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December 14, 2001
LIC-01-0105

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Reference: Docket No. 50-285

SUBJECT: Fort Calhoun Station Unit No. 1 License Amendment Request, "Revise Surveillance Requirements for Emergency Power System Periodic Tests"

Pursuant to 10 CFR 50.90, Omaha Public Power District (OPPDP) hereby requests the following amendment actions: 1) revise Technical Specifications 3.7(2)d and 3.7(4) to allow the tests to be performed on a refueling frequency outside of a refueling outage, and 2) correct the docket concerning inconsistencies in the 1973 Fort Calhoun Station (FCS) Safety Evaluation Report (SER) associated with the 13.8 kV transmission line capability.

Based on the attached evaluation, OPPDP concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

OPPDP requests approval of the proposed amendment by April 15, 2002, to support implementation during the spring 2002 refueling outage. Once approved, the amendment shall be implemented within 30 days. To eliminate further confusion related to the 13.8 kV inconsistencies in the Fort Calhoun Station SER and the original Final Safety Analysis Report and supporting inspections, OPPDP respectfully requests that the SER approving this amendment address the 13.8 kV transmission line capability to correct the docket concerning the errors in the original SER.

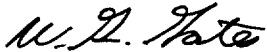
I declare under penalty of perjury that the foregoing is true and correct. (Executed on December 14, 2001)

If you have any questions or require additional information, please contact Dr. R. L. Jaworski at (402) 533-6833.

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Sincerely,



W. G. Gates
Vice President

WGG/RRL/rri

Attachments:

1. Fort Calhoun Station's Evaluation for Amendment of Operating License
2. Markup of Technical Specification Pages
3. Technical Specification Pages

c: E. W. Merschoff, NRC Regional Administrator, Region IV
A. B. Wang, NRC Project Manager
W. C. Walker, NRC Senior Resident Inspector
Division Administrator, Public Health Assurance, State of Nebraska
Winston & Strawn

ATTACHMENT 1

Fort Calhoun Station's Evaluation for Amendment of Operating License

- 1.0 INTRODUCTION
- 2.0 DESCRIPTION OF PROPOSED AMENDMENT
- 3.0 BACKGROUND
- 4.0 REGULATORY REQUIREMENTS & GUIDANCE
- 5.0 TECHNICAL ANALYSIS
- 6.0 REGULATORY ANALYSIS
- 7.0 NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC)
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1.0 INTRODUCTION

This letter is a request to: 1) amend Operating License DPR-40 for Fort Calhoun Station Unit No. 1, Technical Specifications Surveillance Requirements Sections 3.7(2)d and 3.7(4), "Emergency Power System Periodic Tests," to allow the surveillance tests to be performed on a refueling frequency outside of a refueling outage, and 2) correct the docket concerning inconsistencies in the 1973 Fort Calhoun Station (FCS) Safety Evaluation Report (SER) associated with the 13.8 kV transmission line capability.

2.0 DESCRIPTION OF PROPOSED AMENDMENT

The proposed changes to Technical Specifications Surveillance Requirements, Sections 3.7(2)d and 3.7(4) will allow greater flexibility in the time of performance by allowing the tests to be performed on a refueling frequency outside of a refueling outage. Presently, the prescriptive nature of the words in this specification imply that the tests must be performed during a refueling outage. The proposed change will replace the words "refueling shutdown" and "refueling outage" with "refueling frequency." Additionally, typographical errors for the abbreviation for kilovolt in specification 3.7(4) are included in this amendment.

3.0 BACKGROUND

This proposal resulted from an OPPD review of regulatory burden issues. The performance of the surveillance tests required by specifications 3.7(2)d and 3.7(4), as presently worded, requires these surveillance tests be performed during a refueling outage. Significant manpower and resource scheduling advantages can be obtained by providing flexibility to perform these surveillances outside of a refueling outage.

3.1 Background Information for SER Clarification

In the process of developing this license amendment, it was determined that there were differences in the FCS design basis for the 13.8 kV - 480 V service and the description of this capability in the original FCS Safety Evaluation Report (SER), Reference 9.6. The present 13.8 kV transmission line surveillance requirement was implemented to address issues raised during the initial licensing of Fort Calhoun Station. Prior to December 1971, the Atomic Energy Commission (AEC) requested information on the acceptability of the 345 kV transmission line passing over the 161 kV transmission line. In response to the concerns, OPPD provided the following:

"...the existing construction power supply (13.8 kV - 480 V) will be retained after plant startup to provide another source of emergency power in the event both diesel generators fail; the source of this power supply is from the 161 kV system, outside the switchyard breaker which feeds the plant station service. The construction power supply will be modified

during the first operating cycle to relocate some portions of the system and eliminate its susceptibility to failure due to the overhead crossover of the 345 kV and 161 kV lines. The 13.8 kV source will have adequate capacity to safely shutdown the plant." (Reference 9.1)

Previously, OPPD attempted to eliminate Technical Specification 3.7(4) completely as described in Reference 9.7. However, questions arose over the design bases for the 13.8 kV transmission line and the implied surveillance requirements. The Fort Calhoun Station SER (Reference 9.6) implied that the 13.8 kV transmission line would provide power to the 4.16 kV service busses. This was described in the SER as follows:

"After considering the potential for this accident, OPPD stated that they would convert a 13.8 kV temporary construction line and make it available to the 4.16 kV service busses prior to extended operation of the plant of appreciable power."

OPPD's subsequent review of documentation did not locate any information stating or inferring that the 13.8 kV transmission line would supply the 4.16 kV busses. All 1970-1972 correspondence between OPPD and the architect engineer, Gibbs-Hill, is directed towards connecting the 13.8 kV temporary construction line to 480 busses. OPPD, however, located inspections conducted by Mr. R. F. Warnick on September 18 and 19, 1973, (Reference 9.3) and June 17-21, 1974, (Reference 9.4), providing status of the implementation of the modification to the temporary construction power supply power (13.8 kV - 480 V) to provide alternate power to 480 V busses. The inspection conducted by Mr. R. F. Warnick on November 18-21, 1974, (Reference 9.5) indicated that the "Emergency Power Supply - 13.8 kV Construction Line, ...was energized on July 12, 1974 and is available for use should the need ever arise. This item is closed."

To eliminate further confusion related to the statement in the Fort Calhoun Station SER and the original Final Safety Analysis Report and supporting inspections, OPPD respectfully requests that the SER approving this amendment address this issue to correct the docket concerning the errors in the original SER.

4.0 REGULATORY REQUIREMENTS & GUIDANCE

Fort Calhoun Station's design criteria for emergency power is described in Reference 9.2, Criterion 24, "Emergency Power for Protection Systems." Fort Calhoun Station was issued its construction permit prior to May 21, 1971. The General Design Criteria (GDC) provided in Appendix A to 10 CFR 50 do not apply as described in SRM SECY 92-233, Reference 9.9. As part of the licensing process, Fort Calhoun Station did, however, commit to the design criteria as detailed in Appendix G to the FCS Updated Safety Analysis Report, Reference 9.2. The proposed changes continue to comply with these commitments and criteria.

5.0 TECHNICAL ANALYSIS

5.1 Design Basis

The proposed changes to Technical Specifications Sections 3.7(2)d and 3.7(4) will not affect the design bases as described above in Section 3.0 of this evaluation and in Reference 9.1. The proposed changes continue to address and comply with the regulatory requirements as described in Fort Calhoun Station Responses to 70 Criteria cited in Section 9.2. The proposed changes comply with the design bases as described in the Fort Calhoun Updated Safety Analysis Report, Section 8.4.3.2. The proposed changes will continue to assure that the 13.8 kV - 480 V service will have adequate capacity to safely shut down the plant and comply with its design bases.

6.0 REGULATORY ANALYSIS

The proposed changes do not affect other technical specifications and only provide flexibility in time when the tests are performed. The periodicity of the surveillance tests are not being changed.

In conclusion, based on the considerations discussed above, (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.

7.0 NO SIGNIFICANT HAZARDS CONSIDERATION

Omaha Public Power District has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. **Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?**

Response: No.

The proposed changes to Technical Specifications Sections 3.7(2)d and 3.7(4) only provide greater flexibility in the time of testing. The periodicity remains the same, i.e., refueling frequency. There are no physical alterations proposed or being made to the D.C. emergency transfer switches or the 13.8 kV - 480 V service. The proposed changes continue to address and comply with the regulatory requirements as described in Fort Calhoun Station Responses to 70 Criteria, Reference 9.2. The proposed changes will continue to assure that the

D.C. emergency transfer switches and the 13.8 kV - 480 V service will perform their design function. Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?**

Response: No.

The proposed changes will not result in any physical alterations to the D.C. emergency transfer switches or 13.8 kV - 480 V service, or any plant configuration, systems, equipment, or operational characteristics. There will be no change in operating modes or safety limits. With the proposed changes, the technical specifications retain requirements for operability and functionality on a refueling frequency. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

3. **Does the proposed change involve a significant reduction in a margin of safety?**

Response: No.

The proposed changes provide flexibility in the time of performance of the required surveillance tests. The proposed changes will not alter any physical or operational characteristics of the D.C. emergency transfer switches or the 13.8 kV - 480 V service. The proposed surveillance requirements will continue to assure that the design functions are met. Therefore, the proposed changes do not involve a reduction in a margin of safety.

Based on the above, Omaha Public Power District concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

8.0 ENVIRONMENTAL CONSIDERATION

Based on the above considerations, the proposed amendment does not involve and will not result in a condition which significantly alters the impact of the Station on the environment. Thus, the proposed changes meet the eligibility criteria for categorical exclusion set forth in 10 CFR Part 51.22(c)(9), and, pursuant to 10 CFR Part 51.22(b), no environmental assessment need be prepared.

9.0 REFERENCES

- 9.1 Fort Calhoun Station Unit No. 1, Final Safety Analysis Report, Supplement No. 13, Section 8.4.3.1
- 9.2 Fort Calhoun Station Unit No. 1, Updated Safety Analysis Report (USAR), Appendix G, "Responses to 70 Criteria"
- 9.3 Letter from AEC (R. W. Smith) to OPPD (J. L. Wilkins) dated October 1, 1973 (NRC-73-0060)
- 9.4 Letter from AEC (E. M. Howard) to OPPD (J. L. Wilkins) dated July 10, 1974 (NRC-74-0043)
- 9.5 Letter from AEC (G. L. Madsen) to OPPD (L. C. Shalla) dated December 6, 1974 (NRC-74-0086)
- 9.6 Safety Evaluation of the Omaha Public Power District Fort Calhoun Station, Unit No. 1, Supplement 1, AEC, dated April 23, 1973
- 9.7 Letter from OPPD (W. G. Gates) to NRC (Document Control Desk), "Application for Amendment of Facility Operating License No. DPR-40," dated October 27, 2000 (LIC-00-0079)
- 9.8 Letter from OPPD (S. K. Gambhir) to NRC (Document Control Desk), "Withdrawal of Application for Amendment of Facility Operating License," dated October 5, 2001 (LIC-01-0093)
- 9.9 Staff Requirements Memorandum (SRM), from S. J. Chilk (NRC) to J. M. Taylor (NRC), dated September 18, 1992 (SECY 92-223)

ATTACHMENT 2

Markup of Technical Specification Pages

3.0 **SURVEILLANCE REQUIREMENTS**

3.7 **Emergency Power System Periodic Tests (Continued)**

- d. On a refueling frequency ~~During refueling shutdowns~~ the correct function of all D.C. emergency transfer switches shall be demonstrated by manual transfer of normal D.C. supply breakers at the 125 volt D.C. distribution panels.
- (3) **Emergency Lighting**
The correct functioning of the emergency lighting system required for plant safe shutdown shall be verified at least once each year.
- (4) **13.8 ~~kV~~ kV Transmission Line**
The 13.8 ~~kV~~ kV transmission line will be energized and loaded to minimum shutdown requirements ~~at each refueling outage following installation~~ on a refueling frequency.
- (5) **Inverters A, B, C, and D**
The correct inverter output (voltage, frequency, and alignment to required 120 V a-c instrument buses) shall be verified weekly.

Basis

The emergency power system provides power requirements for the engineered safety features in the event of a DBA. Each of the two diesel generators is capable of supplying minimum required safety feature equipment from independent buses. This redundancy is a factor in establishing testing intervals. The monthly tests specified will demonstrate operability and load capacity of each diesel generator. These tests are conducted to meet the objectives of NRC Generic Letter 84-15 regarding the issue of reductions in cold fast starts. For this reason, the test verifying a 10 second start will be conducted from ambient conditions once per 184 days for each diesel. Other monthly tests will allow for manufacturer's recommended warm-up to reduce the mechanical stress and wear on the diesel engines. The fuel supply and various controls are continuously monitored and alarmed for off-normal conditions. Automatic starting on loss of off-site power and automatic load shedding, diesel connection, and loading will be verified on a refueling frequency. At the same intervals, capability will be verified for manual emergency control of these functions from the diesel and switch-gear rooms.

Considering system redundancy, the specified testing intervals for the station batteries should be adequate to detect and correct any malfunction before it can result in system malfunction. Batteries will deteriorate with time, but precipitous failure is extremely unlikely. The surveillance specified is that which has been demonstrated over the years to provide an indication of a cell becoming unserviceable long before it fails.

References

- (1) USAR, Section 7.3.4.2
- (2) USAR, Section 8.4.1
- (3) USAR, Section 8.3.4
- (4) USAR, Section 8.4.2

ATTACHMENT 3

Technical Specification Pages

Technical Specifications

3.0 **SURVEILLANCE REQUIREMENTS**

3.7 **Emergency Power System Periodic Tests** (Continued)

- d. On a refueling frequency the correct function of all D.C. emergency transfer switches shall be demonstrated by manual transfer of normal D.C. supply breakers at the 125 volt D.C. distribution panels.
- (3) **Emergency Lighting**
The correct functioning of the emergency lighting system required for plant safe shutdown shall be verified at least once each year.
- (4) **13.8 kV Transmission Line**
The 13.8 kV transmission line will be energized and loaded to minimum shutdown requirements on a refueling frequency.
- (5) **Inverters A, B, C, and D**
The correct inverter output (voltage, frequency, and alignment to required 120 V a-c instrument buses) shall be verified weekly.

Basis

The emergency power system provides power requirements for the engineered safety features in the event of a DBA. Each of the two diesel generators is capable of supplying minimum required safety feature equipment from independent buses. This redundancy is a factor in establishing testing intervals. The monthly tests specified will demonstrate operability and load capacity of each diesel generator. These tests are conducted to meet the objectives of NRC Generic Letter 84-15 regarding the issue of reductions in cold fast starts. For this reason, the test verifying a 10 second start will be conducted from ambient conditions once per 184 days for each diesel. Other monthly tests will allow for manufacturer's recommended warm-up to reduce the mechanical stress and wear on the diesel engines. The fuel supply and various controls are continuously monitored and alarmed for off-normal conditions. Automatic starting on loss of off-site power and automatic load shedding, diesel connection, and loading will be verified on a refueling frequency. At the same intervals, capability will be verified for manual emergency control of these functions from the diesel and switch-gear rooms.

Considering system redundancy, the specified testing intervals for the station batteries should be adequate to detect and correct any malfunction before it can result in system malfunction. Batteries will deteriorate with time, but precipitous failure is extremely unlikely. The surveillance specified is that which has been demonstrated over the years to provide an indication of a cell becoming unserviceable long before it fails.

References

- (1) USAR, Section 7.3.4.2
- (2) USAR, Section 8.4.1
- (3) USAR, Section 8.3.4
- (4) USAR, Section 8.4.2