



MISSISSIPPI POWER & LIGHT COMPANY
Helping Build Mississippi
 P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

JAMES P. McGAUGHY, JR.
 ASSISTANT VICE PRESIDENT

December 15, 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, Regional Administrator

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
 Units 1 and 2
 Docket Nos. 53-416/417
 File 0260/15525/15526
 PRD-81/33, Final Report,
 Seltz Solenoid Valves for
 Dikkers Safety Relief Valves
 AECM-81/496

Reference 1) AECM-81/348, 9/8/81
 2) AECM-81/435, 11/2/81

On August 7, 1981, Mississippi Power & Light Company notified Mr. F. S. Cantrell, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns the failure of Dikkers Safety Relief Valves.

Based on the results of our investigation we have determined that this deficiency is reportable under 10CFR50.55(e) and 10CFR21. Details are provided in our attached report.

Please note that our previous report was an interim report. However, the heading stated that it was a Final Report. This was an error.

Yours truly,

For J. P. McGaughy, Jr.

KDS:dr
 ATTACHMENT

cc: See page 2

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Mr. J. P. O'Reilly
NRC

AECM-81/496
Page 2

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

Mr. Richard C. DeYoung, Director
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. G. B. Taylor
South Miss. Electric Power Association
P. O. Box 1589
Hattiesburg, MS 39401

FINAL REPORT FOR PRD-81/33

1. Name and address of the individual ... informing the commission:

J. P. McGaughy, Jr.
Assistant Vice President, Nuclear
P.O. Box 1640
Jackson, Mississippi 39205

Notification of Part 21 applicability made to Mr. J. P. O'Reilly, NRC, Region II by letter AECM-81/435, November 2, 1981.

2. Identification of the facility ... which ... contains a defect:

Grand Gulf Nuclear Station (GGNS) Units 1 and 2
Port Gibson, Mississippi 39150

3. Identification of the firm ... supplying the basic component which ... contains a defect:

Supplied to Grand Gulf by the General Electric Company, San Jose, California.

4. Nature of the defect ... and the safety hazard which ... could be created by such a defect ...:

A. Description of the Deficiency

During testing of Dickers Safety Relief Valves by Wyle Laboratories, six (6) of the twenty (20) valves tested did not meet the Emergency Operability Acceptance Criteria, i.e., they did not open within the required time period when power was applied to the solenoid valves. In addition, another solenoid valve was reported to have failed the seat leakage test. The deficiency affects the Nuclear Boiler System and the Automatic Depressurization System.

B. Analysis of Safety Implications

If two (2) of these defective valves had been installed as Automatic Depressurization System Valves, the single valve failure criteria of FSAR Table 6.3-7 would not be met.

5. The date on which the information of such defect ... was obtained.

Mississippi Power and Light received information of the deficiency on July 21, 1981. It was screened as significant, evaluated for reportability, determined to be reportable, and reported to Mr. F. S. Cantrell of your office on August 7, 1981, under the provisions of 10CFR50.55(e).

One (1) interim report was filed on September 8, 1981. The second interim report was filed on November 2, 1981, at which time the commission was informed that MP&L had determined that this deficiency was also reportable under the provisions of 10CFR21.

6. In the case of the basic component ... the number and location of all such components.

The Seitz solenoid valves are used at GGNS in both Unit 1 and Unit 2.

We do not have knowledge of the location of defective equipment other than at GGNS.

7. The corrective action which has been taken ... the name of the individual ... responsible for the action; and the length of time that has been ... taken to complete the action.

A. Corrective Actions Taken

The cause of the deficiency has been determined to be the presence of "Loctite 640" on the ball disc. The excess "Loctite 640" that caused the malfunction oozed out from a nozzle seat during the process of installing the nozzle in the solenoid. The nozzle is force fitted into the front cover and is sealed in the vendor's shop as a separate sub-assembly. All twenty (20) solenoid assemblies for Unit 1 were inspected and "Loctite 640" was found on the ball disc of six (6) assemblies. All twenty (20) solenoid assemblies were returned to the manufacturer (Seitz) for disassembly, inspection, and cleaning.

After the cleaning, the assemblies were tested according to the approved production test procedure for solenoid control assemblies. The solenoid assemblies were re-installed on the Safety Relief Valves, and then retested. All valves satisfactorily met the acceptance criteria of the test. The reworked SRV solenoid and air control package has eliminated the identified problem. As the nozzle seat is installed only once (and not to be removed or reinstalled in the field), there is no potential of new "Loctite 640" being introduced into the solenoid control assemblies.

The spare solenoid control assemblies are presently undergoing the retrofit. The Unit 2 assemblies will be re-worked in the future.

One solenoid valve originally was reported to have failed the seat leakage test. The excess air leakage subsequently was determined to be from the actuator cylinder. The cylinder was replaced by Wyle Laboratories with one from another valve. The valve then passed the seat leakage test. The problem with the cylinder was an isolated occurrence.

B. Responsible Individual

G. B. Rogers, Jr.
Site Manager
Mississippi Power and Light Company

C. Length of Time to Complete Actions

Mississippi Power & Light received information of the deficiency on July 21, 1981. General Electric issued Field Disposition Instructions FDI-103/42382 on September 10, 1981, to do the disassembling, inspection, and cleaning. All Unit 1 work has been completed. Inspection of spares is presently in progress. Inspection of Unit 2 valves will be completed prior to Unit 2 fuel load.

8. Any advice related to the defect ... that has been, is being, or will be given to purchasers or licensees:

As the deficiency did not originate with MP&L, we have no advice to offer.