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. 138
License No. DPR-40

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by the Omaha Public Power District (the licensee) dated June 28, 1990, as supplemented December 20, 1990, complies 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 application, 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 license 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.

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2. Accordingly, Facility Operating License No. DPR-40 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 Appendix A, as revised through Amendment No. 138 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Theodore R. Quay, Director
Project Directorate IV-1
Division of Reactor Projects III, IV, and V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 19, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 138

FACILITY OPERATING LICENSE NO. DPR-40

DOCKET NO. 50-285

Revise Appendix "A" Technical Specifications as indicated below. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

REMOVE PAGES	INSERT PAGES
2-30	2-30
2-31	2-31
	2-31a
3-17a	3-17a
	3-20e

2.0 LIMITING CONDITIONS FOR OPERATION

2.6 Containment System

Applicability

Applies to the reactor containment system.

Objective

To assure the integrity of the reactor containment system.

Specifications

(1) Containment Integrity

a. Containment integrity shall not be violated unless the reactor is in the cold shutdown condition.

b. Containment integrity shall not be violated when the reactor vessel head is removed if the boron concentration is less than refueling concentration.

c. Except for testing one CEDM at a time, positive reactivity changes shall not be made by CEA motion or boron dilution unless the containment integrity is intact.

d. Prior to the reactor going critical after a refueling outage, an administrative check will be made to confirm that all "locked closed" manual containment isolation valves are closed and locked.

e. The containment purge isolation valves will be locked closed unless the reactor is in a cold or refueling shutdown condition.

(2) Internal Pressure

The internal pressure shall not exceed 3 psig (except for containment leak rate tests).

(3) Hydrogen Purge System

a. Minimum Requirements

The reactor shall not be made critical unless all of the following requirements are met:

1. The containment isolation valves VA-280 and VA-289 shall be locked closed.

2. VA-80A and VA-80B with associated valves and piping to include VA-82 filters, are operable.

b. Modification of Minimum Requirements

After the reactor has been made critical, the minimum requirements may be modified to allow either or both of the following statements (i,ii) to be applicable at any one time. If the operability of the component(s) is not restored to meet the minimum requirements within the time specified below, the reactor shall be placed in a hot shutdown condition within six hours.

(i) One of the hydrogen purge fans, VA-80A or VA-80B, with associated valves and piping may, be inoperable provided the fan is restored to operable status within 30 days.

(ii) The hydrogen purge filter system, VA-82, may be inoperable provided the system is restored to operable status within 72 hours.

Basis

The reactor coolant system conditions of cold shutdown assure that no steam will be formed and, hence, there would be no pressure buildup in the containment if the reactor coolant system ruptures. The shutdown margins are selected based on the type of activities that are being carried out. The refueling boron concentration provides a shutdown margin which precludes criticality under any circumstances. Each CEDM must be tested and some have two CEA's attached.

Regarding internal pressure limitations, the containment design pressure of 60 psig would not be exceeded if the internal pressure before a major loss-of-coolant accident were as much as 3 psig.(1) The containment integrity will be protected if the visual check of all "locked closed" manual isolation valves to verify them closed is made prior to plant start-up after an extended outage where one or more valves could inadvertently be left open. Operation of the purge isolation valves is prevented during normal operations due to the size of the valves (42 inches) and a concern about their ability to close against the differential pressure that could result from a LOCA or MSLB.

The Hydrogen Purge System is required to be operable in order to control the quantity of combustible gases in containment in a post-LOCA condition.(2) The containment integrity will be protected by ensuring the penetration valves VA-280 and VA-289 are "locked closed" while HCV-881 and HCV-882 are normally closed during power operation. The applicable surveillance testing requirements of Table 3-5 will ensure that the system is capable of performing its design function. The blowers (VA-80A and VA-80B), associated valves, and piping are single failure proof, have been designed as a Seismic Class I System, and are redundant to the VA-82 filter header. VA-80A or VA-80B is capable of providing sufficient hydrogen removal capabilities as required by the USAR to prevent the hydrogen concentration inside of containment from exceeding the 4% flammability limit.(3) Electrical Equipment qualification was not required as the radiation doses in the area of the Hydrogen Purge System equipment were below the minimum requirements.(4)

VA-80A or VA-80B with the associated valves and piping may be inoperable for 30 days. The redundancy of the blowers allows one blower with associated valves and piping to be removed from operation while the other train has the capability to provide 100% hydrogen control.

References

(1) USAR, Section 14.16; Figure 14.16-2
(2) Regulatory Guide 1.7 (1971)
(3) USAR, Section 14.17
(4) Engineering Study 86-10, Calculation 53

The Safety Injection (SI) pump room air treatment system consists of charcoal adsorbers which are installed in normally bypassed ducts. This system is designed to reduce the potential release of radioiodine in SI pump rooms during the recirculation period following a DBA. The in-place and laboratory testing of charcoal adsorbers will assure system integrity and performance.

Pressure drops across the combined HEPA filters and charcoal adsorbers, of less than 9 inches of water for the control room filters (VA-64A & VA-64B) and of less than 6 inches of water for each of the other air treatment systems will indicate that the filters and adsorbers are not clogged by amounts of foreign matter that would interfere with performance to established levels. Operation of each system for 10 hours every month will demonstrate operability and remove excessive moisture build-up in the adsorbers.

The hydrogen purge system provides the control of combustible gases (hydrogen) in containment for a post-LOCA environment. The surveillance tests provide assurance that the system is operable and capable of performing its design function. VA-80A or VA-80B is capable of controlling the expected hydrogen generation (67 SCFM) associated with 1) Zirconium - water reactions, 2) radiolytic decomposition of sump water and 3) corrosion of metals within containment. The system should have a minimum of one blower with associated valves and piping (VA-80A or VA-80B) available at all times to meet the guidelines of Regulatory Guide 1.7 (1971).

The requirements in 2.9.1(2)f(iii) to automatically isolate the hydrogen purge system by the stack radiation monitors does not apply in that the isolation valves do not have automatic isolation capability.

If significant painting, fire or chemical release occurs such that the HEPA filters or charcoal adsorbers could become contaminated from the fumes, chemicals or foreign materials, testing will be performed to confirm system performance.

Demonstration of the automatic and/or manual initiation capability will assure the system's availability.

References

USAR, Section 9.10

Table 3-5
(Continued)

	Test	Frequency
17. Hydrogen Purge System[1]	1. Verify all manual valves are operable by completing at least one cycle.	During each refueling outage
	2. Cycle each automatic valve through at least one complete cycle of full travel from the control room. Verification of the valve cycling may be determined by the observation of position indicating lights.	During each refueling outage
	3. Initiate flow through the VA-80A and VA-80B blowers, HEPA filter, and charcoal adsorbers and verify that the system operates for at least (a) 30 minutes with suction from the auxiliary building (Room 59) (b) 10 hours with suction from the containment	a) Monthly b) During each refueling outage
	4. Verify the pressure drop across the VA-82 HEPAs and charcoal filter to be less than 6 inches of water. Verify a system flow rate of greater than 80 scfm and less than 230 scfm during system operation when tested in accordance with 3b. above.	During each refueling outage

(1) The requirements of T.S. requirement 2.9.1(2)f(iii) do not apply.

Amendment No.