

March 26, 2008

Mr. David J. Bannister
Vice President and CNO
Omaha Public Power District
Fort Calhoun Station FC-2-4
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Fort Calhoun, NE 68023-0550

SUBJECT: FORT CALHOUN STATION, UNIT NO. 1 - ISSUANCE OF AMENDMENT RE:
CHANGE TO DIESEL GENERATOR SURVEILLANCE TESTING (TAC
NO. MD6939)

Dear Mr. Bannister:

The Commission has issued the enclosed Amendment No. 254 to Renewed Facility Operating License No. DPR-40 for the Fort Calhoun Station, Unit No. 1. The amendment consists of changes to the Technical Specifications (TS) in response to your application dated October 5, 2007.

The amendment revises emergency diesel generator (DG) surveillance testing in TS 3.7, "Emergency Power Systems," to support modification of the DG start circuitry. Currently, TS 3.7 requires the licensee to verify the anticipatory DG start-to-idle speed upon a reactor trip. This amendment deletes the anticipatory DG starting requirement. This amendment also deletes the footnote to TS 3.7(1)e. that pertains to a one-time extension of the surveillance interval for DG-1 that was granted in Amendment No. 112 to the Renewed Facility Operating License.

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/

Michael T. Markley, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-285

Enclosures: 1. Amendment No. 254 to DPR-40
2. Safety Evaluation

cc w/encls: See next page

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ADAMS Accession Nos.: Pkg **ML080640065**, Amendment ML080640069, License and TS Pg ML080640070

(*) See previous concurrence

(**) Concurrence SE Input memo

OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	NRR/EEEB	NRR/ITSB/BC	OGC – NLO w/comment	NRR/LPL4/BC
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DATE	3/19/08	3/19/08	01/09/08	3/3/08	3/24/08	3/26/08

OFFICIAL RECORD COPY

Ft. Calhoun Station, Unit 1

(November 2007)

cc:

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OMAHA PUBLIC POWER DISTRICT

DOCKET NO. 50-285

FORT CALHOUN STATION, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 254
Renewed 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 5, 2007, 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, Renewed Facility Operating License No. DPR-40 is amended by changes as indicated in the attachment to this license amendment, and paragraph 3.B. of Renewed 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. 254, 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 prior to startup from the 2008 refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Thomas G. Hiltz, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Renewed Facility
Operating License No. DPR-40
and Technical Specifications

Date of Issuance: March 26, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 254

RENEWED FACILITY OPERATING LICENSE NO. DPR-40

DOCKET NO. 50-285

Replace the following pages of the Renewed Facility Operating License No. DPR-40 and the 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.

Renewed Facility Operating License No. DPR-40

REMOVE

INSERT

-3-

-3-

Technical Specifications

REMOVE

INSERT

3.7 – Page 2

3.7 – Page 2

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 254 TO
RENEWED FACILITY OPERATING LICENSE NO. DPR-40
OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION, UNIT NO. 1
DOCKET NO. 50-285

1.0 INTRODUCTION

By letter dated October 5, 2007 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072830029), Omaha Public Power District (the licensee) proposed changes to the Fort Calhoun Station, Unit No. 1 (FCS) Technical Specification (TS) 3.7, "Emergency Power System." The proposed changes would modify testing requirements for the emergency diesel generators (DG). Currently, TS 3.7 requires the licensee to verify the anticipatory DG start-to-idle speed upon a reactor trip. The proposed change would delete this anticipatory DG starting requirement.

2.0 REGULATORY EVALUATION

In Section 50.36 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Technical Specifications," the U.S. Nuclear Regulatory Commission (NRC) established its regulatory requirements related to the content of TS. Pursuant to 10 CFR 50.36, TSs are required to include items in the following five specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings, (2) limiting conditions for operations (LCO), (3) surveillance requirements (SR), (4) design features, and (5) administrative controls. The rule does not specify the particular requirements to be included in a plant's TS. As stated in 10 CFR 50.36(d)(2)(i), the "[l]imiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility." The regulations in 10 CFR 50.36(d)(3) state that "[s]urveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components will be maintained within safety limits, and that the limiting conditions for operation will be met."

Paragraph (a)(3) of 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," states that "[t]he objective of preventing failures of structures, systems, and components through maintenance is appropriately balanced against the objective of minimizing unavailability of structures, systems, and components due to monitoring or preventative maintenance." Paragraph (a)(4) of 10 CFR 50.65 states that "[b]efore performing maintenance activities (including but not limited to surveillance, post-maintenance

testing, and corrective and preventative maintenance), the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities.”

FCS was licensed for construction prior to May 21, 1971, and at that time committed to the draft General Design Criteria (GDC). The draft GDC, which are similar to Appendix A, General Design Criteria for Nuclear Power Plants in 10 CFR Part 50, are contained in Appendix G of the FCS Updated Final Safety Analysis Report (UFSAR). In its amendment application, the licensee appropriately identified the applicable regulatory requirements that govern emergency power at FCS. Criterion 15, “Engineered Safety Features Protection System,” requires that protection systems be provided for sensing accident situations and initiating the operation of necessary engineered safety features (ESF). Criterion 24, Emergency Power for Protection Systems,” requires that, in the event of a loss of offsite power, sufficient alternate sources of power be provided to permit the required functioning of the protection systems. Criterion 39, “Emergency Power for Engineered Safety Features,” requires that alternate power systems be provided and designed with adequate independency, redundancy, capacity, and testability to permit the functioning required of the ESF. 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.

Regulatory Guide (RG) 1.9, Revision 3, “Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electric Power Systems at Nuclear Power Plants,” provides guidance with respect to design and testing of safety-related DG. This RG endorses, with some exceptions, the Institute of Electrical and Electronics Engineers (IEEE) Standard 387-1984, “IEEE Standard Criteria for Diesel Generator Units Applied as Standby Power Supplies for Nuclear Power Generating Stations.”

Generic Letter (GL) 84-15, “Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability,” provides guidance as it relates to improving the reliability of DGs.

Improved Standard Technical Specifications (STS) have been developed based on criteria in 10 CFR 50.36, and the NRC staff evaluation of the licensee’s request to modify the specific TS was based, in part, on conformity with DG SR contained in NUREG-1432, Revision 3.0, “Standard Technical Specifications, Combustion Engineering Plants.”

3.0 TECHNICAL EVALUATION

The detailed evaluation provided below will support the conclusion 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.

The FCS onsite Class 1E alternating current (AC) electrical distribution system is powered from two safety-related DG. Both generator sets independently start automatically upon loss of auxiliary power and are ready to accept load within 10 seconds of loss of normal supply power.

Starting power is self-contained within each DG. Each DG must have sufficient capacity to start in sequence the loads required for the ESF equipment for the maximum hypothetical accident

concurrent with loss of offsite power. This capacity must be adequate to provide a safe and orderly plant shutdown and maintain the plant in a safe condition.

The NRC staff has reviewed the licensee's justification for the proposed license amendment as described in the licensee's application dated October 5, 2007. The NRC staff's evaluation of the proposed amendment follows.

3.1 Revisions to TS 3.7(1)c

The licensee proposed revising TS 3.7(1)c.i to remove the requirement to verify an anticipatory start-to-idle speed upon a reactor trip. Currently, TS 3.7(1)c.i. states:

Initiation of a simulated auto-start signal to verify that the diesel starts, followed by,

Thus, TS 3.7(1)c.i. currently requires the initiation of a simulated auto-start signal to verify that the DG starts, followed by the licensee's meeting the requirements of TS 3.7(1)c.ii for initiation of a simulated simultaneous loss of 4.16 kiloVolt (kV) supplies to FCS buses 1A3 (1A4).

The licensee's proposed TS 3.7(1)c.i. would state:

Initiation of a simulated auto-start signal to verify that the diesel starts.

The licensee's proposed revision deletes the words "followed by." The revised TS 3.7(1)c would continue to require the licensee to verify that the DG starts following initiation of a simulated auto-start signal, but this verification will be concurrent with, not followed by, the simulated loss of 4.16 kV supplies to FCS buses 1A3 and 1A4 as required by TS 3.7(1)c.ii.

The licensee stated that the change to TS 3.7(1)c.i. is necessary to accurately reflect actual surveillance testing of the DG following removal of the reactor protective system anticipatory (idle speed) start signal and allow only full-speed DG starting on an undervoltage condition or an ESF signal.

The NRC staff reviewed FCS's UFSAR Section 7.3, "Instrumentation and Controls, Engineered Safeguards Controls and Instrumentation," and Section 8.4, "Electrical Systems, Emergency Power Sources," and confirmed that there was no requirement in the FCS licensing basis to support the existing TS requirement to have an DG anticipatory start-to-idle speed upon a reactor trip. Furthermore, while FCS is not committed to RG 1.9, the staff reviewed the licensee's proposed change against this guidance document. The NRC staff found that RG 1.9 likewise does not include a recommendation for verifying an anticipatory DG start-to-idle speed upon a reactor trip.

The NRC staff concludes that the proposed change will reduce unnecessary testing of the FCS DG as recommended by GL 84-15. The proposed change is also consistent with STS previously evaluated in NUREG-1432.

Based on the above, the staff concludes that the proposed change to TS 3.7(1)c.i. is acceptable.

For consistency with TS 3.7(1)c.i. and TS 3.7(1)c.ii., a period (.) is proposed to be added following TS 3.7(1)c.iii. The NRC staff concluded that this addition is an editorial change that does not have technical significance and, therefore, is acceptable.

3.2 Deletion of Footnote in TS 3.7(1)e

The licensee also proposed to delete the footnote in TS 3.7(1)e.

Currently, TS 3.7(1)e. has a footnote that states:

A one time extension has been granted for this surveillance requirement, allowing the April 1988 surveillance for Diesel Generator No. 1 to be accomplished in October 1988.

The proposed TS 3.7(1)e. would delete the footnote in the current TS.

The footnote in TS 3.7(1)e. pertains to a one-time extension of the surveillance interval for DG-1 that was granted by Amendment No. 112 to the Renewed Facility Operating License. This one-time extension permitted the due date of the surveillance test to be extended from April 1988 to October 1988 to coincide with the 1998 refueling outage. This allowed the surveillance to be performed during a refueling outage since the performance of the surveillance during power operations could have resulted in the plant entering an LCO that would require a plant shutdown. The licensee contends that the footnote is no longer pertinent and requested that it be deleted.

The NRC staff reviewed the licensee's submittal and finds that the aforementioned footnote concerns only the previous one-time extension and thus is no longer applicable or necessary. Based on the above, the staff finds that the proposed change is acceptable.

4.0 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.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the 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 published in the *Federal Register* on November 20, 2007 (72 FR 65369). 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.

6.0 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: G. Morris

Date: March 26, 2008