



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

OMAHA PUBLIC POWER DISTRICT

DOCKET NO. 50-285

FORT CALHOUN STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 53
License No. DPR-40

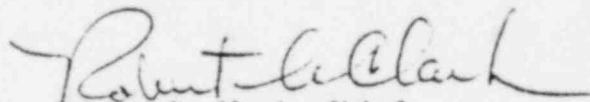
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The applications for amendment by Omaha Public Power District (the licensee) dated October 4, 1978, January 22, May 30, and October 9, 1979, and August 20, 1980, as supplemented, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the applications, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B. of Facility Operating License No. DPR-40 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 53, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 17, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 53

FACILITY OPERATING LICENSE NO. DPR-40

DOCKET NO. 50-285

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Pages

2-91
2-92
2-93 (added)
2-94 (was 2-93)
2-95 (added)

3-81
3-82
3-83

5-1

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

- (3) The provisions set forth in Section 2.19(2) do not apply to time periods during which Containment Integrated Leak Rate Tests are being performed.
- (4) Fire suppression water system shall be operable, except during system testing, jockey pump maintenance or training (not to exceed 7 consecutive days) with both fire pumps, each with a minimum capacity of 1800 gpm, with their discharge aligned to the fire suppression header and automatic initiation logic for each fire pump.
 - a. With less than the above required equipment:
 - (i) restore the inoperable equipment to operable status within 7 days.
 - (ii) if equipment is not restored to operable status within 7 days, prepare and submit a report to the Nuclear Regulatory Commission, pursuant to Section 5.9.3.i of the Technical Specifications, within the next 30 days, outlining the plans and procedures to be used to provide for the loss of the system and the cause of the malfunction.
 - b. With no fire suppression water system operable:
 - (i) establish a backup fire suppression water system within 24 hours.
 - (ii) notify the Nuclear Regulatory Commission, pursuant to Section 5.9.2.a of the Technical Specifications, outlining the cause of the malfunction, the actions taken, and the plans and schedule for restoring the system to operable status.
 - (iii) If (i) above cannot be fulfilled, place reactor in Hot Standby within the next 6 hours and in Cold Shutdown within the following thirty (30) hours.
- (5) The sprinkler system in the Diesel Generator Rooms, the sprinklers above the steam driven auxiliary feedwater pump, and the deluge system in the personnel corridor between fire areas 6 and 20 shall be operable except during system testing. If inoperable:
 - a. Within one hour establish a continuous fire watch with backup fire extinguishing equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.

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

- b. 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.i 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.
- (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 if the inoperable fire hose station is the primary means of fire suppression; otherwise, route the additional hose within 24 hours.
- (7) All penetration fire barriers protecting safety-related areas shall be functional (intact). With a penetration fire barrier non-functional, within one hour, either establish a continuous fire watch on at least one side of the affected penetration, or verify the operability of fire detectors on at least one side of the penetration and establish an hourly fire watch patrol. Restore the non-functional penetration to functional status within 7 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 action taken, the cause, and the plans and schedule for restoring the penetration to functional status.
- (8) The control room, switchgear room and cable spreading room halon systems 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 a continuous 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.

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

Basis (Continued)

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.

The functional integrity of the fire barrier penetrations 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 fire barrier penetrations are a passive element in the facility fire protection program and are subject to periodic inspections.

Fire barrier penetrations, including cable penetration barriers, fire doors and dampers are considered functional when the visually observed condition is the same as the as-designed condition. For those fire barrier penetrations that are not in the as-designed condition, an evaluation shall be performed to show that the modification has not degraded the fire rating of the fire barrier penetration.

During periods of time when a barrier is not functional, either (1) a continuous fire watch is required to be maintained in the vicinity of the affected barrier, or (2) the fire detectors on at least one side of the affected barrier must be verified OPERABLE and an hourly fire watch patrol established, until the barrier is restored to functional status.

TABLE 2.8
FIRE HOSE STATION LOCATIONS

<u>No.</u>	<u>Location</u>	<u>Elevation</u>	<u>Size</u>
1. FP-4N	Intake Structure	1012'-6"	1.5"/2.5"
2. FP-4P	Intake Structure	1012'-6"	1.5"/2.5"
3. FP-3C	Yard Area	At grade level	2.5"
4. FP-3B	Yard Area	At grade level	2.5"
5. FP-3A	Yard Area	At grade level	2.5"
6. FP-3F	Yard Area	At grade level	2.5"
7. FP-3E	Yard Area	At grade level	2.5"
8. FP-3D	Yard Area	At grade level	2.5"
9. FP-7A	Auxiliary Building	989'-0"	1.5"/2.5"
10. FP-7B	Auxiliary Building	989'-0"	1.5"/2.5"
11. FP-7C	Auxiliary Building	989'-0"	1.5"/2.5"
12. FP-7D	Auxiliary Building	989'-0"	1.5"/2.5"
13. FP-7E	Auxiliary Building	989'-0"	1.5"/2.5"
14. FP-7F	Auxiliary Building	989'-0"	1.5"/2.5"
15. FP-8A	Auxiliary Building	1011'-0"	1.5"/2.5"
16. FP-8B	Auxiliary Building	1011'-0"	1.5"/2.5"
17. FP-8C	Auxiliary Building	1011'-0"	1.5"/2.5"
18. FP-8D	Auxiliary Building	1007'-6"	1.5"/2.5"
19. FP-8E	Auxiliary Building	1007'-6"	1.5"/2.5"
20. FP-8F	Auxiliary Building	1007'-6"	1.5"/2.5"
21. FP-8G	Auxiliary Building	1007'-6"	1.5"/2.5"
22. FP-8H	Auxiliary Building	1007'-6"	1.5"/2.5"

TABLE 2-8 (Continued)
FIRE HOSE STATION LOCATIONS

<u>No.</u>	<u>Location</u>	<u>Elevation</u>	<u>Size</u>
23. FP-9A	Auxiliary Building	1025'-0"	1.5"/2.5"
24. FP-9B	Auxiliary Building	1025'-0"	1.5"/2.5"
25. FP-9C	Auxiliary Building	1025'-0"	1.5"/2.5"
26. FP-10A	Auxiliary Building	1036'-0"	1.5"/2.5"
27. FP-10B	Auxiliary Building	1036'-0"	1.5"/2.5"
28. FP-10C	Auxiliary Building	1036'-0"	1.5"/2.5"
29. FP-10D	Auxiliary Building	1036'-0"	1.5"/2.5"
30. FP-10E	Auxiliary Building	1036'-0"	1.5"/2.5"

3.0 SURVEILLANCE REQUIREMENTS

3.15 Fire Protection System (Continued)

3. Verify that each fire pump starts automatically on low fire system pressure to maintain the fire suppression water system pressure ≥ 100 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 using a clean water source.
 - f. At least once per year by visually inspecting the strainer on the discharge side of the fire pumps to verify operability.
- (3) The sprinkler system in the Diesel Generator Rooms, the sprinklers above the steam driven auxiliary feedwater pump, and the deluge system in the personnel corridor between fire areas 6 and 20 shall be demonstrated to be operable:
- a. At least once per 18 months:
 1. By visual inspection of the spray/sprinkler headers to verify their integrity.
 2. By visual inspection of each spray/sprinkler nozzle to verify no blockage and no obstruction of the spray area.
 3. By performing a system functional test which includes simulated automatic actuation of the system and verifies that all automatic valves actuate to their correct position.
 - b. At least once per 3 years by performing an air flow test through each open head spray/sprinkler header and verifying each open head spray/sprinkler nozzle is unobstructed.
- (4) Each fire hose station designated in Table 2-8 shall be verified to be operable:
- a. At least once per month by visual inspection of the station to assure all equipment is available and the system pressure (as determined at the jockey pump pressure gauge) is within limits.
 - b. At least once per 18 months by removing the hose for inspection and reracking and replacing any degraded gaskets in the couplings.
 - c. At least once per 3 years by:
 1. Partially opening the hose station valves to verify valve operability and no blockage.

3.0 SURVEILLANCE REQUIREMENTS

3.15 Fire Protection System (Continued)

2. Conducting a hose hydrostatic test in accordance with NFPA requirements.
- (5) Penetration fire barriers shall be verified to be functional (intact):
 - a. At least once per 18 months by a visual inspection.
 - b. Prior to declaring a fire penetration seal functional following repairs or maintenance by performing a visual inspection of the affected penetration.
- (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 control room, switchgear room and cable spreading room halon systems 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.

3.0 SURVEILLANCE REQUIREMENTS

3.19 Fire Protection System (Continued)

- 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. 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.
- (9) Battery powered smoke detectors in control room cabinets and consoles shall be demonstrated OPERABLE by performance of an operational test performed using a built-in test device at least semi-annually.

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 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.

5.0 ADMINISTRATIVE CONTROLS

5.1 Responsibility

5.1.1 The Manager - Fort Calhoun Station shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility during his absence.

5.2 Organization

Offsite

5.2.1 The offsite organization for facility management and technical support shall be as shown on Figures 5.1 and 5.1a.

5.2.2 Plant Staff

The plant staff organization shall be as shown in Figure 5.2 and function as follows:

- a. The minimum number and type of licensed and unlicensed operating personnel required onsite for each shift shall be as shown in Table 5.2-1.
- b. At least one licensed Operator shall be in the control room when fuel is in the reactor.
- c. At least two licensed Operators shall be present in the control room during reactor startup, scheduled reactor shutdown and during recovery from reactor trips.
- d. An Operator or Technician qualified in Radiation Protection Procedures shall be onsite when fuel is in the reactor.
- e. All core alterations shall be directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator limited to fuel handling who has no other concurrent responsibilities during the operation.
- f. Fire protection program responsibilities are assigned to those positions and/or groups designated by asterisks in Figures 5-1, 5-1A, and 5-2 according to the procedures specified in Section 5.8 of the Technical Specifications.
- g. A fire brigade consisting of 5 members shall be maintained onsite at all times.# The fire brigade shall not include the minimum shift crew necessary for safe shutdown of the unit (2 members).

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 of Fire Brigade members provided immediate action is taken to restore the Fire Brigade to within the minimum requirements.