



Entergy Operations, Inc.
P.O. Box 756
Port Gibson, MS 39150
601 437 6408

September 15, 1992

W. T. Cottle
Vice President
Operations
Grand Gulf Nuclear Station

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

Attention: Document Control Desk

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
Special Report 92-005
Invalid Failure of Emergency Diesel Generator 11 During
Maintenance Run

GNRO-92/00120

On August 18, 1992 following a planned outage for Emergency Diesel Generator (EDG) 11, preparations were made to perform a maintenance run in accordance with System Operating Instruction 04-1-01-P75-1. The run was to verify the correctness of previously performed maintenance.

The EDG was started in accordance with the above procedure and achieved rated RPM. However approximately one minute following the start and prior to a load attempt, EDG 11 tripped. It is surmised that the trip was due to a high vibration signal. EDG 11 had been declared inoperable prior to the start attempt. An investigation was performed to determine the cause of the diesel failure.

The troubleshooting activities included simulated diesel runs; however the diesel trip could not be duplicated by the simulations. All vibration switches were manually tripped and their reset operation verified. No abnormal conditions were observed during troubleshooting.

Following the investigation, a maintenance run was performed without occurrence. The diesel responded as designed. The EDG was loaded to approximately 3 MW and no abnormalities were observed.

The maintenance performed during the EDG outage required the removal of control air to the EDG control panel. Removal of the control air de-pressurizes the pneumatic computer and pneumatic control devices.

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The root cause of this event could not be positively identified; however, the de-pressurization and subsequent re-pressurization of the pneumatic control logic board is suspected to be the underlying cause. This is believed to have caused a failure of a vibration switch to reset.

Instructions will be issued to perform a simulated diesel run as a post-maintenance partial check of the pneumatic computer/logic board and associated engine vibration trips following de-pressurization of the pneumatic control board.

The occurrence was caused by operation of a Group 2 trip signal. The only Group 2 trip that is not bypassed during the emergency operating mode of the EDG is Low Pressure Lube Oil. The Low Pressure Lube Oil trip is pressurized through a different flow path during an emergency condition. Therefore, this condition would not have rendered the EDG incapable of performing its intended safety function. Therefore this occurrence is considered an invalid failure of the EDG unit.

Yours truly,



WTC/RR/

cc: Mr. D. C. Hintz (w/a)
Mr. R. H. Bernhard (w/a)
Mr. R. B. McGehee (w/a)
Mr. N. S. Reynolds (w/a)
Mr. H. L. Thomas (w/o)

Mr. Stewart D. Ebnetter (w/a)
Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
101 Marietta St., N.W., Suite 2900
Atlanta, Georgia 30323

Mr. P. W. O'Connor
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Stop 13H3
Washington, D.C. 20555

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