

ATTACHMENT 1

Dresden Station Unit 2

Proposed Technical Specification Changes

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**3.12 FIRE PROTECTION SYSTEMS****Applicability:**

Applies to the fire protection systems whenever the equipment or systems being protected are required to be operable.

**Objective:**

To ensure that adequate protection against fires is maintained during all modes of facility operation.

**Specification:****A. Fire Detection Instrumentation**

1. As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.12-1 shall be operable at all times when equipment in that fire detection zone is required to be operable.
2. With the number of operable fire detection instruments less than required by Table 3.12-1;
  - a. Perform an inspection of the affected zone, if accessible, within 1 hour. Perform additional inspections at least once per hour, except in inaccessible areas.
  - b. Restore the inoperable instrument(s) to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to operable status.
  - c. The provisions of Specification 3.0.A are not applicable.

**4.12 FIRE PROTECTION SYSTEMS****Applicability:**

Applies to the periodic testing requirements of the fire protection systems whenever the fire protection systems are required to be operable.

**Objective:**

To verify operability of the fire protection systems.

**Specification:****A. Fire Detection Instrumentation**

1. Each of the fire detection instruments given by Table 3.12-1 shall be demonstrated OPERABLE at least every 6 months by a channel functional test.

## 3.12 LIMITING CONDITIONS FOR OPERATION

B. Fire Suppression Water System

1. The Fire Suppression Water System shall be operable at all times with:
  - a. A flow path capable of taking suction from the 2/3 Intake Canal for Unit 2/3 Fire Pump.
  - b. A flow path capable of taking suction from the Unit 1 Intake Canal for Unit 1 fire pump.
  - c. The Unit 2/3 fire pump (2000 GPM) with its discharge aligned to the fire suppression header (from Unit 2/3 Intake Structure).
  - d. The Unit 1 fire pump (2000 GPM) with its discharge aligned to the fire suppression header (from Unit 1 Intake Structure).
  - e. Automatic initiation logic for each fire pump.
  - f. Fire suppression header piping with sectional control valves to:
    - 1) The yard loop.
    - 2) The front valve ahead of the water flow alarm device on each sprinkler or water spray system.
    - 3) The standpipe system.
2. With an inoperable fire pump or associated water supply, restore the inoperable equipment to operable status within 7 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system.

## 4.12 SURVEILLANCE REQUIREMENTS

B. Fire Suppression Water System

1. The Fire Suppression Water System shall be demonstrated operable:
  - a. At least once per 31 days by verifying valve positions.
  - b. At least once per 12 months by cycling each testable valve in the flow path through one complete cycle.
  - c. At least once per year by performance of a system flush.
  - d. At least once per operating cycle:
    - 1) By performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence and verifying that each automatic valve in the flow path actuates to its correct position.
    - 2) By verifying that the Unit 2/3 fire pump develops at least 2000 gpm at a system head of 238 feet.
    - 3) By verifying that the Unit 1 fire pump starts and develops at least 2000 gpm at a system head of 238 ft.
    - 4) Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.
  - e. At least once per 3 years by performing flow tests of the system in accordance with the "Test of Water Supplies" Chapter in the NFPA Fire Protection Handbook.

## 3.12 LIMITING CONDITIONS FOR OPERATION

## 4.12 SURVEILLANCE REQUIREMENTS

3. With no Fire Suppression Water System operable, within 24 hours;
  - a. Establish a backup Fire Suppression Water System.
  - b. Notify the Commission pursuant to Specification 6.6.B.1 outlining the actions taken and the plans and schedule for restoring the system to operable status.
4. If the requirements of 3.12.B.3.a cannot be met, an orderly shutdown shall be initiated, and the reactor shall be in cold shutdown condition within 24 hours.

## 3.12 LIMITING CONDITIONS FOR OPERATION

## C. Sprinkler Systems

1. The sprinkler systems given in Table 3.12-2 shall be operable at all times when equipment in the area that is sprinkler protected is required to be operable.
2. With a sprinkler system inoperable, establish fire inspections with backup fire suppression equipment within 1 hour.
  - a. In the Unit 2/3 turbine mezzanine 538' elevation area or Unit 2 hydrogen seal off area, a continuous fire watch is to be established.
  - b. In all other areas given in Table 3.12-2 perform inspection hourly.
3. Restore the system to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the cause of inoperability, action taken and the plans for restoring the system to operable status.
4. The provisions of Specification 3.0.A are not applicable.

D. CO<sub>2</sub> System

1. The CO<sub>2</sub> Storage Tank shall have a minimum standby level of 50 percent and a minimum pressure of 250 psig.
2. The CO<sub>2</sub> System given in Table 3.12-3 shall be operable.

## 4.12 SURVEILLANCE REQUIREMENTS

## C. Sprinkler System

1. 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.
2. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
3. At least once per operating cycle:
  - a. A system functional test shall be performed which includes simulated automatic actuation of the system and verifying that the automatic valves in the flow path actuate to their correct positions.
  - b. The sprinkler headers shall be inspected to verify their integrity.
  - c. Each nozzle shall be inspected to verify no blockage.
4. At least every other operating cycle, a flow test will be performed to verify that each open head spray nozzle is unobstructed.

D. CO<sub>2</sub> System

1. At least once per 7 days the CO<sub>2</sub> Storage Tank level and pressure will be verified.
2. At least once per 31 days by verifying that each valve, manual, power-operated, or automatic, in the flow path is in the correct position.
3. At least once per operating cycle, the system valves and associated dampers will be verified to actuate automatically and manually. A brief flow test shall be made to verify flow from each nozzle.

## 3.12 LIMITING CONDITIONS FOR OPERATION

3. Specifications 3.12.D.1 and 3.12.D.2 above apply when the equipment in the areas given in Table 3.12-3 is required to be operable.
4. With a CO<sub>2</sub> System inoperable, establish fire inspection with backup fire suppression equipment in unprotected areas within 1 hour, and perform inspection at least hourly.
5. Restore the system to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.8.2 within the next 30 days outlining the cause of inoperability, action taken and the plans and schedule for restoring the system to operable status.
6. The provisions of Specification 3.0.A are not applicable.

## E. Fire Hose Stations

1. The Fire Hose Stations given in Table 3.12-4 shall be operable at all times when the equipment in the area is required to be operable.
2. With a hose station inoperable route an additional equivalent capacity hose to the unprotected area from an operable hose station within 1 hour.
3. When a hose station becomes inoperable, restore to operable status within 14 days or report to the Commission pursuant to specification 6.6.8.2 within the next 30 days outlining the cause of inoperability and plans for restoring the hose station to operability.
4. The provisions of Specification 3.0.A are not applicable.

## 4.12 SURVEILLANCE REQUIREMENTS

## E. Fire Hose Stations

1. At least once per 31 days, a visual inspection of each fire hose station shall be made to assure all equipment is available at the station.
2. At least once per operating cycle, the hose will be removed for inspection and repacked. Degraded gaskets in the couplings will be replaced.
3. At least once per 3 years, each hose station valve will be partially opened to verify valve operability and no blockage.
4. At least once per 3 years a hydrostatic test will be conducted on each hose at a pressure at least 50 psig above line pressure at that station.

## 3.12 LIMITING CONDITIONS FOR OPERATION

## 4.12 SURVEILLANCE REQUIREMENTS

## F. Penetration Fire Barriers

1. All penetration fire barriers protecting safety related areas shall be intact, except as stated in specification 3.12.F.2 below.
2. With one or more of the required penetration fire barriers not intact, establish a continuous fire watch on at least one side of the affected penetration within 1 hour when the area on either side of the affected penetration contains equipment required to be operable.
3. The provisions of Specification 3.0.A are not applicable.
4. Restore the non-functional fire barrier penetrations to operable status within 14 days or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2. within the next 30 days outlining the cause of inoperability, action taken and the plans and schedule for restoring the penetration fire barriers to operable status.

G. See 3.12.B.

## F. Penetration Fire Barriers

1. Each of the required penetration fire barriers shall be verified to be intact by a visual inspection:
  - a. At least once per 18 months, and
  - b. Prior to declaring a penetration fire barrier intact following repairs or maintenance.

## G. Fire Pump Diesel Engine

1. The fire pump diesel engine shall be demonstrated OPERABLE:
  - a. At least once per 31 days by verifying:
    - 1) The fuel storage day tank contains at least 150 gallons of fuel, and
    - 2) The diesel starts for ambient conditions and operates for at least 30 minutes.
    - 3) The fuel transfer pump starts and transfers fuel from the storage tank to the day tank.
  - b. At least once per 92 days a sample of diesel fuel shall be checked for viscosity, water and sediment. The procedure used shall be consistent with existing station procedures used to check diesel fuel in the main storage tanks.

## 3.12 LIMITING CONDITIONS FOR OPERATION

## 4.12 SURVEILLANCE REQUIREMENTS

c. At least once per 18 months, by:

- 1) Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service, and
- 2) Verifying the diesel starts from ambient conditions on the auto-start signal and operates for  $\geq 30$  minutes while loaded with the fire pump.

2. The fire pump diesel engine batteries 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, and
- 2) The overall battery voltage is  $\geq 24$  volts.

b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.

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

- 1) The batteries and battery racks show no visual indication of physical damage or abnormal deterioration, and
- 2) The battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.



## 3.12 LIMITING CONDITIONS FOR OPERATION

## H. Halon System

1. The following Halon system shall be OPERABLE with the storage tanks having at least 95% of full charge weight and 90% of full charge pressure.
  - a. Auxiliary Electrical Equipment Room
2. With one or more of the above required Halon systems inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, prepare and submit a report to the Commission pursuant to Specification 6.6.F 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.

## 4.12 SURVEILLANCE REQUIREMENTS

## H. Halon System

1. At least once per 31 days, verify that each valve in the flow path is in the correct position.
2. At least once per 6 months, the Halon storage tank weight and pressure will be verified.
3. At least once per operating cycle, the system, including associated ventilation dampers, will be verified to actuate manually and automatically. A flow test shall be made through headers and nozzles to assure no blockage.

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, the establishment of frequent fire inspections in the affected areas is required to provide detection capability until the inoperable instrumentation is returned to service.

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, sprinklers, CO<sub>2</sub> systems, Halon system, and fire hose stations, and 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 system are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the affected equipment can be restored to service.

A fire suppression water system shall consist of a water source, pumps, and distribution piping with associated valves. Such valves shall include sectional control valves, and the first valve ahead of the water flow alarm device on each sprinkler or hose standpipe riser.

In the event that 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 24-hour report of 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 functional integrity of the penetration fire barriers ensures that fires will be confined or adequately retarded from spreading to adjacent portions of the facility. This design feature minimizes the possibility of a single fire rapidly involving several areas of the facility prior to detection and extinguishment. The penetration fire barriers are a passive element in the facility fire protection program and are subject to periodic inspections.

During periods of time when the barriers are not functional, a fire watch is required to be maintained in the vicinity of the affected barrier until the barrier is restored to functional status.

FIRE DETECTION INSTRUMENTS

<u>INSTRUMENT LOCATION</u>	<u>MINIMUM INSTRUMENTS OPERABLE</u>
1. Main Control Room 34 Smoke Detectors	24
2. Unit 2/3 Aux. Elect. Equip. Room 12 Smoke Detectors	8
3. Unit 2/3 Computer Room 8 Smoke Detectors	6
4. Unit 2 Battery Room 10 Smoke Detectors	7
5. Unit 2 Turb Bldg. 480v MCC 17 Smoke Detectors	12
6. Unit 2 Turb Bldg. 4KV Switchgear 10 Smoke Detectors	7
7. Unit 2/3 Diesel Generator Area 4 Heat Detectors	3
8. Unit 2 Diesel Generator Area 3 Heat Detectors	2
9. Unit 2 Rx Bldg. 480v MCC (570') 3 Smoke Detectors	2
10. Unit 2 Rx Bldg. 480v MCC (517') 7 Smoke Detectors	5
11. Unit 2 Rx Bldg. 4KV Switchgear 4 Smoke Detectors	3
12. Unit 2 Standby Liquid Control Area 1 Smoke Detector	1

## TABLE 3.12-2

## SPRINKLER SYSTEMS

1. Unit 2 Emergency Diesel Oil Day Tank
2. Unit 2/3 Turbine Mezzanine 538' Elevation
3. Unit 2/3 Emergency Diesel Oil Day Tank
4. Unit 2 Reactor Feed Pump Area
5. Unit 2 Hydrogen Seal Oil Area
6. Unit 2 Condensate Feed Pump Area
7. Unit 2 HPCI Area
8. Unit 2 Turbine Building East Mezzanine Area
9. Unit 2 EHC Area
10. 2/3 Fire Pump Area
11. Unit 2 Trackway
12. Unit 2 Instrument Air Compressor Area

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TABLE 3.12-3

CO<sub>2</sub> SYSTEMS

1. Unit 2 Emergency Diesel Generator
2. Unit 2/3 Emergency Diesel Generator

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TABLE 3.12-4

FIRE HOSE STATIONS

<u>NO.</u>	<u>LOCATION</u>	<u>NO.</u>	<u>LOCATION</u>
F21	Cribhouse - 517-ft., by Bus 20	F62	Reactor Building - 545-ft., North Wall Near Elevator
F54	Reactor Building - 589-ft., North East Wall at Elevator	F63	Reactor Building - 545-ft., South Wall at RBCCW Heat Exchanger
F55	Reactor Building - 589-ft., South of Standby Liquid Tank	F64	Reactor Building - 545-ft., South West Stairway
F56	Reactor Building - 589-ft., South East of Isolation Condenser	F65	Reactor Building - 545-ft., North of Bus 23
F57	Reactor Building - 589-ft., South West Stairway	F66	Reactor Building - 517-ft., at Elevator
F58	Reactor Building - 570-ft., North Wall at Elevator	F67	Reactor Building - 517-ft., South East Wall
F59	Reactor Building - 570-ft., Across from Cleanup Demineralizer P.C. Tank	F68	Reactor Building - 517-ft., South East Stairway
F60	Reactor Building - 570-ft., C.R.D. Repair Room	F73	Reactor Building - 476-ft., 2B LPCI Pump
F61	Reactor Building - 570-ft., West Wall Near RBCCW Tank	F74	Reactor Building - 476-ft., 2C Core Spray Pump
F61A	Reactor Building - 570-ft., by South Stairs	F80A	Turbine Building - 549-ft., North Wall Unit 2 Battery Room
		F80B	Turbine Building - 549-ft., Outside of Passenger Elevator

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TABLE 3.12-4

FIRE HOSE STATIONS

<u>NO.</u>	<u>LOCATION</u>	<u>NO.</u>	<u>LOCATION</u>
F82	Turbine Building - 538-ft., Stator Cooling Pump		
F82A	Turbine Building - 538-ft., East of Trackway Equipment Hatch		
F82B	Turbine Building - 534-ft., Across from Switchgear 23 and 24		
F84	Turbine Building - 534-ft., East of Standby Gas System		
F85	Turbine Building - 517-ft., Near U-2 Transformer Valve		
F86	Turbine Building - 517-ft., at U-2 Emergency Diesel		
F87	Turbine Building - 517-ft., Across from 2C RFP West Walk		
F88	Turbine Building - 495-ft., at C.R.D. Pumps		
F89	Turbine Building - 469-ft., Across from 2D Condensate Pump		

ATTACHMENT 2

Dresden Station Unit 3

Proposed Technical Specification Changes

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3.12

FIRE PROTECTION SYSTEMS

Applicability:

Applies to the fire protection systems whenever the equipment or systems being protected are required to be operable.

Objective:

To ensure that adequate protection against fires is maintained during all modes of facility operation.

Specification:

A. Fire Detection Instrumentation

1. As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.12-1 shall be operable at all times when equipment in that fire detection zone is required to be operable.
2. With the number of operable fire detection instruments less than required by Table 3.12-1;
  - a. Perform an inspection of the affected zone, if accessible, within 1 hour. Perform additional inspections at least once per hour, except in inaccessible areas.
  - b. Restore the inoperable instrument(s) to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to operable status.
- c. The provisions of Specification 3.0.A are not applicable.

4.12

FIRE PROTECTION SYSTEMS

Applicability:

Applies to the periodic testing requirements of the fire protection systems whenever the fire protection systems are required to be operable.

Objective:

To verify operability of the fire protection systems.

Specification:

A. Fire Detection Instrumentation

1. Each of the fire detection instruments given by Table 3.17-1 shall be demonstrated OPERABLE at least every 6 months by a channel functional test.

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## 3.12 LIMITING CONDITIONS FOR OPERATION

B. Fire Suppression Water System

1. The Fire Suppression Water System shall be operable at all times with:

- a. A flow path capable of taking suction from the 2/3 Intake Canal for Unit 2/3 Fire Pump.
- b. A flow path capable of taking suction from the Unit 1 Intake Canal for Unit 1 fire pump.
- c. The Unit 2/3 fire pump (2000 GPM) with its discharge aligned to the fire suppression header (from Unit 2/3 Intake Structure).
- d. The Unit 1 fire pump (2500 GPM) with its discharge aligned to the fire suppression header (from Unit 1 Intake Structure).
- e. Automatic initiation logic for each fire pump.
- f. Fire suppression header piping with sectional control valves to:

- 1) The yard loop.
- 2) The front valve ahead of the water flow alarm device on each sprinkler or water spray system.
- 3) The standpipe system.

2. With an inoperable fire pump or associated water supply, restore the inoperable equipment to operable status within 7 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system.

## 4.12 SURVEILLANCE REQUIREMENTS

B. Fire Suppression Water System

1. The Fire Suppression Water System shall be demonstrated operable:

- a. At least once per 31 days by verifying valve positions.
- b. At least once per 12 months by cycling each testable valve in the flow path through one complete cycle.
- c. At least once per year by performance of a system flush.
- d. At least once per operating cycle:

- 1) By performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence and verifying that each automatic valve in the flow path actuates to its correct position.
- 2) By verifying that the Unit 2/3 fire pump develops at least 2000 gpm at a system head of 238 feet.
- 3) By verifying that the Unit 1 fire pump starts and develops at least 2000 gpm at a system head of 238 ft.
- 4) Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.

- e. At least once per 3 years by performing flow tests of the system in accordance with the "Test of Water Supplies" Chapter in the NFPA Fire Protection Handbook.

**3.12 LIMITING CONDITIONS FOR OPERATION****4.12 SURVEILLANCE REQUIREMENTS**

3. With no Fire Suppression Water System operable, within 24 hours;
  - a. Establish a backup Fire Suppression Water System.
  - b. Notify the Commission pursuant to Specification 6.6.B.1 outlining the actions taken and the plans and schedule for restoring the system to operable status.
  
4. If the requirements of 3.12.B.3.a cannot be met, an orderly shutdown shall be initiated, and the reactor shall be in cold shutdown condition within 24 hours.

## 3.12 LIMITING CONDITIONS FOR OPERATION

## C. Sprinkler Systems

1. The sprinkler systems given in Table 3.12-2 shall be operable at all times when equipment in the area that is sprinkler protected is required to be operable.
2. With a sprinkler system inoperable, establish fire inspections with backup fire suppression equipment within 1 hour.
  - a. In the Unit 2/3 turbine mezzanine 538' elevation area or Unit 3 hydrogen seal oil area, a continuous fire watch is to be established.
  - b. In all other areas given in Table 3.12-2 perform surveillance hourly.
3. Restore the system to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the cause of inoperability, action taken and the plans for restoring the system to operable status.
4. The provisions of Specification 3.0.A are not applicable.

D. CO<sub>2</sub> System

1. The CO<sub>2</sub> Storage Tank shall have a minimum standby level of 50 percent and a minimum pressure of 250 psig.
2. The CO<sub>2</sub> System given in Table 3.12-3 shall be operable.

## 4.12 SURVEILLANCE REQUIREMENTS

## C. Sprinkler System

1. 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.
2. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
3. At least once per operating cycle:
  - a. A system functional test shall be performed which includes simulated automatic actuation of the system and verifying that the automatic valves in the flow path actuate to their correct positions.
  - b. The sprinkler headers shall be inspected to verify their integrity.
  - c. Each nozzle shall be inspected to verify no blockage.
4. At least every other operating cycle, a flow test will be performed to verify that each open head spray nozzle is unobstructed.

D. DO<sub>2</sub> System

1. At least once per 7 days the CO<sub>2</sub> Storage Tank level and pressure will be verified.
2. At least once per 31 days by verifying that each valve, manual, power-operated, or automatic, in the flow path is in the correct position.
3. At least once per operating cycle, the system valves and associated dampers will be verified to actuate automatically and manually. A brief flow test shall be made to verify flow from each nozzle.

## 3.12 LIMITING CONDITIONS FOR OPERATION

3. Specifications 3.12.D.1 and 3.12.D.2 above apply when the equipment in the areas given in Table 3.12-3 is required to be operable.
4. With a CO<sub>2</sub> System inoperable, establish fire inspection with backup fire suppression equipment in unprotected areas within 1 hour, and perform inspection at least hourly.
5. Restore the system to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the cause of inoperability, action taken and the plans and schedule for restoring the system to operable status.
6. The provisions of Specification 3.0.A are not applicable.

## E. Fire Hose Stations

1. The Fire Hose Stations given in Table 3.12-4 shall be operable at all times when the equipment in the area is required to be operable.
2. With a hose station inoperable route an additional equivalent capacity hose to the unprotected area from an operable hose station within 1 hour.
3. When a hose station becomes inoperable, restore to operable status within 14 days or report to the Commission pursuant to specification 6.6.8.2 within the next 30 days outlining the cause of inoperability and plans for restoring the hose station to operability.
4. The provisions of Specification 3.0.A are not applicable.

## 4.12 SURVEILLANCE REQUIREMENTS

## E. Fire Hose Stations

1. At least once per 31 days, a visual inspection of each fire hose station shall be made to assure all equipment is available at the station.
2. At least once per operating cycle, the hose will be removed for inspection and repacked. Degraded gaskets in the couplings will be replaced.
3. At least once per 3 years, each hose station valve will be partially opened to verify valve operability and no blockage.
4. At least once per 3 years a hydrostatic test will be conducted on each hose at a pressure at least 50 psig above line pressure at that station.

## 3.12 LIMITING CONDITIONS FOR OPERATION

## F. Penetration Fire Barriers

1. All penetration fire barriers protecting safety related areas shall be intact, except as stated in specification 3.12.F.2 below.
2. With one or more of the required penetration fire barrier not intact, establish a continuous fire watch on at least one side of the affected penetration within 1 hour when the area on either side of the affected penetration contains equipment required to be operable.
3. The provisions of Specification 3.0.A are not applicable.
4. Restore the non-functional fire barrier penetrations to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2. within the next 30 days outlining the cause of inoperability action taken and the plans and schedule for restoring the penetration fire barriers to operable status.

G. See 3.12.B.

## 4.12 SURVEILLANCE REQUIREMENTS

## F. Penetration Fire Barriers

1. Each of the required penetration fire barriers shall be verified to be intact by a visual inspection:
  - a. At least once per 10 months, and
  - b. Prior to declaring a penetration fire barrier intact following repairs of maintenance.

## G. Fire Pump Diesel Engine

1. The fire pump diesel engine shall be demonstrated OPERABLE:
  - a. At least once per 31 days by verifying:
    - 1) The fuel storage day tank contains at least 150 gallons of fuel, and
    - 2) The diesel starts from ambient conditions and operates for at least 30 minutes.
    - 3) The fuel transfer pump starts and transfers fuel from the storage tank to the day tank.
  - b. At least once per 92 days, a sample of diesel fuel shall be checked for viscosity, water and sediment. The procedure used shall be consistent with existing station procedures used to check diesel fuel in the main storage tanks.
  - c. At least once per 18 months by:
    - 1) Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service

## 3.12 LIMITING CONDITIONS FOR OPERATION

## 4.12 SURVEILLANCE REQUIREMENTS

- 2) Verifying the diesel starts from ambient conditions on the auto-start signal and operates for  $\geq 30$  minutes while loaded with the fire pump.
2. The fire pump diesel engine batteries 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, and
    - 2) The overall battery voltage is  $> 24$  volts.
  - b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.
  - c. At least once per 18 months by verifying that:
    - 1) The batteries and battery racks show no visual indication of physical damage or abnormal deterioration, and
    - 2) The battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.

## 3.12 LIMITING CONDITIONS FOR OPERATION

## H. Halon System

1. The following Halon system shall be OPERABLE with the storage tanks having at least 95% of full charge weight and 90% of full charge pressure.
  - a. Auxiliary Electrical Equipment Room
2. With one or more of the above required Halon systems inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, prepare and submit a report to the Commission pursuant to Specification 6.6.E 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.

## 4.12 SURVEILLANCE REQUIREMENTS

## H. Halon System

1. At least once per 31 days, verify that each valve in the flow path is in the correct position.
2. At least once per 6 months, the Halon storage tank weight and pressure will be verified.
3. At least once per operating cycle, the system, including associated ventilation dampers, will be verified to actuate manually and automatically. A flow test shall be made through headers and nozzles to assure no blockage.



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, the establishment of frequent fire inspections in the affected areas is required to provide detection capability until the inoperable instrumentation is returned to service.

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, sprinklers, CO<sub>2</sub> systems, Halon system, and fire hose stations, and 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 system are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the affected equipment can be restored to service.

A fire suppression water system shall consist of a water source, pumps, and distribution piping with associated valves. Such valves shall include sectional control valves, and the first valve ahead of the water flow alarm device on each sprinkler or hose standpipe riser.

In the event that 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 24-hour report of 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 functional integrity of the penetration fire barriers ensures that fires will be confined or adequately retarded from spreading to adjacent portions of the facility. This design feature minimizes the possibility of a single fire rapidly involving several areas of the facility prior to detection and extinguishment. The penetration fire barriers are a passive element in the facility fire protection program and are subject to periodic inspections.

During periods of time when the barriers are not functional, a fire watch is required to be maintained in the vicinity of the affected barrier until the barrier is restored to functional status.

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TABLE 3.12-1

FIRE DETECTION INSTRUMENTS

<u>INSTRUMENT LOCATION</u>	<u>MINIMUM INSTRUMENTS OPERABLE</u>
1. Main Control Room 34 Smoke Detectors	24
2. Unit 2/3 Aux. Elect. Equip. Room 12 Smoke Detectors	8
3. Unit 2/3 Computer Room 8 Smoke Detectors	6
4. Unit 2/3 Diesel Generator Area 4 Heat Detectors	3
5. Unit 3 Diesel Generator Area 3 Heat Detectors	2
6. Unit 3 Turb. Bldg. 4KV Switchgear 8 Smoke Detectors	6
7. Unit 3 Battery Room 4 Smoke Detectors	3
8. Unit 3 Rx Bldg. 480V MCC (570') 3 Smoke Detectors	2
9. Unit 3 Rx Bldg. 4KV Switchgear 4 Smoke Detectors	3
10. Unit 3 Rx Bldg. 480V MCC (517') 8 Smoke Detectors	6
11. Unit 3 Turb. Bldg. 480V MCC 11 Smoke Detectors	8
12. Unit 3 Cable Tunnel 40 Smoke Detectors	28
13. Unit 3 Standby Liquid Control Area 1 Smoke Detector	1

156m

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TABLE 3.12-2

SPRINKLER SYSTEMS

1. Unit 3 Cable Tunnel
2. Unit 3 Emergency Diesel Oil Day Tank
3. Unit 2/3 Turbine Mezzanine 538' Elevation
4. Unit 2/3 Emergency Diesel Oil Day Tank
5. Hydrogen Seal Oil Area
6. Unit 3 Reactor Feed Pump Area
7. Unit 3 Condensate Feed Pump Area
8. Unit 3 HPCI Area
9. Unit 2/3 Fire Pump Area
10. Unit 3 EHC Area
11. Unit 3 Trackway

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TABLE 3.12-3

CO<sub>2</sub> Systems

1. Unit 3 Emergency Diesel Generator
2. Unit 2/3 Emergency Diesel Generator

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TABLE 3.12-4

FIRE HOSE STATIONS

<u>NO.</u>	<u>LOCATION</u>	<u>NO.</u>	<u>LOCATION</u>
F22	2/3 Intake	F113	Reactor Building - 545-ft., South West Wall at Bus 34-1
F67A	Reactor Building - 517-ft., Interlock to 2/3 Emergency Diesel Generator	F114	Reactor Building - 545-ft., North West Wall at Elevator
F104	Reactor Building - 589-ft., South East Wall	F116	Reactor Building - 517-ft., South East Wall at Stairway
F105	Reactor Building - 589-ft., South West Wall at Isolation Condenser	F117	Reactor Building - 517-ft., South West Wall at Stairway
F106	Reactor Building - 589-ft., North West at Elevator	F118	Reactor Building - 517-ft., West Accumulator Area
F107	Reactor Building - 589-ft., North of Standby Liquid Tank	F119	Reactor Building - 476-ft., South East Corner 3A LPCI Pump
F108	Reactor Building - 570-ft., Across from Cleanup Demineralizer Precoat Tank	F122	Reactor Building - 476-ft., South West Corner 3D-LPCI Pump
F110	Reactor Building - 570-ft., South West Wall Near RBCCW Tank	F129	Turbine Building - 538-ft., Fire Water Regulating Valves
F111	Reactor Building - 570-ft., South East Wall at Equipment Hatch	F130	Turbine Building - 538-ft., South West Wall at DC Switch Group Room
F112	Reactor Building - 545-ft., South East Wall at Equipment Hatch		

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TABLE 3.12-4

FIRE HOSE STATIONS

<u>NO.</u>	<u>LOCATION</u>	<u>NO.</u>	<u>LOCATION</u>
F130A	Turbine Building - 538-ft., West Wall of Unit 3 Trackway Equipment Hatch		
F131	Turbine Building - 518-ft., West Turbine Trackway		
F132	Turbine Building - 517-ft., at 3 "C" R.F.P.		
F133	Turbine Building - 517-ft., at 3 "A" R.F.P.		
F134	Turbine Building - 517-ft., at CO <sub>2</sub> Tank		
F136	Turbine Building - 538-ft., at Freight Elevator		
F137	Turbine Building - 538-ft., Behind MCC 39-2		
F139	Turbine Building - 495-ft., at 3 "A" CRD Pump		
F140	Turbine Building - 469-ft., at 3 "A" Condensate Booster Pump		