I Cable Chase	261' 0"	NA	5	NA	
333XL	Div I Switchgear Room	261' 0"	NA	7	NA	
334NZ	Div I Battery Room	261' 0"	NA	4	NA	
335NZ	Div II Battery Room	261' 0"	NA	4	NA	
336XL	Div II Switchgear Room	261' 0"	NA	7	NA	
337NW	Div II & III Cable Chase	261' 0"	NA	5	NA	
338NZ	Remote Shutdown Room B	261' 0"	NA	2	NA	
339NZ	HPCS Battery Room	261' 0"	NA	1	NA	
340NZ	Div I Chiller Room	261' 0"	NA	2	NA	
341NZ	Div II Chiller Room	261' 0"	NA	2	NA	

TABLE 3.3.7.8-1 (Continued)

FIRE DETECTION INSTRUMENTATION

<u>INSTRUMENT LOCATION</u>			<u>TOTAL NUMBER OF INSTRUMENTS**</u>			
<u>FIRE</u>						
<u>ZONE*</u>	<u>ROOM OR AREA</u>	<u>ELEV</u>	<u>HEAT</u>	<u>IONIZATION</u>	<u>PHOTOELECTRIC</u>	
<u>Control Building (Continued)</u>						
342XL	Div III Switchgear Room	261'-0"	NA	4	NA	
349NZ	Remote Shutdown Room A	261'-0"	NA	2	NA	
351NZ	Instrument Room & Corridor	288'-6"	NA	17	NA	
352NW	Div I Cable Chase	288'-6"	NA	4	NA	
353SG	Relay Room	288'-6"	50	106	NA	
354SG	Relay Room	288'-6"	50	120	NA	
356NZ	Relay Room	288'-6"	NA	14	NA	
357XG	Computer Room	288'-6"	NA	8	NA	
358XG	Computer Room	288'-6"	NA	4	NA	
359NW	Div II & III Cable Chase	288'-6"	NA	5	NA	
360NZ	HVAC Equipment Room	288'-6"	NA	11	NA	
362SG	Relay Room	288'-6"	40	72	NA	
371NW	Div I Cable Chase	306'-0"	NA	4	NA	
373NZ	Control Room	306'-0"	NA	25	NA	
374SG	Control Room	306'-0"	43	68	NA	
375SG	Control Room	306'-0"	44	75	NA	
376XG	Control Room	306'-0"	NA	11	NA	
377NW	Div II & III Cable Chase	306'-0"	NA	3	NA	
378NZ	HVAC Equipment Room	306'-0"	NA	9	NA	

TABLE 3.3.7.8-1 (Continued)

FIRE DETECTION INSTRUMENTATION

<u>INSTRUMENT LOCATION</u>		<u>TOTAL NUMBER OF INSTRUMENTS**</u>			
<u>FIRE</u>					
<u>ZONE*</u>	<u>ROOM OR AREA</u>	<u>ELEV</u>	<u>HEAT</u>	<u>IONIZATION</u>	<u>PHOTOELECTRIC</u>
<u>Control Building (Continued)</u>					
380NZ	Instrument Room & Corridor	306'-0"	NA	13	NA
381SG	Control Room	306'-0"	62	88	NA
<u>Diesel Generator Building</u>					
401NZ	Div I, II, & III Control Room	261'-0"	NA	NA	9
402SW	Div I D/G Room	261'-0"	NA	NA	7
403SW	Div II D/G Room	261'-0"	NA	NA	7
404SW	HPGS D/G Room	261'-0"	NA	NA	7
<u>Electrical Tunnels</u>					
301NW	140° Tunnel	215'-0"	NA	23	NA
302NW	35° Tunnel	215'-0"	NA	15	NA
303NW	315° Tunnel	215'-0"	NA	3	NA
304NW	230° Tunnel	215'-0"	NA	12	NA
236NZ	Div I HVAC Room	237'-0"	NA	8	NA
237NZ	Div II HVAC Room	237'-0"	NA	9	NA
<u>Service Water Pump Bays</u>					
806NZ	Div I Pump Bay	244'-0"	NA	6	NA
807NZ	Div II Pump Bay	244'-0"	NA	6	NA
<u>Fire Pump Rooms</u>					
804NW	Diesel Engine Fire Pump Room	261'-0"	NA	NA	8

TABLE 3.3.7.8-1 (Continued)

FIRE DETECTION INSTRUMENTATION

<u>INSTRUMENT LOCATION</u>			<u>TOTAL NUMBER OF INSTRUMENTS**</u>			
<u>FIRE</u>						
<u>ZONE*</u>	<u>ROOM OR AREA</u>	<u>ELEV</u>	<u>HEAT</u>	<u>IONIZATION</u>	<u>PHOTOELECTRIC</u>	
<u>Fire Pump Rooms (Continued)</u>						
<u>805NZ</u>	<u>Elect Motor Fire</u> <u>Pump Room</u>	<u>261'-0"</u>	<u>NA</u>	<u>2</u>	<u>NA</u>	
<u>Standby Gas Treatment Rooms</u>						
<u>247NZ</u>	<u>Div I GTS Room</u>	<u>261'-0"</u>	<u>NA</u>	<u>7</u>	<u>NA</u>	
<u>248NZ</u>	<u>Div II GTS Room</u>	<u>261'-0"</u>	<u>NA</u>	<u>9</u>	<u>NA</u>	
<u>Main Steam Tunnel</u>						
<u>256NZ</u>	<u>Main Steam Tunnel</u>	<u>240'-0"</u>	<u>9</u>	<u>NA</u>	<u>NA</u>	
<u>Pipe Tunnels</u>						
<u>361NZ</u>	<u>Pipe Tunnel</u>	<u>245'-0"</u>	<u>NA</u>	<u>10</u>	<u>NA</u>	
<u>362NZ</u>	<u>Pipe Tunnel</u>	<u>239'-0"</u>	<u>NA</u>	<u>32</u>	<u>NA</u>	
<u>363NZ</u>	<u>Pipe Tunnel</u>	<u>244'-0"</u>	<u>7</u>	<u>36</u>	<u>NA</u>	
<u>Screenwell</u>						
<u>802NZ</u>	<u>Screenwater</u> <u>Intake and</u> <u>Discharge</u>	<u>241'-0"</u>	<u>NA</u>	<u>15</u>	<u>NA</u>	

* The first letter in the alpha-numeric fire zone designation denotes: S, actuation of fire suppression; N, no actuation of fire suppression; and X, actuation of fire suppression (Halon and CO₂ only) provided one detector is tripped in each of two loops. The second letter denotes: W-water; L-low pressure CO₂; G-Halon; Z-nothing; and F-foam.

** In the case of a fire zone which contains two fire detection loops (denoted by an X in the fire zone designation), the number listed is the total number of detectors in both loops.

~~PLANT SYSTEMS~~

~~3/4.7.7 FIRE SUPPRESSION SYSTEMS~~

~~FIRE SUPPRESSION WATER SYSTEM~~

~~LIMITING CONDITIONS FOR OPERATION~~

~~3.7.7.1 The fire suppression water system shall be OPERABLE with:~~

- ~~a. Two OPERABLE fire suppression pumps, each with a capacity of 2500 gpm, with their discharge aligned to the fire suppression header, and~~
- ~~b. An OPERABLE flow path capable of taking suction from the Service Water Bay 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 3.7.7.2, 3.7.7.5, and 3.7.7.6.~~

~~APPLICABILITY: At all times.~~

~~ACTION:~~

- ~~a. With one pump inoperable, restore the inoperable equipment to OPERABLE status within 7 days or 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, establish a backup fire suppression water system within 24 hours.~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.7.7.1.1 The fire suppression water system shall be demonstrated OPERABLE:~~

- ~~a. At least once per 31 days by starting the electric motor driven fire pump and operating it for at least 15 minutes on recirculation flow.~~
- ~~b. 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.~~

~~PLANT SYSTEMS~~

~~FIRE SUPPRESSION SYSTEMS~~

~~FIRE SUPPRESSION WATER SYSTEM~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.7.7.1.1 (Continued)~~

- ~~c. At least once per 6 months by performance of a system flush.~~
- ~~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 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 2500 gpm at a net discharge head of 113 psig,~~
 - ~~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 and maintains the fire suppression water system pressure of 125 psig or more.~~~~
- ~~f. At least once per 3 years by performing a flow test of the system in accordance with Chapter 6, Section 16, of the Fire Protection Handbook, 15th Edition, published by the National Fire Protection Association.~~

~~4.7.7.1.2 The diesel driven fire suppression pump shall be demonstrated OPERABLE:~~

- ~~a. At least once per 31 days by:
 - ~~1. Verifying the fuel day tank contains at least 350 gallons of fuel.~~
 - ~~2. Starting the diesel driven pump from ambient conditions and operating for greater than or equal to 30 minutes on recirculation flow.~~~~
- ~~b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM D4057-81, is within the acceptable limits specified in Table 1 of ASTM D975-81 when checked for viscosity, water, and sediment.~~
- ~~c. At least once per 18 months by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.~~



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~~PLANT SYSTEMS~~

~~FIRE SUPPRESSION SYSTEMS~~

~~FIRE SUPPRESSION WATER SYSTEM~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.7.7.1.3 The diesel-driven fire pump starting 24 volt battery bank and charger shall be demonstrated OPERABLE.~~

~~a. At least once per 7 days by verifying that:~~

~~1. The electrolyte level of each cell is above the plates,~~

~~2. The pilot cell specific gravity, corrected to 77°F and full electrolyte level, is 1.235 or more,~~

~~3. The overall battery voltage is 25.5 volts* or more with the battery on float charge.~~

~~b. At least once per 92 days by verifying that all cell parameters for all battery cells are demonstrated OPERABLE per Specification 4.7.7.1.3.a and the difference between the pilot cell with the highest specific gravity when compared to the pilot cell with the lowest specific gravity is 0.015 or less.~~

~~c. At least once per 18 months by verifying that:~~

~~1. The batteries, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration, and~~

~~2. Battery and terminal connections are clean, tight, and free of corrosion.~~

~~* An overall battery voltage of 25.5 volts or more represents 12 pilot cells each carrying at least a 2.13 volt charge.~~

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~~PLANT SYSTEMS~~

~~FIRE SUPPRESSION SYSTEMS~~

~~SPRAY AND/OR SPRINKLER SYSTEMS~~

~~LIMITING CONDITIONS FOR OPERATION~~

~~3.7.7.2 The following spray and sprinkler systems shall be OPERABLE.~~

~~a. Spray and Sprinkler Systems~~

SYSTEM NO.	BUILDING/ELEVATION	ZONE NO.
W-9	115kV Transformer/261' 0"	510 SW
W-16	115kV Transformer/261' 0"	506 SW
W-33	Electrical Tunnel 35'	302 NW
W-34	Electrical Tunnel 140'	301 NW
W-35	Electrical Tunnel 230'	304 NW
W-36	Electrical Tunnel 315'	303 NW
W-42	Control/288' 6"	361 NW
W-43	Control/306' 0"	379 NW
W-44	Control/214' 0" to 306' 0"	309 NW, 324 NW, 337 NW
		359 NW, 377 NW
W-45	Control/214' 0" to 237' 0"	323 NW, 326 NW, 327 NW
W-46	Control/214' 0" to 306' 0"	305 NW, 321 NW, 332 NW,
		352 NW, 371 NW
W-47	Control/214' 0" to 237' 0"	322 NW, 325 NW, 331 NW
W-55	Reactor/175' 0"	204 SW
W-57	Reactor/261' 0"	242 NW, 251 NW
W-60	Diesel Fire Pump Rm./261' 0"	804 NW

~~b. Preaction Systems~~

SYSTEM NO.	BUILDING/ELEVATION	ZONE NO.
W-48	Diesel Generator/261' 0"	402 SW
W-49	Diesel Generator/261' 0"	404 SW
W-50	Diesel Generator/261' 0"	403 SW
W-54	Reactor/South 175' 0" to 328' 10"	206 SW, 207 SW, 208 SW,
		213 SW, 214 SW, 223 SW,
		224 SW, 238 SW, 239 SW,
		245 SW, 255 SW, 262 SW,
		272 SW, 274 SW
W-56	Reactor/North 175' 0" to 328' 10"	201 SW, 202 SW, 203 SW,
		211 SW, 212 SW, 222 SW,
		232 SW, 243 SW, 252 SW,
		261 SW, 271 SW, 273 SW,
		221 SW, 231 SW

~~APPLICABILITY: Whenever equipment protected by the spray and/or sprinkler systems is required to be OPERABLE.~~

PLANT SYSTEMS

FIRE SUPPRESSION SYSTEMS

SPRAY AND/OR SPRINKLER SYSTEMS

LIMITING CONDITIONS FOR OPERATION

3.7.7.2 (Continued)

ACTION:

- a. ~~With one or more of the above required spray and/or sprinkler systems inoperable, within 1 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. In addition, comply with the provisions of Specification 3.3.7.8.~~
- b. ~~The provisions of Specification 3.0.3 and 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

~~4.7.7.2 Each of the above required spray and sprinkler 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.~~
- 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 spray and sprinkler headers to verify their integrity, and~~
 - 3. ~~By a visual inspection of each deluge nozzle's spray area to verify that the spray pattern is not obstructed.~~
- d. ~~At least once per 3 years by performing an air or water flow test through each open head spray and sprinkler header and verifying each open head spray and sprinkler nozzle is unobstructed.~~

~~PLANT SYSTEMS~~

~~FIRE SUPPRESSION SYSTEMS~~

~~CO₂ SYSTEMS~~

~~LIMITING CONDITIONS FOR OPERATION~~

~~3.7.7.3 The following low pressure CO₂ systems shall be OPERABLE:~~

ZONE NUMBER	BUILDING/ELEVATION
336 XL	Control/261' 0"
333 XL	Control/261' 0"
342 XL	Control/261' 0"
253 XL	Reactor/289' 0"

~~APPLICABILITY: Whenever equipment protected by the CO₂ systems is required to be OPERABLE,~~

~~ACTION:~~

- ~~a. With one or more of the above required CO₂ systems inoperable, within 1 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.~~
- ~~b. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.7.7.3.1 Each of the above required CO₂ 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.~~

~~4.7.7.3.2 Each of the above required low pressure CO₂ systems shall be demonstrated OPERABLE:~~

- ~~a. At least once per 7 days by verifying the CO₂ storage tank 2FPL-TK1 contains 3 tons of CO₂ at a pressure to be greater than 275 psig, and~~
- ~~b. At least once per 18 months by verifying:~~
 - ~~1. The system, including associated ventilation system fire dampers actuate manually and automatically, upon receipt of a simulated actuation signal, and~~
 - ~~2. Flow from each nozzle during a "Puff Test,"~~

~~PLANT SYSTEMS~~

~~FIRE SUPPRESSION SYSTEMS~~

~~HALON SYSTEMS~~

~~LIMITING CONDITIONS FOR OPERATION~~

~~3.7.7.4 The following Halon systems shall be OPERABLE with the storage tanks having at least 95% of full charge weight or level and 90% of full charge pressure.~~

<u>ZONE NO.</u>	<u>BUILDING/ELEVATION</u>
353 SG	Control/288' 6"
354 SG	Control/288' 6"
362 SG	Control/288' 6"
357 XG	Control/288' 6"
358 XG	Control/288' 6"
374 SG	Control/306' 0"
375 SG	Control/306' 0"
381 SG	Control/306' 0"
376 XG	Control/306' 0"

~~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 1 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.~~
- ~~b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.~~

~~SURVEILLANCE REQUIREMENTS~~

- ~~4.7.7.4 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.~~
 - ~~b. At least once per 6 months by verifying Halon storage tank weight or level* and pressure.~~

~~*Level determination for the purpose of verifying Halon system OPERABILITY shall conform to NRC accepted UL or FM test procedures and/or equipment.~~



~~PLANT SYSTEMS~~

~~FIRE SUPPRESSION SYSTEMS~~

~~HALON SYSTEMS~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.7.7.4 (Continued)~~

~~c. At least once per 18 months by:~~

- ~~1. Verifying the system, including associated ventilation system fire dampers and fire door release mechanisms, actuates, manually and automatically, upon receipt of a simulated actuation signal, and~~
- ~~2. Performance of an air flow test through headers and nozzles to assure no blockage.~~



PLANT SYSTEMS

~~FIRE SUPPRESSION SYSTEMS~~

~~FIRE HOSE STATIONS~~

~~LIMITING CONDITIONS FOR OPERATION~~

~~3.7.7.5 The fire hose stations shown in Table 3.7.7.5-1 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 3.7.7.5-1 inoperable, provide gated wye(s) on the nearest OPERABLE hose station(s). One outlet of the wye shall be connected to the standard length of hose provided for the hose station. The second outlet of the wye shall be connected to a length of hose sufficient to provide coverage for the area left unprotected by the inoperable hose station. Where it can be demonstrated that the physical routing of the fire hose would result in a recognizable hazard to operating technicians, plant equipment, or the hose itself, the fire hose shall be stored in a roll at the outlet of the OPERABLE hose station. Signs shall be mounted above the gated wye(s) to identify the proper hose to use. The above ACTION shall be accomplished within 1 hour if the inoperable fire hose is the primary means of fire suppression; otherwise route the additional hose within 24 hours.~~
- ~~b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.7.7.5 Each of the fire hose stations shown in Table 3.7.7.5-1 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~~



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~~PLANT SYSTEMS~~

~~FIRE SUPPRESSION SYSTEMS~~

~~FIRE HOSE STATIONS~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.7.7.5.b (Continued)~~

~~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, which ever is greater.~~

TABLE 3.7.7.5-1

FIRE HOSE STATIONS

<u>LOCATION</u>	<u>ELEVATION</u>	<u>HOSE RACK IDENTIFICATION</u>
Control Bldg.	214' 0"	FHR 118
Control Bldg.	214' 0"	FHR 119
Control Bldg.	237' 0"	FHR 113
Control Bldg.	237' 0"	FHR 117
Control Bldg.	250' 0"	FHR 30
Control Bldg.	261' 0"	FHR 116
Control Bldg.	261' 0"	FHR 112
Control Bldg.	288' 6"	FHR 111
Control Bldg.	288' 6"	FHR 115
Control Bldg.	306' 0"	FHR 114
Control Bldg.	306' 0"	FHR 110
Diesel Generator Bldg.	261' 0"	FHR 22
Diesel Generator Bldg.	261' 0"	FHR 33
Reactor Bldg.	175' 0"	FHR 74
Reactor Bldg.	175' 0"	FHR 90
Reactor Bldg.	175' 0"	FHR 100
Reactor Bldg.	198' 0"	FHR 102
Reactor Bldg.	198' 0"	FHR 101
Reactor Bldg.	198' 0"	FHR 103
Reactor Bldg.	215' 0"	FHR 73
Reactor Bldg.	215' 0"	FHR 89
Reactor Bldg.	215' 0"	FHR 99
Reactor Bldg.	240' 0"	FHR 72
Reactor Bldg.	240' 0"	FHR 88
Reactor Bldg.	240' 0"	FHR 98
Reactor Bldg.	261' 0"	FHR 71
Reactor Bldg.	261' 0"	FHR 79
Reactor Bldg.	261' 0"	FHR 87
Reactor Bldg.	261' 0"	FHR 94
Reactor Bldg.	289' 0"	FHR 70
Reactor Bldg.	289' 0"	FHR 78
Reactor Bldg.	289' 0"	FHR 86
Reactor Bldg.	289' 0"	FHR 93
Reactor Bldg.	306' 6"	FHR 69
Reactor Bldg.	306' 6"	FHR 77
Reactor Bldg.	328' 10"	FHR 68
Reactor Bldg.	328' 10"	FHR 76
Reactor Bldg.	328' 10"	FHR 85
Reactor Bldg.	328' 10"	FHR 92
Reactor Bldg.	353' 10"	FHR 67
Reactor Bldg.	353' 10"	FHR 75
Reactor Bldg.	353' 10"	FHR 84
Reactor Bldg.	353' 10"	FHR 91



~~TABLE 3.7.7.5-1 (Continued)~~

~~FIRE HOSE STATIONS~~

LOCATION	ELEVATION	HOSE RACK IDENTIFICATION
Aux. Bay North	175'-0"	FHR 97
Aux. Bay North	198'-0"	FHR 104
Aux. Bay North	215'-0"	FHR 96
Aux. Bay North	240'-0"	FHR 95
Aux. Bay South	175'-0"	FHR 83
Aux. Bay South	198'-0"	FHR 82
Aux. Bay South	215'-0"	FHR 81
Aux. Bay South	240'-0"	FHR 80
Screenwell Bldg.	261'-0"	FHR 56
Electrical Tunnels	210'-0"	FHR 137
Electrical Tunnels	214'-6"	FHR 139
Electrical Tunnels	214'-6"	FHR 135
Electrical Tunnels	214'-6"	FHR 136
Electrical Tunnels	220'-6"	FHR 138



~~PLANT SYSTEMS~~

~~FIRE SUPPRESSION SYSTEMS~~

~~YARD FIRE HYDRANTS AND HYDRANT HOSE HOUSES~~

~~LIMITING CONDITIONS FOR OPERATION~~

~~3.7.7.6 The yard fire hydrants and associated hydrant hose houses shown in Table 3.7.7.6-1 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 3.7.7.6-1 inoperable, within 1 hour have sufficient additional lengths of 2-1/2-inch diameter hose located in an adjacent OPERABLE hydrant hose house to provide service to the unprotected area(s) if the inoperable fire hydrant or associated hydrant hose house is the primary means of fire suppression; otherwise provide the additional hose within 24 hours.~~
- ~~b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.7.7.6 Each of the 115 kV switch yard fire hydrants and associated hydrant hose houses shown in Table 3.7.7.6-1 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.~~



~~TABLE 3.7.7.6-1~~

~~YARD FIRE HYDRANTS AND ASSOCIATED HYDRANT HOSE HOUSES~~

LOCATION	HYDRANT NUMBER
115 kV Yard	FH 14
115 kV Yard	FH 10



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~~PLANT SYSTEMS~~

~~3/4.7.8 FIRE RATED ASSEMBLIES~~

~~LIMITING CONDITIONS FOR OPERATION~~

~~3.7.8 All fire barrier assemblies, including 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, including fire doors, fire dampers, cable and piping penetration 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 1 hour establish a continuous fire watch on at least one side of the affected assembly(ies) 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.~~
- ~~b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.7.8.1 Each of the above required fire rated assemblies and penetration 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. At least 10% of the above required fire dampers shall be verified OPERABLE by removal of the fusible link and observing closure of the associated damper. If a damper fails to close, an additional 10% shall be tested until a 10% sample with no failures is found. Samples shall be selected so that fire dampers will be inspected at least once per 15 years.~~
- ~~c. At least 10% of each type of sealed penetration. If apparent changes in appearance or abnormal degradations are found, a visual inspection of an additional 10% of each type of sealed penetration shall be made. This inspection process shall continue until a 10% sample with no apparent changes in appearance or abnormal degradation is found. Samples shall be selected so that each penetration seal will be inspected at least once every 15 years.~~



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~~PLANT SYSTEMS~~

~~FIRE RATED ASSEMBLIES~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.7.8.2 Each of the above required fire doors shall be verified OPERABLE by inspecting release and closing mechanism and latches at least once per 6 months, and by verifying:~~

- ~~a. At least once per 7 days that each locked closed fire door is closed.~~
- ~~b. At least once per 24 hours that doors with release mechanisms are free of obstructions and performing a functional test of these mechanisms at least once per 18 months.~~
- ~~c. At least once per 24 hours that each unlocked fire door is closed.~~



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INSTRUMENTATION

BASES

MONITORING INSTRUMENTATION

3/4.3.7.6 SOURCE RANGE MONITORS

The source range monitors (SRMs) provide the operator with information about the status of the neutron level in the core at very low power levels during startup and shutdown. At these power levels, reactivity additions shall not be made without this flux level information being 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 (TIP) 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.

The TIP system OPERABILITY is demonstrated by normalizing all probes (i.e., detectors) before performing an LPRM function calibration. Monitoring core thermal limits may involve utilizing individual detectors to monitor selected areas of the reactor core; thus, all detectors may not be required to be OPERABLE. The operability of individual detectors to be used for monitoring is demonstrated by comparing the detector(s) output with data obtained during the previous LPRM calibrations.

~~3/4.3.7.8 FIRE DETECTION INSTRUMENTATION~~

~~OPERABILITY of the detection instrumentation ensures that 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.~~

~~Fire detectors that are used to actuate fire suppression systems represent a more critically important component of a plant's fire protection program than detectors that are installed solely for early fire warning and notification. Consequently, the minimum number of OPERABLE fire detectors must be greater.~~

~~The loss of detection capability for fire suppression systems, actuated by fire detectors, represents a significant degradation of fire protection for any area. As a result, the establishment of a fire watch patrol must be initiated at an earlier stage than would be warranted for the loss of detectors that provide only early fire warning. The establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.~~

PLANT SYSTEMS

BASES

3/4.7.6 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, and surveillance requirements are commensurate with the probability of damage to a source in that group. Those sources that are frequently handled are required to be tested more often than those that are not. Sealed sources which are continuously enclosed within a shielded mechanism, i.e., sealed sources within radiation-monitoring devices, are considered to be stored and need not be tested unless they are removed from the shielded mechanism.

~~3/4 7.7 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 sprinkler systems, CO₂ 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 or level and pressure of the tanks. Level measurements are made by either a UL or FM approved method.~~

~~In the event the fire suppression water system becomes inoperable, immediate corrective measures must be taken because this system provides the major fire suppression capability of the plant.~~

PLANT SYSTEMS

BASES

~~3/4.7.8 FIRE RATED ASSEMBLIES~~

~~The OPERABILITY of the fire barriers and barrier penetrations ensures that fire damage will be limited. These design features minimize the possibility of a single fire involving more than one fire area before it is detected and extinguished. The fire barriers, fire barrier penetrations for conduits, cable trays and piping, fire dampers, and fire doors are periodically inspected to verify their OPERABILITY.~~

3/4.7.9 MAIN TURBINE BYPASS SYSTEM

The main turbine bypass system is required to be OPERABLE consistent with the assumptions of the feedwater controller failure analysis of FSAR Chapter 15.

ADMINISTRATIVE CONTROLS

ORGANIZATION

UNIT STAFF

6.2.2.e (Continued)

Supervisor - Nuclear is restricted in the control room until an additional Licensed Senior Operator arrives.

- f. A Licensed Senior Operator shall be responsible for all movement of new and irradiated fuel within the site boundary. All core alterations shall be directly supervised by a Licensed Senior Operator who has no other concurrent responsibilities during this operation. A Licensed Operator will be required to manipulate the controls of all fuel handling equipment except movement of new fuel from receipt through dry storage. All fuel moves within the core shall be directly monitored by a member of the reactor analyst group.
- g. A Fire Brigade* of five members shall be maintained on site at all times. The Fire Brigade shall not include the Shift Supervisor and the two other members of the minimum shift crew necessary for safe shutdown of the unit and any personnel required for other essential functions during a fire emergency.
- h. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions; e.g., Licensed Senior Operators, licensed operators, health physicists, auxiliary operators, and key maintenance personnel.
- i. Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a normal 8-hour day, 40-hour week while the unit is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance, or major unit modifications, on a temporary basis the following guidelines shall be followed:
 - 1. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
 - 2. An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time.
 - 3. A break of at least 8 hours should be allowed between work periods, including shift turnover time.

* The radiation protection qualified individual and Fire Brigade composition may be less than the minimum requirements for a period of time not to exceed 2 hours, in order to accommodate unexpected absence, provided immediate action is taken to fill the required positions.



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ADMINISTRATIVE CONTROLS

REVIEW AND AUDIT

SAFETY REVIEW AND AUDIT BOARD

AUDITS

6.5.3.8 (Continued)

- j. Any other area of unit operation considered appropriate by the SRAB or the Vice President - Nuclear Generation or the Manager - Nuclear Engineering and Licensing.
- k. The Fire Protection Program and implementing procedures at least once per 24 months.
- l. An independent fire protection and loss prevention program inspection and audit shall be performed at least once per 12 months utilizing either qualified offsite licensee personnel or an outside fire protection firm.
- m. An inspection and audit of the fire protection and loss prevention program shall be performed by an outside qualified fire consultant at intervals no greater than 36 months.

AUTHORITY

6.5.3.9 The SRAB shall report to and advise the Vice President - Nuclear Generation and Manager - Nuclear Engineering and Licensing on those areas of responsibility specified in Sections 6.5.3.7 and 6.5.3.8.

RECORDS

6.5.3.10 Records of SRAB activities shall be prepared, approved, and distributed as indicated below:

- a. Minutes of each SRAB meeting shall be prepared, approved, and forwarded to the Vice President - Nuclear Generation and Manager - Nuclear Engineering and Licensing within 14 days following each meeting.
- b. Reports of reviews encompassed by Specification 6.5.3.7b, e, g, h shall be prepared, approved, and forwarded to the Vice President - Nuclear Generation and Manager - Nuclear Engineering and Licensing within 14 days following completion of the review.
- c. Audit reports encompassed by Specification 6.5.3.8 shall be forwarded to the Vice President - Nuclear Generation, the Manager - Nuclear Engineering and Licensing, and to the management positions responsible for the areas audited within 30 days after completion of the audit by the auditing organization.

