UNION ELECTRIC COMPANY
Callaway Plant

March 31, 1986

Mr. James G. Keppler
Regional Administrator
Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

ULNRC-1280

Dear Mr. Keppler:

DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-30
SPECIAL REPORT 86-01
DIESEL GENERATOR FAILURE DURING AN INVALID TEST

The enclosed Special Report is submitted pursuant to Technical Specification 4.8.1.1.3 and 6.9.2 concerning a diesel generator failure during an invalid test.

G. L. Randolph
Manager, Callaway Plant

DEY/TPS/JWK/drs
Enclosure

cc: Distribution attached

APR 2 1986

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SPECIAL REPORT 86-01
DIESEL GENERATOR FAILURE DURING AN INVALID TEST

Surveillance Procedure ISP-SA-2413A, Diesel Generator and Sequencer Testing (Train A), was in progress on 3/6/86 to satisfy various 18 month Technical Specification (T/S) surveillance requirements. The plant had entered Mode 5, Cold Shutdown, on 3/4/86. During performance of the "'A' Train Blackout Without SIS (Safety Injection Signal)" portion of ISP-SA-2413A, the 'A' emergency diesel generator (D/G) was intentionally secured without loading to at least 50% of continuous rating. The D/G was secured to investigate a failure of the load sequencer to properly sequence the required emergency loads onto the 4.16 kV safety-related bus (NB01) energized by 'A' D/G.

Since the successful D/G start was terminated intentionally without loading to at least 50% of continuous rating, it is not considered a valid test or failure in accordance with Regulatory Position C.2.e(4) of Regulatory Guide 1.108, Revision 1, August 1977. The D/G testing frequency established by T/S Table 4.8-1 is therefore not affected by this incident and this Special Report is being submitted as required for all D/G failures, valid or nonvalid, per T/S 4.8.1.1.3. It is noted that the D/G could have been manually loaded and a valid test completed had the operators not intentionally secured the D/G for troubleshooting of the load sequencer.

Starts of the D/G's have been tracked since the completion of Preoperational Testing on 5/11/84. The starting history of the D/G's as of the date of this report is summarized as follows:

D/G	Number of Valid Tests	Number of Failures During Valid Tests	Number of Failures During Invalid Tests
A	31	1*	5#
B	27	0	1§

* Reference Special Report 84-02.
\# Reference Special Reports 85-01, 85-02, 85-07, and 86-01.
§ Reference Special Report 85-05.

The following is a summary of the events applicable to this incident.

- The "'A' Train Blackout Without SIS" portion of ISP-SA-2413A began at approximately 2018 on 3/6/86.
- Loads shed off bus NB01 as required when the test signal (blackout without SIS) was initiated.
- 'A' D/G successfully started and attained the required voltage and frequency.

- 'A' D/G output breaker closed.

- Only 'A' Centrifugal Charging Pump and 'A' Component Cooling Water Pump sequenced onto bus NB01 and were powered by the 'A' D/G.

- Testing activities were halted and troubleshooting initiated.

- Troubleshooting of the 'A' D/G output breaker identified that the plunger bolt (which actuates certain stationary contacts when the breaker closes) was out of adjustment. Consequently, the stationary contacts did not initiate a signal to the load sequencer that the breaker was closed. The condition also prevented synchronizing of the D/G with offsite power by not allowing a synchronizing check relay to pick up.

- Temporary adjustments were made such that the synchronizing check relay picked up. The D/G was paralleled with offsite power and the loads were transferred off the D/G. The D/G output breaker was opened, and the D/G secured and declared inoperable at approximately 2350 on 3/6/86.

- The plunger bolt was found to be out of adjustment by approximately 3/32 of an inch. It was adjusted within tolerance per Electrical Preventive Maintenance Procedure MPE-ZZ-QS005, Cleaning, Inspection, and Lubrication of 13.8 kV and 4.16 kV Breakers, at 0210 on 3/7/86.

- The "'A' Train Blackout Without SIS" portion of ISP-SA-2413A was again commenced at approximately 2040 on 3/7/86 and completed satisfactorily.

- 'A' D/G was declared operable at 2222 on 3/7/86.

Verification of proper adjustment of the plunger bolt for 'A' D/G output breaker was last performed on 5/20/85 during an 18 month preventive maintenance inspection. The cause of the plunger bolt being out of adjustment is unknown. This type of problem has not been a frequently experienced occurrence associated with the D/G output breakers; however, due to the significance of the plunger bolt/stationary contacts function, a preventive maintenance inspection for proper adjustment of the plunger bolt will be evaluated for increased periodicity for 'A' and 'B' D/G output breakers.

This incident occurred while the plant was in Mode 5. In this mode, T/S 3.8.1.2 requires only one diesel generator to be operable. 'B' D/G was operable while 'A' D/G was out of service for testing and

inoperable due to the output breaker plunger bolt. Performance of ISP-SA-2413B, Diesel Generator and Sequencer Testing (Train B), began following completion of ISP-SA-2413A. On 3/10/86 the load sequencer for for 'B' train functioned satisfactorily when the breaker closed during the "'B' Train Blackout Without SIS" portion of ISP-SA-2413B.

Surveillance tests are currently performed at least once per 31 days for each D/G. This is in conformance with the schedule of Regulatory Position C.2.d of Regulatory Guide 1.108, Revision 1, August 1977, and Technical Specification Table 4.8-1 which require the test interval to be not more than 31 days if the number of failures in the last 100 valid tests is one or zero.