

2.0 LIMITING CONDITIONS FOR OPERATION  
2.19 Fire Protection System (Continued)

- (6) The fire hose stations designated in Table 2-8 shall be operable. With a hose station inoperable, provide a hose of equivalent capacity which can service the unprotected areas from an operable hose station within one hour from the time that a hose station is determined to be inoperable.
- (7) All penetration fire barriers protecting safety related areas shall be functional (intact). With a penetration fire barrier non-functional, a continuous fire watch shall be established on one side of the affected penetration within one hour.
- (8) The switchgear room halon system shall be operable with the storage tanks having at least 90% of full charge pressure and 95% of full charge weight or level. With a halon system inoperable, establish an hourly fire watch with backup fire suppression equipment. Restore the system to operable status within 14 days, or prepare and submit a report to the Nuclear Regulatory Commission, pursuant to Section 5.9.3 of the Technical Specifications, within an additional 30 days, outlining the cause of the inoperability and the plans for restoring the system to operable status.

Basis

The fire protection system provides a means for detecting, alarming, and extinguishing plant fires. The system is divided into the fire detection subsystem and fire extinguishing subsystem.

The fire detection subsystem is an instrumentation system which alarms control room operators of a fire, indicating fire location on a panel in the control room and providing a local indication from the detector in the affected zone.

The fire extinguishing system includes the sprinklers which protect the Diesel Generator Rooms. Also included are the hose stations which protect the immediate vicinity outside the entire plant, hose cabinets inside the intake structure, and other miscellaneous equipment.

Specification 2.19(2) allows one of the four fire detection zones to be inoperable in the containment. One inoperable zone would not significantly reduce fire detection capability or margins of safety or protection for the following reasons:

- (1) A large number of fire detectors at many locations and elevations exist in the containment vessel.
- (2) During normal operation, containment fans provide complete circulation and mixing of containment air, thereby exposing most of the containment fire detectors to any locally produced combustion products.
- (3) Normally, containment ventilation duct fire detectors are operable and are continuously exposed to air streams originating from all locations in the containment.

3.0 SURVEILLANCE REQUIREMENTS  
3.15 Fire Protection System (Continued)

- (6) The diesel fire pump shall be demonstrated OPERABLE:
- a. At least once per month by verifying that the fuel storage tank contains at least 200 gallons of fuel.
  - b. At least once per quarter 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-D975-74 with respect to viscosity, water content 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.
- (7) The fire pump diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:
- a. At least once per month by verifying that the electrolyte level of each battery is above the plates.
  - b. At least once per quarter 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.
    2. The battery-to-battery and terminal connections are clean, tight, essentially free of corrosion and suitable corrosion protection is used.
- (8) The switchgear room halon system shall be demonstrated to be operable:
- a. At least once per month by verifying that each valve in the flow path is in its correct position.
  - b. At least once every 6 months by verifying each halon storage tank pressure and weight or level.
  - c. At least once every 18 months by:
    1. Verifying the system, including associated ventilation dampers (if applicable), is actuated by a simulated test signal. Manual and automatic test signals will be alternated every 18 months.
    2. Visual inspection of spray headers to verify integrity.

3.0 SURVEILLANCE REQUIREMENTS  
3.15 Fire Protection System (Continued)

3. Visual inspection of all nozzles to ensure no blockage.
- d. At least once every three years by performing an air flow test through each header and nozzle to assure no blockage.

Basis

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The fire detection subsystem is an instrumentation system which alarms control room operators of a fire, indicating fire location on a panel in the control room, and providing local indication from the detector in the affected zone.

The fire extinguishing system includes the sprinklers which protect the Diesel Generator Rooms. Also included are the hose stations which protect the immediate vicinity outside the entire plant, hose cabinets inside the intake structure, and other miscellaneous equipment.

Maintaining the operability of the fire protection system under various operating conditions is essential to insure the integrity of various nuclear safety related plant systems and equipment. The above surveillance measures aid in accomplishing this objective.

Specification 3.15(2)f. provides a surveillance program that insures that silt and other material in the river water will not prevent the delivery of water to areas protected by fire water suppression systems.

## DISCUSSION

In accordance with Section 3.1.8 of the Commission's Safety Evaluation Report (SER) for the Fort Calhoun Station fire protection program, the Omaha Public Power District will have a halon system installed, as noted in the proposed specifications, in October, 1980. The proposed specifications specify limiting conditions for operation and surveillance measures for the halon system to be installed in the switchgear room.

The specifications require that the halon system be maintained in operable status with storage tanks having at least 90% of full charge pressure and 95% of full charge weight or level. This requirement ensures that the system contains an adequate supply of halon. In addition, the specifications provide assurance that system operability is maintained by requiring that system pressure and tank weight or level be verified twice a year, that automatic and manual test signals be introduced, and that visual inspections and air flow tests be conducted at a prescribed frequency. These specifications, if implemented, would not be inimical to the health and safety of the public.