



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

JAMES P. McGAUGHY, JR.
ASSISTANT VICE PRESIDENT

January 29, 1981

Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N.W.
Suite 3100
Atlanta, Georgia 30303

Attention: Mr. J. P. O'Reilly, Director

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
Units 1 and 2
Docket Nos. 50-416/417
File 0260/15525/15526
PRD-80/35, Interim Report #3,
Standby Diesel Generator
Jacket Water Cooler Thermo-
static Valve Fracture
AECM-81/55

References: 1) AECM-80/166, 7/23/80
2) AECM-80/281, 11/10/80

On June 26, 1980, Mississippi Power & Light Company notified Mr. M. Hunt, of your office, of a Potentially Reportable Deficiency (PRD) concerning the Standby Diesel Generator. The deficiency was a fractured valve body on the Jacket Water Thermo-static Valve.

We have determined this deficiency to be reportable within the meaning of 10CFR50.55(e). The condition is not reportable under 10CFR21 because the components have not been offered to MP&L for acceptance. Attached is our interim report.

We expect to submit a final report by May 20, 1981.

Yours truly,

J. P. McGaughy, Jr.

for

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ATR:mt
Attachment

cc: Mr. N. L. Stampley
Mr. R. B. McGehee
Mr. T. B. Conner

Mr. Victor Stello, Director
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INTERIM REPORT NO. 3 FOR PRD-80/35

I. Description of Deficiency

The Unit 1 "B" Standby Diesel Generator Jacket Water Thermostatic Control Valve (P75 System) failed during a pneumatic pressure test. The test was being conducted to verify the integrity of the drain connections on the jacket water cooler. The control valve was within the pressure boundary of the test. The valve suffered catastrophic failure (cracked) at the flange connection. The pressure at the moment of failure was less than the valve design pressure.

The Standby Diesel Generator supplies emergency power to the Division I and II ESF 4.16 busses upon loss of normal off-site power. The failure of the Thermostatic Control Valve could have led to a loss of coolant water and subsequent failure of the Standby Diesel Generator. The failure of the Diesel Generator could have adversely affected the safety of plant operations in that the power would not be supplied to systems that are required to shutdown and cooldown the reactor and to maintain the reactor in this condition during a loss of off-site power.

II. Approach to Resolution of the Problem

A. The cause may be attributed to one or a combination of the following:

1. Installation of mismatched flanges on the valve and adjacent piping.
2. Jacking of the attached pipe for a pneumatic pressure test.
3. Applied pressure during a pneumatic pressure test.
4. Shipping and handling of the valve with attached piping.
5. A material defect in the valve or error in the manufacturing process.

B. The remaining Unit 1 valve, on the "A" Standby Diesel Generator, was subjected to magnetic particle examination. The valve was found to have a hairline linear indication. It was determined that the valve had been subjected to similar conditions as the Unit 1 "B" valve.

- C. Both Unit 2 valves were subjected to magnetic particle examination and determined to be satisfactory. The Unit 2 valves will be used to replace the defective Unit 1 valves and new valves will be purchased for Unit 2.
- D. The pneumatic pressure test alone would not have caused the valves to fail. The test was conducted within the pressure test rating of the valves. The pressure test may have contributed to the failure only by amplifying a defect which had been initiated by other causes.
- E. The jacking of the attached pipe for pneumatic pressure test and the shipping and handling of the valve with the pipe attached will be procedurally controlled by issuance of a generic Work Plan/Procedure (WP/P).
- F. The architect/engineer will coordinate directly with the vendor to determine the applicability of material defect or manufacturing process of the valve as a cause of the defect.
- G. The raised face flanges on Unit 1 pipe are being replaced with flat face flanges. Unit 2 flanges are to be examined for mismatched flanges and replaced if necessary.

III. Status of Proposed Resolution

- A. The generic WP/P noted in item II.E. is being prepared and is scheduled for issue by March 15, 1981.
- B. The Unit 1 flanges have been replaced to eliminate the mismatch. The Unit 2 flanges on the piping/valve interface have been examined and it was determined a mismatch does not exist for Unit 2.
- C. The architect/engineer is coordinating with the vendor to obtain the data necessary to determine the applicability of material defects/manufacturing process as a cause of the condition.

IV. Reason Why A Final Report Will Be Delayed

Sufficient information has not been obtained from the vendor to effect a complete determination of necessary corrective actions.

V. Date When Final Report Will Be Submitted

A final report is expected to be submitted by May 20, 1981