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. 52
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 March 14, 1978, (as supplemented May 1. 26, 1978, March 6 and May 24, 1979) and August 5, 1980, 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. 52, 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: October 14, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 52

FACILITY OPERATING LICENSE NO. DPR-40

DOCKET NO. 50-285

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

Appendix "A" Pages
i
5
2-0 (added)
2-0a (added)
2-0b (added)
3-20b
3-20c

Appendix "B" Page
1.1-2

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MISCELLANEOUS DEFINITIONS

Operable - Operability

A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).

In Operation

A system or component is in operation if it is performing its design function.

CEA's

All full length shutdown and regulating control rods.

Part Length CEA's

CEA's which contain neutron absorbing material only in the lower quarter of their length.

Containment Integrity

Containment integrity is defined to exist when all of the following are met:

(1) All nonautomatic containment isolation valves which are not required to be open during accident conditions and blind flanges are closed.

(2) The equipment hatch is properly closed and sealed.

(3) At least one door in the personnel air lock is properly closed and sealed.

(4) All automatic containment isolation valves are operable or locked closed (or isolated by locked closed valves or blind flanges as permitted by limiting condition for operation).

(5) The uncontrolled containment leakage satisfies Specification 3.5.

2.0 LIMITING CONDITIONS FOR OPERATION

2.0.1 General Requirements

Applicability

Applies to the operable status of all systems, subsystems, trains, components, or devices covered by the Limiting Conditions for Operation.

Objective

To specify corrective measures to be employed for system conditions not covered by or in excess of the Limiting Conditions for Operation.

Specification

(1) In the event a Limiting Condition for Operation and/or associated action requirements cannot be satisfied because of circumstances in excess of those addressed in the specification, the unit shall be placed in at least HOT SHUTDOWN within 6 hours, in at least subcritical and < 300°F within the next 6 hours, and in at least COLD SHUTDOWN within the following 30 hours, unless corrective measures are completed that permit operation under the permissible action requirements for the specified time interval as measured from initial discovery or until the reactor is placed in an Operating Mode in which the specification is not applicable. Exceptions to these requirements shall be stated in the individual specifications.

(2) When a system, subsystem, train, component, or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s), and device(s) are OPERABLE, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied, the unit shall be placed in at least HOT SHUTDOWN within 6 hours, in at least subcritical and < 300°F within the next 6 hours, and in at least COLD SHUTDOWN within the following 30 hours. This specification is not applicable in Operating Modes 4 or 5.

Basis

(1) This specification delineates corrective measures to be taken for circumstances not directly provided for in the system specific specifications and whose occurrence would violate the intent of the specification. For example, Specification 2.3 requires each Low Pressure Safety Injection (LPSI) pump to be operable and provides explicit corrective measures to

be followed if one pump is inoperable. Under the terms of Specification 2.0.1(1), if more than one LPSI pump is inoperable, the unit must be placed in at least HOT SHUTDOWN within 6 hours, in at least subcritical and < 300°F within the following 6 hours, and in at least COLD SHUTDOWN within the following 30 hours, unless at least one LPSI pump were restored to operability. It is assumed that the unit is brought to the required mode within the required times by promptly initiating and carrying out the appropriate measures required by the specification.

(2) This specification delineates what additional conditions must be satisfied to permit operation to continue, consistent with the system specific specifications for power sources, when a normal or emergency power source is not OPERABLE. It specifically prohibits operation when one division is inoperable because its normal or emergency power source is inoperable and a system, subsystem, train, component, or device in another division is inoperable for another reason.

The provisions of this specification permit the requirements associated with individual systems, subsystems, trains, components, or devices to be consistent with the specification of the associated electrical power source. It allows operation to be governed by the time limits of the requirements associated with the Limiting Condition for Operation for the normal or emergency power source, not the individual requirements for each system, subsystem, train, component, or device that is determined to be inoperable solely because of the inoperability of its normal or emergency power source.

For example, Specification 2.7 requires in part that two emergency diesel generators be OPERABLE. The specification provides for 7 days per month out-of-service time when one emergency diesel generator is not OPERABLE. If the definition of OPERABLE were applied without consideration of Specification 2.0.1(2), all systems, subsystems, trains, components, and devices supplied by the inoperable emergency power source would also be inoperable. This would dictate invoking the applicable corrective measures for each of the applicable Limiting Conditions for Operation. However, the provisions of Specification 2.0.1(2) permit the time limits for continued operation to be consistent with the requirements for the inoperable emergency diesel generator instead, provided the other specified conditions are satisfied. In this case, this would mean that the corresponding normal power source must be OPERABLE, and all redundant systems, subsystems, trains, components, and devices must be OPERABLE, or otherwise satisfy Specification 2.0.1(2) (i.e., be capable of performing their design

function and have at least one normal and one emergency power source OPERABLE). If they are not satisfied, shutdown is required in accordance with this specification.

As a further example, Specification 2.7 requires in part that two physically independent circuits between the offsite transmission network and the onsite Class IE distribution system be OPERABLE. The specification provides a 24-hour out-of-service time when both required offsite circuits are not OPERABLE. If the definition of OPERABLE were applied without consideration of Specification 2.0.1(2), all systems, subsystems, trains, components, and devices supplied by the inoperable normal power sources, both of the offsite circuits, would also be inoperable. This would dictate invoking the applicable measures for each of the applicable LCO's. However, the provisions of Specification 2.0.1(2) permit the time limits for continued operation to be consistent with the corrective measures for the inoperable normal power sources instead, provided the other specified conditions are satisfied. In this case, this would mean that for one division the emergency power source must be OPERABLE (as must be the components supplied by the emergency power source) and all redundant systems, subsystems, trains, components, and devices in the other division must be OPERABLE, or likewise satisfy Specification 2.0.1(2) (i.e., be capable of performing their design functions and have an emergency power source OPERABLE). In other words, both emergency power sources must be OPERABLE and all redundant systems, subsystems, trains, components, and devices in both divisions must also be OPERABLE. If these conditions are not satisfied, shutdown is required in accordance with this specification.

In Operating Modes 4 or 5, Specification 2.0.1(2) is not applicable, and thus the individual requirements for each applicable Limiting Condition for Operation in these modes must be adhered to.

TABLE 3-5
(Continued)

	Test		Frequency	FSAR Section Reference
10b.	Charcoal Adsorbers for Spent Fuel Storage Pool Area	1. In-Place Testing** Charcoal adsorbers shall be leak tested and shall show ≥99% Freon (R-11 or R-112) removal.	Each refueling shutdown not to exceed 18 months or after every 720 hours of system operation, or after each complete or partial replacement of the charcoal adsorber bank, or after any major structural maintenance on the system housing and following significant painting, fire or chemical release in a ventilation zone communicating with the system.	6.2 9.4
		2. Laboratory Testing		
		a. Initial batch tests of all charcoal adsorbers shall show ≥99% elemental iodine removal when tested under conditions of ≥95% R.H., ≥125°F, 5 to 10 mg/m^3 inlet elemental iodine concentration and at the face velocity within ±20% of system design.	Prior to initial loading in the filter unit.	
		b. The carbon sample test results shall show ≥90% elemental iodine removal, under conditions of ≥95% R.H., ≥125°F, 5 to 10 mg/m^3 inlet elemental concentration and within 20% of design face velocity.	Each refueling shutdown not to exceed 18 months or after every 720 hours of system operation, and following significant painting, fire or chemical release in any ventilation zone communicating with the system.	
		3. Overall System Operation		
		a. Operation of each circuit shall be demonstrated.	Ten hours every month.	
		b. Volume flow rate through charcoal filter shall be shown to be between 9000 and 12,000 cfm.	At least once per plant operating cycle.	
		4. Manual initiation of the system shall be demonstrated.	At least once per plant operating cycle.	

**Tests shall be performed in accordance with applicable section(s) of ANSI N510-1975.

TABLE 3-5
(Continued)

	Test	Frequency	FSAR Section Reference
10. Charcoal Adsorbers for S.I. Pump Room	1. In-Place Testing** Charcoal adsorbers shall be leak tested and shall show ≥99% Freon (R-11 or R-112) removal.	Each refueling shutdown not to exceed 18 months or after every 720 hours of system operation or after each complete or partial replacement of the charcoal adsorber bank, or after any major structural maintenance on the system housing and following significant painting, fire or chemical release in any ventilation zone communicating with the system.	9.10 6.2
	2. Laboratory Testing		
	a. Initial batch tests of all charcoal adsorbers shall show ≥99% elemental iodine removal when tested under conditions of ≥95% R.H., ≥125°F, 5 to 10 mg/m^3 inlet elemental iodine concentration and at a face velocity within ±20% of system design.	Prior to initial loading in the filter unit.	
	b. The carbon sample test results for the S.I. Pump Room charcoal filters shall show no less than 90% elemental iodine removal, under conditions of ≥95% R.H., at ≥125°F, 5 to 10 mg/m^3 inlet elemental iodine concentration and within ±20% of design face velocity.	Each refueling shutdown not to exceed 18 months or after every 720 hours of system operation and following significant painting, fire or chemical release in any ventilation zone communicating with the system.	
	3. Overall System Operation		
	a. Operation of each circuit shall be demonstrated.	Ten hours every month.	
	b. Volume flow rate shall be shown to be between 3000 and 6000 cfm.	At least once per plant operating cycle.	

**Tests shall be performed in accordance with applicable section(s) of ANSI N510-1975.

Basis

The once-through condenser cooling system will increase the temperature of the river water pumped through the system during the full-load operation by approximately 25°F. On the average, the area of the river heated 5°F or more above ambient will be within a zone 2000 ft. long by 250 ft. wide.

During the winter months when the river temperature is 55°F or less, it may be planned to overhaul the circulators one at a time or perform other maintenance that may require reduced circulating water flow. Normally one to two weeks will be required to overhaul each circulator. It is expected that during this period of time the number of circulators will be cut from three to two and that the rise across the condenser could increase to 35°F at the full-load operation. During these periods when a circulator is out of operation, recirculation flow for ice control and/or load will be limited such that the total rise will not exceed 35°F. The position of the 5°F isotherm will move downstream to about 5,000 to 6,000 ft. for these flow ranges. The limit of 7,000 cfs river flow, under which such operation could result in undesirable temperatures across the river, is the low flow expected for a seven-day period once in 10 years under 1970 development conditions.