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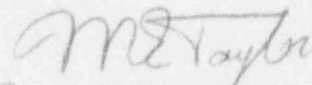
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Gentlemen:

**DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-30
SPECIAL REPORT 94-01
VALID DIESEL GENERATOR FAILURE DUE TO
LOOSE TACHOMETER SIGNAL GENERATOR**

This special report is submitted in accordance with Technical Specification (T/S) 4.8.1.1.3 and 6.9.2 concerning the valid failure of Diesel Generator (D/G) 'A' due to a loose tachometer signal generator found during troubleshooting.


for J. D. Blosser
Manager, Callaway Plant

JDB/TPS/MKD/lrj

Enclosure

cc: Distribution attached

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SPECIAL REPORT 94-01
VALID DIESEL GENERATOR FAILURE
DUE TO LOOSE TACHOMETER SIGNAL GENERATOR

On 7/13/94, at 0929 CDT, during performance of T/S 4.8.1.1.2.a(4) surveillance procedure OSP-NE-00002, Standby Diesel Generator Periodic Test, Emergency Diesel Generator (D/G) 'A' started and obtained proper frequency and voltage. However, D/G 'A' local indication of speed was low and fluctuating and the fuel transfer pump was cycling on and off while it should have been running constantly. The diesel was manually loaded by the licensed reactor operator and, within approximately 15 minutes, local indication was correct and steady and the fuel transfer pump was functioning correctly. The one-hour T/S load test was completed with no other problems.

Troubleshooting for the unusual local indications revealed that the tachometer signal generator had slipped on its shaft, causing faulty speed readings. The cap screws on the taperlock fitting which attaches the signal generator to the shaft, were found loose. The faulty speed readings caused the fuel transfer pump to cycle. The cycling of the fuel transfer pump did not affect the operability of the D/G. However, if the tachometer signal generator had fallen from its shaft during a subsequent start demand, it would have rendered D/G 'A' inoperable.

The signal generator had been installed on 5/17/94 to replace the previous signal generator with one that provided a better signal. The replacement work was performed by utility maintenance mechanics over multiple shifts. D/G 'A' was surveilled satisfactorily on 5/18/94 and 6/13/94, with no unusual local indications, verifying the D/G was able to start and load correctly. Therefore, D/G 'A' was operable until the valid failure on 7/13/94.

Subsequent to the valid failure on 7/13/94, offsite power sources were verified to meet the requirements of T/S 3.8.1.1.b. The signal generator was secured to the shaft. The signal generator on D/G 'B' was verified to be correctly secured, and D/G 'B' was started successfully at 0339 on 7/14/94, per T/S requirements. D/G 'A' was successfully tested and was declared operable at 0054 on 7/14/94. During the next outage on D/G 'A' and D/G 'B', the tightness of the screws on the taperlock fitting will be verified. The computerized Callaway Equipment List will be revised to include a note to require verification of screw tightness when mounting the signal generator in future work activities.

Regulatory Position C.2.e(8) of Regulatory Guide 1.108, Revision 1, August 1977, states: "...discovery of conditions that would have resulted in the failure of the diesel generator unit during test or during response to a bona fide signal should be considered a valid test and failure." Although D/G 'A' started and loaded correctly, because the tachometer signal generator had slipped on its shaft and could have fallen, thus causing the diesel to fail during the next start, this constitutes a valid test and failure.

A starting history of D/G 'A' as of this report date is summarized as follows:

<u>No. of Valid Tests</u>	<u>No. of Failures During Valid Tests</u>	<u>No. of Failures During Invalid Tests</u>
180	7 * @	7 #

* Special Reports 84-02, 87-10, 89-03, 91-02 & 92-01, LER 87-002-00

@ Four failures in the last 100 tests. One failure in the last 20 valid tests.

Special Reports 85-01, 85-02, 85-07, 86-01, 89-02, 89-07 & 90-01.

Surveillance tests are currently performed at least once per 31 days for D/G 'A'. This is in conformance with T/S Table 4.8-1 which requires a test interval of not more than 31 days if the number of failures in the last 20 valid tests is one or zero, or if the number of failures in the last 100 valid tests is four or less.