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LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

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TABLE 3.3.6

FIRE DETECTION INSTRUMENTS

<u>INSTRUMENT LOCATION</u>	<u>MINIMUM INSTRUMENTS OPERABLE</u>
1. Control Room	
Above Dropped Ceiling	9
Control Boards	
Main Control Board	3
SI Panels	1/Panel
General Area	9
2. Cable Spreading	
Cable Tray House	2
Manhole No. 3	1
3. Switchgear Room	20
Battery Room No. 1	1
Battery Room No. 2	1
4. Diesel Generators	
No. 1	1
No. 2	1
No. 3	1
5. Safety Injection Pumps and No. 3 Battery	5
6. Charging Pump Cubicles	
No. 1	1
No. 2	1
No. 3	1
7. 1 & 2 Charcoal Filters	1/Filter
8. Turbine Building	
Transformer Oil Cooler Area	2
Turbine Lube Oil Reservoir	2
9. Vapor Container	1

PLANT SYSTEMS

3/4.7.10 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.10.1 The fire suppression water system shall be OPERABLE with:

- a. Two motor operated high pressure pumps, each with a capacity of 1000 gpm, with their discharge aligned to the fire suppression header and
- b. A diesel engine driven pump with a capacity of 2000 gpm, with its discharge aligned to the fire suppression header and
- c. An OPERABLE flow path with the diesel engine driven pump capable of taking suction from the fire water storage tank and the motor operated pumps capable of taking suction from Sherman Pond and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves.

APPLICABILITY: At all times.

ACTION:

- a. With one pump and/or one water supply inoperable, restore equipment to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.9, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.6 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.
- b. With the fire suppression water system otherwise inoperable:
 1. Establish a backup fire suppression water system within 24 hours, and
 2. Submit a Special Report in accordance with Specification 6.9.6;
 - a) By telephone within 24 hours,
 - b) Confirmed by telegraph, mailgram or facsimile transmission no later than the first working day following the event, and

PLANT SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

- c) In writing within 14 days following the event, outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.7.10.1.1 The fire suppression water system shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by starting each pump.
- 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.
- c. At least once per 6 months by performance of a system flush.
- d. 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 motor driven pump develops at least 1000 gpm at a system head of 125 psig.
 - 3. Verifying that the diesel driven pump develops at least 2000 gpm at a system head of 125 psig.
 - 4. Verifying that each high pressure pump starts to maintain the fire suppression water system pressure \geq 85 psig.
- e. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.7.10.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying:
 1. The fuel storage tank contains at least 60 gallons of fuel, and
 2. The diesel starts from ambient conditions and operates for at least 20 minutes.
- 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, is within the acceptable limits specified in Table 1 of ASTM-D-975-74 when checked for viscosity, water and sediment.
- c. At least once per 18 months, during shutdown, 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 greater than or equal to 20 minutes while loaded with the fire pump.

4.7.10.1.3 The fire pump diesel 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, and
 2. The overall battery voltage is greater than or equal to 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, cell plates 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.

PLANT SYSTEMS

SPRAY AND SPRINKLER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.10.2 The following sprinkler systems shall be OPERABLE:

- a. Cable Tray House sprinkler system.
- b. Turbine Building:
 1. Zone 1 sprinkler system
 2. Zone 2 sprinkler system
 3. Zone 3 sprinkler system
 4. Transformer oil cooler deluge system
 5. Turbine building columns spray system.

APPLICABILITY: Whenever equipment in the sprinkler protected areas is required to be OPERABLE:

ACTION:

- a. With one or more of the above required sprinkler systems inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.6 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
- b. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.10.2 Each of the above required sprinkler systems shall be demonstrated OPERABLE:

- a. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 18 months by:
 - 1. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.
 - 2. A visual inspection of the sprinkler headers to verify their integrity, and
 - 3. A visual inspection of each nozzle's spray area to verify that the spray pattern is not obstructed.

- c. At least once per 3 years by performing an air flow test through each open head sprinkler headers and verifying each open head sprinkler nozzle is unobstructed.

PLANT SYSTEMS

HIGH PRESSURE CO₂ SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.10.3 The high pressure CO₂ system located in Manhole No. 3 shall be OPERABLE with at least 90% of full charge weight in the main and auxiliary CO₂ cylinders.

APPLICABILITY: Whenever equipment in the high pressure CO₂ protected area is required to be OPERABLE.

ACTION:

- a. With the above required high pressure CO₂ system inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.6 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.10.3 The above required high pressure CO₂ systems shall be demonstrated OPERABLE:

- a. At least once per 6 months by verifying CO₂ cylinder weight.
- b. At least once per 18 months by:
 1. Verifying the system valves actuate automatically.
 2. Performance of a flow test through headers and nozzles to assure no blockage.

PLANT SYSTEMS

FIRE HOSE STATIONS

LIMITING CONDITIONS FOR OPERATION

3.7.10.4 The following fire hose stations shall be OPERABLE:

- a. Turbine Building, Pump Room:
 - 1. South wall,
 - 2. Middle stanchion,
 - 3. West wall, and
 - 4. North wall.

- b. Turbine Building, Operating Floor
 - 1. Outside Control Room Northwest door, and
 - 2. Outside Control Room Northeast door.

- c. Turbine Building Mezzanine level. South wall.
 - 1. Outside Switchgear Room Northeast door.

- d. PAB
 - 1. Cubicle area East side
 - 2. Lower level North wall

- e. SI Building
 - 1. North wall

- f. Yard Hydrants #11, 12, 13, 14, 15 and 18.

- g. Inside containment, a one-inch hose line connected to a water source for temporary use during REFUELING and during shutdown periods when maintenance activities are being performed.

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 above required fire hose stations inoperable, route an additional equivalent capacity fire hose to the unprotected area(s) from an OPERABLE hose station within 1 hour.

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

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.7.10.4 Each of the above required fire hose stations shall be demonstrated OPERABLE:

- a. At least once per 31 days by visual inspection of the station to assure all required equipment is at the station.
- b. At least once per 18 months by:
 1. Removing the hose for inspection and re-racking, and
 2. Replacement of all degraded gaskets and 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 at least 50 psig greater than the maximum pressure available at that hose station.

PLANT SYSTEMS

HALON SYSTEMS

LIMITING CONDITION FOR OPERATION

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

- a. Switchgear Room
- b. Battery Room No. 1
- c. Battery Room No. 2

APPLICABILITY: Whenever equipment in the Halon protected areas is required to be OPERABLE.

ACTION:

- a. With one or more of the above required Halon systems inoperable, establish an hourly fire watch patrol with backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.6 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

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

- a. At least once per 6 months by verifying Halon storage tank weight and pressure.
- b. At least once per 18 months by:
 - 1. Verifying the system, including associated ventilation dampers and fire door release mechanisms, actuates manually and automatically, upon receipt of a simulated actuation signal, and
 - 2. Performance of a flow test through headers and nozzles to assure no blockage.

PLANT SYSTEMS

FOAM SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.10.6 The following foam system shall be OPERABLE:

Turbine Lube Oil Reservoir.

APPLICABILITY: Whenever the turbine lube oil reservoir is required to be OPERABLE.

ACTION:

- a. With the above required foam system inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.6 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.10.6 The above required foam system shall be demonstrated OPERABLE:

- a. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
- b. At least one per 18 months by:
 1. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.
 2. A visual inspection of the foam header to verify integrity, and
 3. A visual inspection of each foam nozzle area to verify that the spray pattern is not obstructed.
- c. At least once per 3 years by performing an air flow test through the foam header and verifying each foam nozzle is unobstructed.

PLANT SYSTEMS

3/4.7.11 PENETRATION FIRE BARRIERS

LIMITING CONDITIONS FOR OPERATION

3.7.11 All penetration fire barriers protecting safety related areas shall be functional.

APPLICABILITY: At all times.

ACTION:

- a. With one or more of the above required penetration fire barriers non-functional, establish a continuous fire watch on at least one side of the affected penetration within 1 hour or verify the operability of the fire detector instruments on at least one side of the non-functional fire barrier and establish an hourly fire watch patrol.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

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

3/4.7.10 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 equipment required for safe shutdown is located. The fire suppression system consists of the water system, spray and/or sprinklers, CO₂, fire hose stations, Halon and foam systems. The collective capability² of the fire suppression systems is adequate to minimize potential damage to equipment required for safe shutdown 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.

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

3/47.11 PENETRATION FIRE BARRIERS

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 continuous fire watch is required to be maintained in the vicinity of the affected barrier until the barrier is restored to functional status.

ADMINISTRATIVE CONTROLS

- (d) Total dissolved gas radioactivity (in curies) and average concentration released to the unrestricted area.
- (e) Total volume (in liters) of liquid waste released.
- (f) Total volume (in liters) of dilution water used prior to release from the restricted area.
- (g) Total gross radioactivity (in curies) by nuclide released based on representative isotopic analyses performed.
- (h) Percent of Technical Specification limit for total radioactivity.

(3) Solid Wastes

- (a) The total amount of solid waste shipped (in cubic feet).
- (b) The total estimated radioactivity (in curies) involved.
- (c) Disposition including date and destination.

6.9.6 Special reports shall be submitted to the Director of the Office of Inspection and Enforcement Regional Office within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification:

- a. Inservice Inspection Program Reviews, Specification 4.4.9.1
- b. ECCS Actuation, Specifications 3.4.2 and 3.5.3
- c. Inoperable Meteorological Monitoring Instrumentation, Specification 3.3.3.3
- d. Sealed Source leakage in excess of limits, Specification 3.7.7.1
- e. Radioactive Solid Waste Disposal, Specification 3.7.7.1
- f. Fire Detection Instrumentation, Specification 3.3.3.4
- g. Fire Suppression Systems, Specifications 3.7.10.1, 3.7.10.2, 3.7.10.3, 3.7.10.5 and 3.7.10.6
- h. Environmental Monitoring Program, Specifications 3.7.8
- i. Steam Generator Inservice Inspection Results, Specification 4.4.10.5