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P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

NUCLEAR LICENSING & SAFETY DEPARTMENT

July 27, 1984

U.S. Nuclear Regulatory Commission
Region II
101 Marietta St., N.W., Suite 2900
Atlanta, Georgia 30323

Attention: Mr. J. P. O'Reilly, Regional Administrator

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-13
File: 0260/L-835.0
Special Report 84-028/0, Division I
Diesel Generator Trip
AECM-84/0379

On June 27, 1984, the Division I Diesel Generator Tripped at 50 percent load after approximately 3 hours of maintenance operation. The diesel engine, manufactured by Transamerica Delaval Inc. (TDI), had been disassembled for inspection per an NRC order issued May 22, 1984. The diesel generator was being operated for final adjustments following reassembly and prior to the required preoperational testing.

The engine tripped on a sensed differential current caused by grounding of the B phase linear reactor of a voltage transformer. The epoxy insulation on the reactor was broken down by excessive temperature exposure. The voltage flashed to ground which was detected by the differential current relay. The reactor began to burn but was quickly extinguished by personnel using available extinguishers. No other equipment was damaged.

Although the A and C phase linear reactors did not fail, each showed visual indications of overheating. The linear reactors in the Division 2 Diesel Generator (also manufactured by TDI) showed no signs of overheating. This is expected since the Division 2 Diesel Generator has only 4 hours of operation at 110 percent of rated load and less than 200 hours operation at 100 percent load since receipt of the low power operating license. In comparison, the Division I Diesel Generator has operated approximately 30 hours at 110 percent load and greater than 400 hours at 100 percent load. The excessive testing on the Division I Diesel Generator at high loads caused the reactors to thermally age prematurely.

As immediate corrective action, the A, B, and C phase reactors on the Division I Diesel Generator were replaced. Temperature decals have been attached at strategic points on the cabinets for Division 1 and Division 2 Diesel Generators. Temperature decals were also placed on the reactors for the Division I Diesel Generator. Both diesel generators have since been

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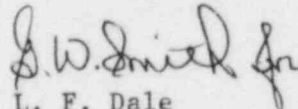
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operated with the highest temperature indicated to be 120°F, which was at the cabinet top vent. The reactors are rated at approximately 120°F. The cabinet which contains the reactors will be modified to provide improved ventilation during diesel generator tests. This is expected to be completed by the first refueling outage.

Under the NRC order of May 22, the Division I Diesel Generator was exempted from Technical Specifications. The starts during this special exemption for inspection and testing are not counted towards the cumulative statistical data for determining testing intervals.

Yours truly,



L. F. Dale
Director

EBS/SHH:rg

cc: Mr. J. B. Richard
Mr. R. B. McGehee
Mr. N. S. Reynolds
Mr. G. B. Taylor

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