

PROPOSED PAGE CHANGES

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(8) Study of Multiple Control System Failures (Section 2.7.2, SFR)

Prior to startup following the first refueling outage, DECo shall provide the NRC staff for its review and approval, the necessary analysis or modifications needed to resolve the impact of control system failures due to a failure or malfunction of power sources or sensors which provide power or signals to two or more control systems.

(9) Modifications for Fire Protection (Section 2.8.1, SSFR 95 and SSFR 96)

(a) DECo shall implement and maintain in effect all provisions of the approved fire protection program as described in its Final Safety Analysis Report for the facility through Amendment 60 and as approved in the SFR through Supplement No. 5, Subject to provisions (b) and (c) below:

(b) ~~DECo may make no change to the approved fire protection program which would significantly decrease the level of fire protection in the plant without prior approval of the Commission. To make such a change, DECo must submit an application for a license amendment pursuant to 10 CFR 50.60.~~

(c) ~~DECo may make changes to features of the approved fire protection program which do not significantly decrease the level of fire protection without prior Commission approval provided:~~

(i) ~~such changes do not otherwise involve a change in license condition or Technical Specification or result in an unresolved safety question (see 10 CFR 50.60), and~~

(ii) ~~such changes do not result in failure to complete the fire protection program approved by the Commission prior to license issuance.~~

~~DECo shall maintain, in an auditable form, a current record of all such changes, including an analysis of the effects of the changes on the fire protection program, and shall make such records available to NRC inspectors upon request. All changes to the approved program shall be reported to the Director of the Office of Nuclear Reactor Regulation, together with the PSAR revisions required by 10 CFR 50.71(e).~~

(a) DECo shall install and make operational, the independent alternate shutdown system in accordance with the schedule contained in its letter dated July 5, 1985. The interim

INSERT

(a) DECo may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

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INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

3/4.3.7.9 DELETED

LIMITING CONDITION FOR OPERATION

3.3.7.9 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3.7.9-2 shall be OPERABLE.

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

ACTION:

- a. With the number of OPERABLE fire detection instruments in one or more zones:
 1. Less than, but more than one-half of, the Total Number of Instruments shown in Table 3.3.7.9-1 for Function A, restore the inoperable Function A instrument(s) to OPERABLE status within 34 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, unless the instrument(s) is located inside the containment, then inspect that containment zone at least once per 8 hours or monitor the containment air temperature at least once per hour at the locations listed in Specification 4.6.1.7.
 2. One less than the Total Number of Instruments shown in Table 3.3.7.9-1 for Function B, or one-half or less of the Total Number of Instruments shown in Table 3.3.7.9-1 for Function A, or with any two or more adjacent instruments inoperable, within 1 hour 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, then inspect that containment zone at least once per 8 hours or monitor the containment air temperature at least once per hour at the locations listed in Specification 4.6.1.7.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

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.

4.3.7.9.3 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.

TABLE 2.2.7.2-1

~~FIRE DETECTION INSTRUMENTATION~~

DELETED

INSTRUMENT LOCATION	FIRE DETECTION ZONE	IONIZATION (n/y)	TOTAL NUMBER OF INSTRUMENTS*	PHOTOELECTRIC (n/y)	FIXED THERMAL (n/y)	INFRARED (n/y)
a. Reactor Building						
1. Torus Area	1	8/0				
2. SW Corner Rooms, BHR Pump	2	4/0				
3. SW Corner Rooms, BHR Pump	3	4/0				
4. SE Corner Rooms, CRD MPC	4	9/0				
5. NE Corner Rooms, BCIC	5	5/0			8/0	
6. First Floor	7	20/0				
7. EEC System Area						
Second Floor	10	21/0				
8. Third Floor	15	15/0			2/0	
9. Fourth Floor	17	8/0				
10. Refueling Area, Fifth Floor	17					10/0
b. Auxiliary Building						
1. Basement, B Control Air Equipment	4	6/0				
2. Corridors, 862', 863'	5	2/0		2/0		
3. First Floor Mezzanine, Cable Trays, 883', 803'	6	17/0				
4. Switchgear Room, Corridor Area	9	9/0				
Second Floor	9	10/0				
5. Cable Tunnel						
6. Cable Tray Area						
Second Floor						
Mezzanine	9A	8/22				
7. BC/MCC Room, Third Floor	14	8/10				
8. Switchgear, Battery and R-G Rooms						
Third Floor	14	14/0				
9. Fourth Floor	15	6/0				
10. Fifth Floor	15	25/0				

PLANT SYSTEMS

3/4.7.7 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM 3/4.7.7.1 DELETED

LIMITING CONDITION FOR OPERATION

3.7.7.1 The fire suppression water system shall be OPERABLE with:

- a. Two fire suppression pumps, each with a capacity of 2500 gpm, with their discharge aligned to the fire suppression header,
- b. The general service water intake structure water level \geq 558 feet, and
- c. An OPERABLE flow path capable of taking suction from the general service water intake structure 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 spray system required to be OPERABLE per Specifications 3.7.7.2, 3.7.7.3, and 3.7.7.6.

APPLICABILITY: At all times.

ACTION:

- a. With one pump inoperable, restore the inoperable pump to OPERABLE status within 7 days or provide an alternate backup pump. 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 7 days by verifying the minimum water supply level.
- b. At least once per 31 days by starting the electric motor-driven fire suppression pump and operating it for at least 15 minutes on recirculation flow.
- 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.

PLANT SYSTEMS

Surveillance Requirements (Continued)

- d. At least once per 12 months by performance of a system flush.
 - e. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
 - f. 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 fire pump develops a discharge of 150% of rated capacity at 65% of rated pressure (3750 ± 10% gpm at 204 ± 10% psig), and recording measured performance at minimum and rated loads.
 2. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel, and
 3. Verifying that each fire suppression pump starts sequentially to maintain the fire suppression water system pressure greater than or equal to 200 psig.
 - g. At least once per 3 years by performing a flow test of the system in accordance with Chapter 8, 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 storage tank contains at least 150 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-D270-65 (reapproved 1980), is within the acceptable limits specified in Table 1 of ASTM-D975-77 when checked for viscosity, water and sediment.
 - c. At least once per 18 months, during shutdown, by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.

PLANT SYSTEMS

MAINTENANCE REQUIREMENTS (Continued)

4.7.7.2.8 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 battery is above the plates.
 - 2. The battery specific gravity, corrected to 77°F, is greater than or equal to 1.265.
 - 3. The battery voltage is greater than or equal to 24 volts, and
- b. At least once per 28 months by verifying that:
 - 1. The battery and battery racks show no visual indication of physical damage or abnormal deterioration, and
 - 2. Battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anticorrosion material.

PLANT SYSTEMS

SPRAY AND/OR SPRINKLER SYSTEMS

34.77.2 DELETED

EXISTING CONDITION FOR OPERATION

3.7.7.2 The following spray and sprinkler systems shall be OPERABLE:

<u>AREA</u>	<u>ELEVATION</u>	<u>TYPE</u>
a. <u>Reactor Building</u>		
1. Torus Room	540'	Wet Pipe Sprinkler
2. Basement NE Corner Room	540'	Wet Pipe Sprinkler
3. MPC Turbine and Pump Room	540'	Wet Pipe Sprinkler
4. First Floor, Railroad Bay	553'	Wet Pipe Sprinkler
5. Second Floor, Cable Trays	513'	Wet Pipe Sprinkler
6. Fourth Floor, NE Sets	541'6"	Wet Pipe Sprinkler
b. <u>Auxiliary Building</u>		
1. Basement	551' and 562'	Wet Pipe Sprinkler
2. Mezzanine and Cable Tray Area	553' - 503'	Wet Pipe Sprinkler
3. Ventilation Equipment	577'	Manual Flooding System
4. Cable Spreading Room	530'6"	Manual Sprinkler
5. Corridor	552'	Wet Pipe Sprinkler
c. <u>RHR Complex</u>		
1. Fuel Oil Storage Tank Rooms - (4)		Wet Pipe Sprinkler
d. <u>General Service Water Pumphouse</u>		
1. Diesel Fire Pump Room		Wet Pipe Sprinkler

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

ACTION:

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

PLANT SYSTEMS

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 by performing a system functional test which includes simulated automatic actuation of each system, except the ventilation room manual flooding system, by opening the inspectors test valve and verifying the water flow alarm annunciator.~~
- ~~d. At least once per 18 months by a visual inspection of the sprinkler header to verify its integrity.~~

PLANT SYSTEMS

CO₂ SYSTEMS

3.4.7.7.3 DELETED

INITIAL CONDITION FOR OPERATION

3.7.7.3 The following low pressure CO₂ systems shall be OPERABLE:

- Emergency diesel generators, BWR complex.
- Standby gas treatment system charcoal filters, Auxiliary Building, elevation 677'6".
- Cable tray area, Auxiliary Building, elevation 631'.
- Outside Division II switchgear room, Auxiliary Building, elevation 643'6".

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

ACTION:

- 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.
- The provisions of Specifications 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:

- At least once per 7 days by verifying the CO₂ storage tank level to be greater than 80% full for systems a and b above and greater than 40% full for systems c and d above, and pressure to be greater than 250 psig but less than 330 psig for all of the systems.
- At least once per 18 months by verifying:
 - The system, including associated ventilation system fire dampers and fire door release mechanisms, actuates, manually and/or automatically, upon receipt of a simulated actuation signal, and
 - Flow from each nozzle during a "Puff Test."

PLANT SYSTEMS

HAZARD SYSTEMS 3/4.7.7.4 DELETED

INITIATING CONDITION FOR OPERATION

3.7.7.4 The following Hazen systems shall be OPERABLE with the storage tanks of either the main bank or the reserve bank having at least 90% of the main bank or the reserve bank full charge weight and 90% of the main bank or the reserve bank full charge pressure:

- a. Relay room, elevation 613'6".
- b. Cable spreading room, elevation 630'6".
- c. Computer room, and under floor, elevation 655'6".

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

ACTION:

- a. With one or more of the above required Hazen 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 Hazen 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 Hazen storage tank weight and pressure.
- c. At least once per 36 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 a puff test through all headers and nozzles to assure no blockage.

PLANT SYSTEMS

FIRE HOSE STATIONS

SN.7.7.5 DELETED

LIMITING CONDITION 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 eye(s) on the nearest OPERABLE hose station(s). One outlet of the eye shall be connected to the standard length of hose provided for the hose station. The second outlet of the eye 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 eye(s) to identify the proper hose to use. The above ACTION shall be accomplished within 2 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
 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 250 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater.

TABLE 3.7.2.8-1

DELETED

FIRE HOSE STATIONS

<u>LOCATION</u>	<u>ELEVATION</u>	<u>HOSE RACK</u>
a. <u>Reactor Building</u>		
1. Fire hose at top of stairway in northwest aux building	736'	RB-1
2. Fire hose at northwest corner of elevator	684'-6"	RB-2
3. Fire hose at southwest corner	684'-6"	RB-3
4. Fire hose at northeast stairway	684'-6"	RB-4
5. Fire hose in southeast walkway	684'-6"	RB-5
6. Fire hose at northwest corner outside elevator	659'-6"	RB-6
7. Fire hose at northeast corner in stairway	659'-6"	RB-7
8. Fire hose at southwest corner at stairway	659'-6"	RB-8
9. Fire hose at southeast corner at stairway	659'-6"	RB-9
10. Fire hose at northeast corner at stairway	641'-6"	RB-10
11. Fire hose at northwest corner at stairway by elevator	641'-6"	RB-11
12. Fire hose at southwest corner at stairway	641'-6"	RB-12
13. Fire hose at southeast corner at stairway	641'-6"	RB-13
14. Fire hose at northwest corner near elevator	613'-6"	RB-14
15. Fire hose at southwest corner at bottom of stairway	613'-6"	RB-15
16. Fire hose near drywell instrument monitoring rack (east walkway)	613'-6"	RB-16

TABLE 2.7.7.8-3 (Continued)

DELETED FIRE HOSE STATIONS		<u>ELEVATION</u>	<u>HOSE RACK</u>
<u>LOCATION</u>			
17. Fire hose in the northeast corner		613'-6"	RB-17
18. Fire hose at southeast corner by aux bldg access		613'-6"	RB-18
19. Fire hose at northwest corner near elevator		603'-6"	RB-19
20. Fire hose at northeast corner near stairway		603'-6"	RB-20
21. Fire hose at railroad bay		603'-6"	RB-21
22. Fire hose at southeast corner near stairway		603'-6"	RB-22
23. Fire hose at entrance to containment (southwest)		603'-6"	RB-23
24. Fire hose at northwest corner near elevator		662'-0"	RB-24
25. Fire hose at northeast corner near stairway		662'-0"	RB-25
26. Fire hose at southwest corner near stairway		662'-0"	RB-26
27. Fire hose at southeast corner near stairway		662'-0"	RB-27
28. Fire hose at northwest corner near stairway		640'-0"	RB-28
29. Fire hose at northeast corner near stairway		640'-0"	RB-29
30. Fire hose at southwest corner near stairway		640'-0"	RB-30
31. Fire hose at southeast corner near stairway		640'-0"	RB-31
32. Fire hose in MPC1 room		640'-0"	RB-32
33. Fire hose in CRU pump room		662'-0"	RB-33

TABLE 2.7.7.2-3 (Continued)

~~DELETED FIRE HOSE STATIONS~~

<u>LOCATION</u>	<u>ELEVATION</u>	<u>HOSE BACK</u>
D. Auxiliary Building		
1. Fire hose at southwest corner in control center air conditioning equipment room	677'-6"	AB-1
2. Fire hose at northwest corner in ventilation equipment area	677'-6"	AB-2
3. Fire hose at southwest wall in ventilation equipment area	677'-6"	AB-3
4. Fire hose at north side in ventilation equipment area	659'-6"	AB-4
5. Fire hose at south side in ventilation equipment area	659'-6"	AB-5
6. Fire hose outside control room near center stairway	643'-6"	AB-6
7. Fire hose outside cable spreading room in stairway from control room	630'-6"	AB-7
8. Fire hose south wall cable tray room near stairway	630'-6"	AB-8
9. Fire hose near column line H-22	623'-6"	AB-9
10. Fire hose in walkway from reactor building	613'-6"	AB-10
11. Fire hose in stairway from relay room to lower cable tray area	613'-6"	AB-11
12. Fire hose at southeast corner by RBCCW heat exchanger	583'-6"	AB-12
13. Fire hose at column G, 14 RBCCW pump area	583'-6"	AB-13
14. Fire hose near compressor receiver for Division 11	551'-0"	AB-14
15. Fire hose near compressor receiver for Division I	551'-0"	AB-15

TABLE 2.7.7.B-2 (Continued)

LOCATION	DELETED	PIPE-HOSE STATIONS	ELEVATION	HOSE BACKS
c. Residual Heat Removal (RHR) Complex				
1. Fire hose at top of stairway to RHR-1 switchgear room			617'-0"	RR-1
2. Fire hose at top of stairway to RHR-2 switchgear room			617'-0"	RR-2
3. Fire hose in RHR-1 near diesel generator service water pump			590'-0"	RR-3
4. Fire hose in RHR-2 near diesel generator service water pump			590'-0"	RR-4
5. Fire hose in RHR-1 near diesel generator #12			590'-0"	RR-5
6. Fire hose in RHR-2 near diesel generator #25			590'-0"	RR-6
7. Fire hose in RHR-1 near diesel generator #11			590'-0"	RR-7
8. Fire hose in RHR-2 near diesel generator #14			590'-0"	RR-8

PLANT SYSTEMS

YARD FIRE HYDRANTS AND HYDRANT HOSE HOUSES

3/4.7.7.6 DELETED

ADMITTING CONDITION 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 2 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 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 2.7.7.6-1

~~DELETED~~ ~~HAZARD FIRE HYDRANTS AND ASSOCIATED HYDRANT HOSE NUMBER~~

<u>LOCATION</u>	<u>HYDRANT NUMBER</u>
a. Between the PWR complex and the Reactor Building	9
b. Southwest of the Reactor Building	20
c. Southwest of the Reactor Building	21
d. Southeast of the Reactor Building	22

PLANT SYSTEMS

3/4.7.8 FIRE RATED ASSEMBLIES ~~DELETED~~

LIMITING CONDITION FOR OPERATION

3.7.8 All fire rated 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, piping and ventilation duct 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 1 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 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. Each fire damper and associated hardware.
- c. At least 20% of each type of sealed penetration. If apparent changes in appearance or abnormal degradations are found, a visual inspection of an additional 20% of each type of sealed penetration shall be made. This inspection process shall continue until a 20% 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 18 years.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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

- a. The OPERABILITY of the fire door supervision system for each electrically supervised fire door by performing a MANUAL FUNCTIONAL TEST at least once per 31 days.
- b. The position of each latched-closed fire door at least once per 7 days.
- c. That each unlatched fire door without electrical supervision is closed at least once per 24 hours.

INSTRUMENTATION

BASES

MONITORING INSTRUMENTATION (Continued)

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 chlorine mode of operation to provide the required protection. The detection system required by this specification is consistent with the recommendations of Regulatory Guide 2.95 "Protection of Nuclear Power Plant Control Room Operators against an Accidental Chlorine Release", Revision 2, January, 1977.

3/4.3.7.9 FIRE DETECTION INSTRUMENTATION DELETED

~~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.~~

~~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.~~

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 2.123, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981.

3/4.3.7.11 RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

The radioactive liquid effluent monitoring instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents during actual or potential releases of liquid effluents. The alarm/trip setpoints for these instruments shall be calculated and adjusted in accordance with the methodology and parameters in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 20 CFR Part 20. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63 and 64 of Appendix A to 20 CFR Part 50.

PLANT SYSTEMS

BASES

2/4.7.6 SEALED SOURCE CONTAMINATION

The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 30 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 devices, are considered to be stored and need not be tested unless they are removed from the shielded mechanism.

2/4.7.7 FIRE SUPPRESSION SYSTEMS ~~DELETED~~

~~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 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 assurance 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 water fire suppression capability of the plant.~~

2/4.7.8 FIRE BARRIER ASSEMBLIES ~~DELETED~~

~~The operability of the fire barriers and barrier penetrations ensure that fire damage will be limited. These design features minimize the possibility of a single fire involving more than one fire area prior to detection and extinguishment. The fire barriers, fire barrier penetrations for conduits, cable trays and piping, fire dampers, and fire doors are periodically inspected to verify their operability.~~

ADMINISTRATIVE CONTROLS

UNIT STAFF (Continued)

- c. A Health Physics Technician shall be on site when fuel is in the reactor. ↑
- d. All CORE ALTERATIONS shall be observed and directly supervised by either a licensed Senior Operator or licensed Senior Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation;
- e. ~~A fire brigade of at least five members shall be maintained on site at all times. The fire brigade shall not include the Nuclear Shift Supervisor, the Shift Technical Advisor, nor 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; and~~
- f. 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 physics personnel, auxiliary operators, and key maintenance personnel).

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.
4. Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.

Any deviation from the above guidelines shall be authorized by the Plant Manager or a Section Superintendent or higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation. Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by the Plant Manager or a Section Superintendent to assure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

position may be unfilled
The Health Physics Technician 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;

ADMINISTRATIVE CONTROLS

RESPONSIBILITIES (Continued)

1. Review of every unplanned onsite release of radioactive material to the environs including the preparation and forwarding of reports covering evaluation, recommendations and disposition of the corrective action to prevent recurrence to the Vice President-Nuclear Operations and to the Nuclear Safety Review Group; and
 - m. Review of changes to the PROCESS CONTROL PROGRAM, the OFFSITE DOSE CALCULATION MANUAL, and major modifications to the Radwaste Treatment Systems.
 - n. *Review of the Fire Protection Program.*
- 6.5.1.7 The OSRO shall:
- a. Recommend in writing to the Plant Manager approval or disapproval of items considered under Specification 6.5.1.6a. through d. prior to their implementation.
 - b. Render determinations in writing to the Nuclear Safety Review Group with regard to whether or not each item considered under Specification 6.5.1.6a. through f. constitutes an unreviewed safety question.
 - c. Provide written notification within 24 hours to the Vice President-Nuclear Operations and the Nuclear Safety Review Group of disagreement between the OSRO and the Plant Manager; however, the Plant Manager shall have responsibility for resolution of such disagreements pursuant to Specification 6.1.1.

RECORDS

6.5.1.8 The OSRO shall maintain written minutes of each OSRO meeting that, at a minimum, document the results of all OSRO activities performed under the responsibility provisions of these Technical Specifications. Copies shall be provided to the Vice President-Nuclear Operations and the Nuclear Safety Review Group.

6.5.2 NUCLEAR SAFETY REVIEW GROUP (NSRG)

FUNCTION

6.5.2.1 The NSRG shall function to provide independent review and audit of designated activities in the areas of:

- a. Nuclear power plant operations,
- b. Nuclear engineering,
- c. Chemistry and radiochemistry,
- d. Metallurgy,
- e. Instrumentation and control,
- f. Radiological controls,
- g. Mechanical and electrical engineering, and
- h. Quality assurance practices.

The NSRG shall report to and advise the Senior Vice President on those areas of responsibility in Specifications 6.5.2.7 and 6.5.2.8.

TABLE 2.2.7.2-1 (Continued)
FIRE DETECTION INSTRUMENTATION

<u>INSTRUMENT LOCATION</u>	<u>FIRE DETECTION FIRMI</u>	<u>NOTIFICATION (n/y)</u>	<u>TOTAL NUMBER OF INSTRUMENTS*</u>		
			<u>PHOTOELECTRIC (n/y)</u>	<u>FIXED THERMAL (n/y)</u>	<u>INFRARED (n/y)</u>
c. Control Center					
1. Relay Room	0	0/27			
2. Cable Spreading Room	21	0/28			
3. Control Room	21	00/0	4/0	2/0	
4. Computer Room	13	0/23			
5. Computer Room above Drop ceiling	13	0/0	2/0		
d. EWR Complex					
1. Division I Pump Room	00	0/0			
2. Division II Pump Room	01	0/0			
3. EDG 11 Room Suppression					0/0
4. EDG 12 Room Suppression					0/0
5. EDG 13 Room Suppression					0/0
6. EDG 14 Room Suppression					0/0
7. EDG 11 Switchgear Room	02	0/0			
8. EDG 12 Switchgear Room	03	0/0			
9. EDG 13 Switchgear Room	04	0/0			
10. EDG 14 Switchgear Room	05	0/0			
e. General Service Water Pump House					
1. First Floor	01	2/0		3/0	

*n(y): n 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 containment are not required to be OPERABLE during the performance of Type A Containment Leakage Rate Tests.