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Vice President
Nuclear Operations

March 29, 1988

U. S. Nuclear Regulatory Commission
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 88-001/0
Diesel Generator Number 12
Trip During Surveillance
AECM-88/0066

On March 2, 1988 at 1030, Diesel Generator 12 automatically tripped on low lube oil pressure during performance of the monthly functional surveillance. The diesel generator had been manually started at 0924 and synchronized and fully loaded onto bus 16AB. Approximately 30 minutes after loading, an operator noticed that the auxiliary lube oil pump was operating. Because this pump is normally in a standby mode, the operator reported the condition to the Control Room and then checked lube oil pressure indications. The lube oil pressure indicated that both the auxiliary lube oil pump and the engine driven lube oil pump were operating. After consultation with the Shift Supervisor, it was decided to shutdown the auxiliary lube oil pump. When the auxiliary lube oil pump switch was placed in "TRIP", the diesel generator tripped on low lube oil pressure. The diesel generator was declared inoperable and the associated Limiting Condition for Operation (LCO) actions were performed.

The investigation into the diesel trip was inconclusive regarding why the auxiliary lube oil pump was operating, but the probable cause is an automatic start due to lube oil pressure fluctuations that may occur during engine startup. This pump functions as a backup to the engine driven lube oil pump and automatically starts on low lube oil pressure when diesel speed is greater than 200 RPM. The auxiliary lube oil pump does not normally start automatically during a diesel startup.

When the operator secured the auxiliary lube oil pump, the lube oil pressure regulators could not respond fast enough to compensate for the sudden drop in lube oil pressure. This sudden pressure drop caused the diesel generator to trip on low lube oil pressure. Associated instruments and switches were checked by maintenance personnel and found to operate properly. The diesel generator was successfully tested and returned to service at 2250 on March 2, 1988.

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The System Operating Instructions and the surveillance procedures for Diesel Generator 11 and Diesel Generator 12 will be changed by April 15, 1988 to require operators to ensure that the auxiliary lube oil pump is not operating prior to synchronizing the diesel generator. The procedure changes will also provide guidance concerning when a shutdown of the auxiliary lube oil pump is and is not permitted.

Although the low lube oil pressure trip is not bypassed during the emergency operating mode, the auxiliary lube oil pump power supply is shed by the Load Shedding and Sequencing system in the emergency operating mode and requires operator action to return it to service. Since the automatic start function of the auxiliary lube oil pump is not operative in the emergency operating mode, the diesel generator trip is not considered a valid failure as allowed by Regulatory Guide 1.108 position C.2.e(2) and the test frequency remains at once per 31 days in accordance with the test schedule of Technical Specification Table 4.8.1.1.2-1.

Yours truly,



ODK:bms

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