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Vice President
Nuclear Operations

August 31, 1989

U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Attention: Document Control Desk

Gentlemen:

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
Special Report 89-007/0
Emergency Diesel Generator 13
Invalid Failure
AECM-89/0168

On August 4, 1989 Diesel Generator 13 failed to properly load during performance of the monthly functional surveillance. The test was also intended to demonstrate operability of the diesel generator following maintenance. Diesel Generator 13 was considered inoperable at the time of the test and the LCO actions required by Technical Specification 3.8.1.1. were being performed. The offsite AC power sources and Diesel Generators 11 and 12 were operable.

When the diesel generator is synchronized to the bus for testing, the generator is initially loaded to approximately 350 KW. After this load is established and stabilized, the generator load is increased in 1000 KW increments with approximately 5 minute hold times between the increments. The diesel generator successfully started and was successfully synchronized to the energized bus to approximately 350 KW. While increasing the load from 350 KW with the governor manual control handswitch, the engine fuel racks exhibited erratic motion accompanied by erratic load behavior. The diesel generator output dropped resulting in a trip on reverse power.

An investigation of the malfunction determined that the cause was a failure of the motor operated potentiometer in the governor control circuit. Incomplete contact between the wiper arm and the variable resistor at a position equivalent to approximately 800 KW caused a control signal that decreased load.

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PCOM SPECIAL REPORT 89-007/0 - 1

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The motor operated potentiometer was replaced and the diesel generator was retested satisfactorily. A maintenance history check revealed no previous failures of this component.

SERI considers the test not to be a valid test or failure pursuant to Position C.2.e(2) of Regulatory Guide 1.108. The motor operated potentiometer is used to control load during synchronization to an energized bus. It is not used to control load during emergency operation. During emergency operation, the motor driven potentiometer would not be positioned to the defective spot and thus would not affect diesel generator operation. In addition, the reverse power trip is bypassed during emergency operation. The testing frequency remains at once per 31 days in accordance with the test schedule of Technical Specification Table 4.8.1.1.2-1.

This Special Report is submitted pursuant to Technical Specification 4.8.1.1.3.

Yours Truly,

WTC:cg

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