



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20666

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 65 TO FACILITY OPERATING LICENSE NO. NPF-30

UNION ELECTRIC COMPANY  
CALLAWAY PLANT, UNIT 1  
DOCKET NO. STN 50-483

1.0 INTRODUCTION

By letter dated November 15, 1991, the Union Electric Company (the licensee) submitted a request for an emergency amendment to Facility Operating License No. NPF-30, to revise the Callaway Plant Technical Specifications (TSs). The request followed the granting of a Temporary Waiver of Compliance (TWOC) from the requirements of TS 3.0.3 by the Office of Nuclear Reactor Regulation on November 14, 1991, which was documented in a letter dated November 18, 1991. The TWOC and subject amendment request involved TS Surveillance Requirement 4.8.1.1.2.f.(2), which specifies that each emergency diesel generator (EDG) be demonstrated operable, "...At least once per 18 months, during shutdown, by: ... Verifying the capability to reject a load of greater than or equal to 1352 kW (ESW pump) while maintaining voltage at 4000 + 320 volts and frequency at 60 + 5.4 Hz." The licensee was notified by a similar plant of a concern in performing the surveillance, regarding the verification of the 1352 kW limit. The licensee determined that although the periodic surveillances had demonstrated the ability of the EDGs to continue to run following the rejection of the largest single load, measurements of the actual load rejected had not been made. As a result, the licensee concluded that the plant had never been in literal compliance with the surveillance requirement. In accordance with TS 4.0.3, which states that "failure to perform a surveillance requirement within the specified time interval shall constitute a failure to meet the OPERABILITY requirements for a Limiting Condition of Operation," the licensee declared the EDGs inoperable, and entered TS 3.0.3. A waiver was granted by the staff in order to avoid an unnecessary plant shutdown, based on the determination that the existing surveillance test adequately demonstrated that the EDGs were operable. The waiver is in effect until the staff issues its final action on the requested TS change.

2.0 EVALUATION

Position C.2.a (4) of Regulatory Guide 1.108, Revision 1, states that testing of diesel generator units at least once every 18 months should:

"Demonstrate proper operation during diesel generator load shedding, including a test of the loss of the largest single load ... and verify that the voltage requirements are met and that the overspeed limits are not exceeded."

The surveillance tests historically conducted at Callaway to meet the

requirement of TS 4.8.1.1.2.f.(2) have been performed by disconnecting an essential service water (ESW) pump motor (the single largest emergency load on the EDG), with the ESW and AC power systems aligned in their emergency mode of operation. The voltage and frequency are then verified to remain within the specified limits, thereby demonstrating that the diesel generator is capable of performing its intended function for the specific condition of a loss of the largest single load.

The licensee has indicated that there is no installed plant equipment which would allow the measurement of the rejected load and therefore, there is no direct way to assure that this load is greater than or equal to 1352 kW. Furthermore, the licensee calculates that the actual load of the ESW pump motor is less than 1352 kW. The licensee believes that 1352 kW was a conservative value used for the ESW pump motor loads in performing diesel generator sizing calculations, and that the number was incorrectly included as a limit in the surveillance requirement. The proposed changes to the TSs would revise Surveillance Requirement 4.8.1.1.2.f.(2) to read:

"... Verifying the diesel generator capability to reject the ESW pump motor load (the largest single emergency load) while maintaining voltage at  $4000 \pm 320$  volts and frequency at  $60 \pm 5.4$  Hz;..."

This would eliminate the requirement to measure the actual load rejected. The licensee also proposes changes to the Bases section to discuss the purpose of this specific surveillance test and to update the reference to Regulatory Guide 1.9, Revision 1.

The staff has reviewed the information provided, and concludes that the current surveillance method meets the licensing basis for the Callaway Plant. That surveillance test meets the positions of Regulatory Guides 1.9 and 1.108 in demonstrating at least once per 18 months that each diesel generator can withstand the rejection of the largest single load under emergency conditions. The measurement of a specific value for the load rejected is not necessary to demonstrate operability in this instance. The proposed changes to the Bases simply add clarifying language and do not change the intent. Therefore, the staff finds that the proposed TS changes are acceptable.

### 3.0 STATE CONSULTATION

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

### 4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to 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 or a change to a surveillance requirement. The 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 this amendment.

#### 5.0 CONCLUSION

The staff 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

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