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September 23, 1987

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

PLANT VOGTLE - UNIT 1
NRC DOCKET 50-424
OPERATING LICENSE NPF-68
SPECIAL REPORT 87-001
VALID DIESEL GENERATOR FAILURE
MECHANICAL GOVERNOR MALFUNCTION

Gentlemen:

In accordance with the requirements of the Plant Vogtle - Unit 1 Technical Specifications section 4.8.1.1.3 and 6.8.2, Georgia Power Company is submitting the enclosed Special Report (SR) concerning a valid diesel generator failure.

Sincerely,

William E. Burn /for

L. T. Gucwa

LGB/lm

Enclosure: SR 50-424/1987-001

c: (see next page)

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ENCLOSURE 1

SPECIAL REPORT 87-001

A. REQUIREMENT FOR REPORT

This report is required in accordance with the Plant Vogtle - Unit 1 Technical Specifications section 4.8.1.1.3. This section of the Technical Specifications requires that all diesel generator failures, valid or nonvalid, shall be reported to the Commission in a Special Report pursuant to Specification 6.8.2. within 30 days.

B. UNIT STATUS AT TIME OF EVENT

On August 24, 1987, Plant Vogtle - Unit 1 was in mode 1 at approximately 100 percent of rated thermal power.

C. DESCRIPTION OF EVENT

The affected diesel generator was the Plant Vogtle - Unit 1 train A diesel generator (DG1A).

This was the first valid failure of DG1A in eleven valid start attempts since Plant Vogtle - Unit 1 received its operating license on January 16, 1987.

On August 24, 1987, DG1A was started for its monthly surveillance. The engine tripped on overspeed shortly after the start was initiated.

The engine was secured and a preliminary investigation was performed by the system engineer which revealed no obvious problems. Deficiency card 18702205 and Maintenance Work Order (MWO) 18709241 were initiated to investigate and correct the problem. Several devices were checked during the investigation including: verification of a signal at the mechanical governor from the electrical governor, governor drive coupling, and free movement of the fuel racks; all with acceptable results. To verify proper operation of the mechanical governor, the engine was started with the Delavel service representative and system engineer observing the governor reaction. The engine tripped on

overspeed due to a lack of response from the mechanical governor. The mechanical governor was replaced under MWO 18709241, and the engine was started for setup of the new governor. Once the governor had been fully vented and adjusted, the engine was stopped and started with the governor at its final settings to verify proper engine response on startup. The engine was slightly overly responsive, and a small adjustment was made before engine shutdown. The engine was again started to verify acceptable response on startup. The engine and generator reached 60 HZ and 4160 volts within the required Technical Specification criteria. The generator was then paralleled to the power grid to verify governor response while loaded. Load was slowly increased to 7000 KW and allowed to remain at that load for approximately 15 minutes. The control room operator turned away from the panel for a period of time, and when he subsequently checked generator loading, he found it was approximately 8000 KW and increasing. The operator attempted to decrease load, but it was found necessary to trip the engine because the governor did not properly respond. The system engineer had observed no problem with governor operation during this loaded run. However, he felt the governor might still be too responsive to changes in the power grid. This condition would require more attention from the operator to maintain desired load level. The electric needle valve on the mechanical governor was adjusted to reduce responsiveness of the governor to power grid changes. The surveillance was then repeated with no observed problems.

LCO 1-87-0703, which was initiated on the first overspeed, was cleared after 40 hours and 44 minutes.

The current surveillance test interval remains at once per 31 days in accordance with Technical Specification Table 4.8-1 "Diesel Generator Test Schedule".