



Portland General Electric Company
Trojan Nuclear Plant
P.O. Box 439
Rainier, Oregon 97048
(503) 556-3713

RECEIVED
NRC

1983 SEP 10
August 30, 1983
CPY-598-83 10

REGION VIII

Mr. John B. Martin
Regional Administrator - V
US Nuclear Regulatory Commission
1450 Maria Lane - Suite 210
Walnut Creek, California 94596

Dear Sir:

In accordance with the Trojan Plant Operating License, Appendix A, USNRC Technical Specifications 6.9.1.9.b, Licensee Event Report No. 83-10 concerning the 'A' train emergency diesel generator (EDG) being inoperable due to a failed filter capacitor in its associated annunciator panel power supply, is attached.

Sincerely,

C. P. Yundt
General Manager

CPY/GGB/MJA:ga

Attachments

c: LER Distribution
File 93.24a (Q)

IE-22

REPORTABLE OCCURRENCE

1. Report No: 83-10
2. Report Date: August 30, 1983
3. Occurrence Date: July 31, 1983
4. Facility: Trojan Nuclear Plant, PO Box 439, Rainier, Oregon 97048
5. Identification of Occurrence:

On July 31, 1983 an engine lockout was received on the 'A' train emergency diesel generator (EDG). The lockout would have prevented both automatic and manual starting of the diesel and as a result, the EDG was declared inoperable. Standard Technical Specification 3.8.1.1 requires two emergency diesel generators to be operable.

6. Conditions Prior to Occurrence:

Prior to the occurrence, the Plant was in steady state condition at 40% power.

7. Description of Occurrence:

On July 28, 1983 an engine cranking light was received on the 'A' EDG. The engine had not attempted to start and the problem was diagnosed as a faulty speed switch. This switch is used to indicate that the engine has reached certain preset speeds and sends a signal to other engine indication and protection circuits. In this case, the speed switch had generated a signal indicating that the engine was turning; however, the signal was not sufficient to cause an engine lockout. The problem was investigated and diagnosed as a faulty speed switch. The switch was replaced and no further problems were noted at this time.

At 1048 on July 31, another engine cranking alarm was received on the 'A' EDG. This time an engine lockout was also received. The lockout prevents both manual and automatic starting of the engine. The problem was once again diagnosed to be a problem with the speed switch. It was determined that the switch was being actuated by electronic noise. The switch being actuated sent a signal to the protective circuitry indicating that the engine was cranking. When this condition exists for more than 10 seconds and the diesel has not reached rated speed, an engine lockout will occur. The sensitivity of the speed switch was adjusted reducing the effects of noise on the speed sensing circuit. Under these conditions, the noise signals were not of sufficient size or length to cause an engine lockout. The EDG was tested and returned to operation at 1335 on July 31, 1983. An investigation into the source of the noise continued.

On August 1 it was determined that the problem was caused by noise in the associated annunciator power supply system to the speed switch. A filter capacitor in the power supply was found to be failed allowing electronic noise to be generated. This noise was detected by the speed pickup and interpreted as a speed signal by the speed switch causing erroneous indications. This problem was the cause of all engine cranking alarms that were received.

8. Designation of Apparent Cause of Occurrence:

The cause of the occurrence was component failure.

9. Significance of Occurrence:

There was no impact on public or plant safety since off-site power and the redundant train EDG were available at all times.

10. Corrective Action:

The failed capacitor was replaced and the EDG was tested satisfactorily and returned to operation. The power supply for the other EDG was checked and found to be operating normally.