

December 16, 2002

Mr. R. T. Ridenoure
Division Manager - Nuclear Operations
Omaha Public Power District
Fort Calhoun Station, FC-2-4 Adm.
P.O. Box 550
Fort Calhoun, NE 68023-0550

SUBJECT: FORT CALHOUN STATION, UNIT NO. 1 - ISSUANCE OF AMENDMENT
(TAC NO. MB6471)

Dear Mr. Ridenoure:

The Commission has issued the enclosed Amendment No. 213 to Facility Operating License No. DPR-40 for the Fort Calhoun Station, Unit No. 1 (FCS). The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 8, 2002.

The amendment increases the amount of diesel fuel oil required by TS 2.7, "Electrical Systems." A recent calculation determined that the amount of diesel fuel oil required by TS 2.7(1)m is slightly insufficient (35 gallon shortfall) to provide for 7 days of emergency diesel generator (EDG) operation following a design basis accident at FCS. As such, OPPD proposes to increase the amount of diesel fuel oil required by TS 2.7(1)m, "Electrical Systems," for tank FO-10 from 8,000 gallons to 10,000 gallons. In addition, to maintain consistency, the amount of diesel fuel oil required by TS 2.7(2)k for 6 days of EDG operation has been increased by the same amount (2,000 gallons).

A copy of the related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Alan B. Wang, Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-285

Enclosures: 1. Amendment No. 213 to DPR-40
2. Safety Evaluation

cc w/encls: See next page

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Ft. Calhoun Station, Unit 1

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OMAHA PUBLIC POWER DISTRICT

DOCKET NO. 50-285

FORT CALHOUN STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.
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 October 8, 2002, 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.

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. _____, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Stephen Dembek, Chief, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance:

ATTACHMENT TO LICENSE AMENDMENT NO. _____

FACILITY OPERATING LICENSE NO. DPR-40

DOCKET NO. 50-285

Replace the following pages of Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

REMOVE

2-32
2-34
2-36

INSERT

2-32
2-34
2-36

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. _____ TO FACILITY OPERATING LICENSE NO. DPR-40
OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION, UNIT NO. 1
DOCKET NO. 50-285

1.0 INTRODUCTION

By application dated October 8, 2002, Omaha Public Power District (OPPD) requested changes to the Technical Specifications (Appendix A to Facility Operating License No. DPR-40) for the Fort Calhoun Station, Unit No. 1 (FCS). A recent calculation determined that the amount of diesel fuel oil required by TS 2.7(1)m is slightly insufficient (35 gallon shortfall) to provide for 7 days of emergency diesel generator (EDG) operation following a design basis accident at FCS. As such, OPPD proposes to increase the amount of diesel fuel oil required by TS 2.7(1)m, "Electrical Systems," for tank FO-10 from 8,000 gallons to 10,000 gallons. In addition, to maintain consistency, the amount of diesel fuel oil required by TS 2.7(2)k for 6 days of EDG operation has been increased by the same amount (2,000 gallons).

2.0 REGULATORY EVALUATION

The FCS design meets criteria similar to those now contained in 10 CFR Part 50, Appendix A, General Design Criteria for Nuclear Power Plants. The FCS Updated Safety Analysis Report (USAR) Appendix G, "Responses to 70 Criteria," describes how those criteria are met. The criteria that govern emergency power sources are USAR Appendix G, Criteria 24 and 39.

Criterion 24 – Emergency Power for Protection Systems, states: "In the event of loss of all offsite power, sufficient alternate sources of power shall be provided to permit the required functioning of the protection systems." This criterion is met. Emergency power is available from two completely independent diesel generator sets and from the two completely independent 125v DC systems for essential DC loads. Each unit has sufficient capacity to start sequentially the loads that must be supplied for the engineered safeguards equipment for the hypothetical accident concurrent with loss of outside power.

Criterion 39 – Emergency Power For Engineered Safety Features states: "Alternate power systems shall be provided and designed with adequate independency, redundancy, capacity and testability to permit the functioning required of the engineered safety features. As a minimum, the onsite power system and the offsite power system shall each, independently, provide this capacity assuming a failure of a single active component in each power system." Onsite power is provided by two diesel generator sets. Each independent diesel generator set is adequate for supplying the minimum

engineered safeguards equipment for the hypothetical accident concurrent with loss of outside power.

The proposed changes were evaluated against these criteria and the fuel storage requirements of IEEE-308 to meet the need for 7 days of continuous EDG operation.

3.0 BACKGROUND

This amendment is necessary because a recent calculation determined that the amount of diesel fuel oil required by TS 2.7 is slightly insufficient for 7 days of emergency EDG operation. This discrepancy was documented in OPPD's corrective action program. The calculation performed to resolve this discrepancy determined that the minimum available diesel fuel oil inventory required by TS 2.7(1)m is 35 gallons short of the amount required for 7 days of post-accident EDG operation. The major cause of the discrepancy was a reduction in available fuel inventory attributed to the fuel used by FW-56, the auxiliary feedwater pump diesel engine. FW-56 can provide power for FO-37, the fuel oil transfer pump, which transfers diesel fuel oil from FO-10 to FO-1. As described in the October 8, 2002, submittal, FW-56 is one of three potential sources of power for FO-37.

This proposed change will establish a minimum of 10,000 gallons of diesel fuel oil be reserved in the auxiliary boiler fuel oil storage tank FO-10. This assures sufficient fuel oil for transfer to the emergency diesel generator fuel oil storage tank in the event of an emergency to extend the fuel supply for diesel generator operation to 7 days. There is no safety or operability concern as administrative controls are in place to ensure that there is substantial margin in the minimum diesel fuel oil inventory required to be stored in FO-10. TS 2.7(2)k allows either tank FO-1 or FO-10 to be less than the amount required by TS 2.7(1)m for 48 hours as long as the total fuel inventory in tanks FO-1 and FO-10 are greater than 21,350 gallons. The 21,350 gallons represents a 6 day supply of fuel oil. For consistency the amount of diesel fuel oil required by TS 2.7(2)k has been increased by the same amount (2,000 gallons).

4.0 EVALUATION

By Amendment No. 162, dated March 29, 1994, the staff had reviewed and approved the FCS fuel storage system configuration. The staff concluded that FCS met the fuel storage oil requirements of IEEE-308 as being capable of providing fuel oil for 7 days of uninterrupted EDG operation following the most limiting accident. In addition, the staff reviewed and approved FCS Report EA-FC-92-047, "Diesel Generator Fuel Oil Requirement, Rev. 0." This report documented the licensee's calculation of the fuel oil inventory (24,520 gallons) required for 7 days of continuous EDG operation. The licensee has stated that EA-FC-92-047 contains the methodology for the diesel generator loading model. The actual calculation of the fuel oil consumption which applies this methodology is contained in calculation FC03382 Appendix 2, "Diesel Generator Fuel Oil Consumption Model." This calculation is updated every refueling cycle. The licensee has determined that the previous analysis was insufficient by approximately 35 gallons. The auxiliary feedwater pump diesel engine FW-56 is one of the potential power sources to FO-37, which is the primary pump used for transfer of diesel fuel oil from tank FO-10 to tank FO-1. The additional fuel oil is needed to assure that FW-56 is operable for the entire period needed to transfer 8,000, to be increased to 10,000 by this TS change, gallons of fuel oil from tank FO-10 to tank FO-1. This transfer capability is a critical assumption in our approval

of the FCS fuel storage configuration. The TS change will increase the minimum required fuel volume in tank FO-10 as required by TS 2.7(1)m from 8,000 gallons to 10,000 gallons. The licensee has increased the required level significantly to provide a substantial margin. The 2,000 gallons of fuel oil is equivalent to approximately 12 hours of operation of one EDG. The staff has determined that the original methodology has been maintained and agrees that the 2,000 gallon increase in the TS fuel oil requirement for tank FO-10 is conservative and therefore the TS change is acceptable.

TS 2.7(2)k has been revised to reflect the new requirement for tank FO-10. This increases the combined inventory requirement from 21,350 gallons to 23,350 gallons. This TS allows the fuel oil inventory to be below the 7-day requirement, but above the 6-day supply, for a period of 48 hours. This was previously approved in Amendment No. 162. The 48-hour restriction allows sufficient time for the licensee to obtain the TS required fuel volumes and perform the analyses required prior to the addition of the fuel oil to the tank. The staff agrees that the 2,000 gallon increase in the TS fuel oil inventory requirement for FCS is conservative and, therefore, the TS change is acceptable.

Bases Section 2.7, "Electrical Systems," has been revised to reflect the proposed TS changes. The staff has reviewed these Bases changes and has no objections to them.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Nebraska State official was notified of the proposed issuance of the amendment. The State official had no comments.

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (67 FR 68741). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

7.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: A. Wang

Date: