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

JAMES P. McGAUGHY, JR.
ASSISTANT VICE PRESIDENT

March 3, 1982

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
Unit 1
Docket Nos. 50-416
File 0260/15525/15526
PRD-81/27, Final Report,
Valve Closure Times
AECM-82/23

On May 27, 1981, Mississippi Power & Light Company notified Mr. F. Cantrell, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns eight (8) Henry Pratt valves that do not meet the closing time requirements per specification.

We have completed our investigation of this matter and have determined that this deficiency is reportable under the provisions of 10CFR50.55(e) for MP&L but not under the provisions of 10CFR21.

The deficiency, however, is reportable under 10CFR21 for Bechtel Power Corporation, as this was a received component. Mr. P. A. Taylor, of your office was notified by phone on November 20, 1981, of this reporting requirement for Bechtel Power Corporation. He agreed that Bechtel's 10CFR21 report could be included as an attachment to MP&L's Final 50.55(e) Report. Bechtel's 10CFR21 Report is included as Attachment B.

This report was originally due on January 14, 1982, but an extension until March 3, 1982, was granted by Mr. Chuck Burger on that date and Mr. Ross Butcher on January 18, 1982.

Yours truly,

For J. P. McGaughy, Jr.

KDS:dr
ATTACHMENT

cc: See page 2

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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 TO PRD-81/27

I. Description of the Deficiency

Eight (8) Henry Pratt ASME Class III butterfly valves with Bettis T-312B-SR3 actuators, when tested by our Constructor, had closing times greater than four (4) seconds as given in the purchase specification. The vent ports, in the ASCO solenoid NP8321A6E were too small to allow the cylinder to exhaust in four (4) seconds.

The valves are located in the Containment Cooling System (M41) and provide containment and drywell isolation. The deficiency affects only Unit 1.

This deficiency does not apply to the NSSS vendor.

II. Analysis of Safety Implications

Valves Q1M41F011, Q1M41F012, Q1M41F034 and Q1M41F035, which are four of the eight (8) affected, are primary containment isolation valves for the 20-inch diameter containment purge penetrations. The Grand Gulf FSAR commits to a 4 second [illegible] time of these penetrations and dose analyses are based on this [illegible]nd closure time. Closing times on these four (4) valves of greater than 4 seconds would increase site boundary dose contributions from the containment purge penetrations. Personnel safety could not be assured. Therefore, this deficiency could adversely affect the safety of operations of the nuclear power plant and is reportable under the provisions of 10CFR50.55(e).

The deficiency is not reportable under 10CFR21 for MP&L since the affected system was turned over to MP&L with the cited condition already identified.

Our Constructor, Bechtel Power Corporation, has determined that this deficiency is a substantial safety hazard and meets the reporting requirements of 10CFR21 for Bechtel Power Corporation since the valves were a received component. Bechtel's 10CFR21 report is included in this report as Attachment B.

III. Corrective Actions Taken

This deficiency relates to a documentation error by Henry Pratt Co. that occurred several years ago.

In selecting solenoids that were environmentally qualified for use at GGNS, Henry Pratt Company inadvertently utilized incorrect documentation reflecting solenoids that had been on the valves which had closure cycles exceeding the specified time parameters. In an effort to avoid schedule delays, our Constructor procured the recommended solenoid valves directly from ASCO.

When our Constructor notified Henry Pratt Company of the deficiency discovered during testing, Pratt acknowledged that their documentation was in error. The documentation error by Pratt was the root cause of the problem.

Henry Pratt Company has stated that the problem was limited to valves supplied to GGNS. Our Constructor has investigated the deficiency at GGNS and has concluded that the extent is limited to the eight (8) valves mentioned previously.

Henry Pratt Company's documentation is being revised to reflect the correct information. All corrective actions for Unit I have been completed. The solenoid valves have been replaced with the correct solenoids with the proper closing time.

ATTACHMENT "A" TO PRD 81/27

CLOSING TIME OF AIR ACTUATED VALVES

PART 21 REPORT

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

J. R. Valdez
Quality Assurance Supervisor
Bechtel Power Corporation
Post Office Box 41
Port Gibson, Mississippi 39150

T. E. Reaves, Jr.
Manager of Quality Assurance
Mississippi Power & Light Company
City Center North
210 South Lamar Street
Suite 320
Jackson, Mississippi 39201

Per telephone call on November 20, 1981 with Mr. P. A. Taylor, Region II, it was confirmed that the 10 CFR 50.55(e) time requirements for the written report could be applied and, as such, MP&L was requested to include this report with their 50.55(e) report.

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

Grand Gulf Nuclear Station Unit I
Port Gibson, Mississippi 39150

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

Supplied to Bechtel Power Corporation by the Henry Pratt Company, Aurora, Illinois.

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

a. Eight (8) Butterfly valves supplied by Henry Pratt with Bettis Air Actuator, model #T-312B-SR3, do not conform to the specification closing time requirements. The vent ports in the solenoid, model number NP8321A6E, are too small to allow the cylinder to exhaust in 4 seconds. The actual closing time, as tested by our CTO, is 12 seconds.

b. The valves in question are primary containment/drywell isolation valves. Failure of these valves to close in the required time-

span could increase site boundry dose contributions; therefore, a substantial safety hazard could be created.

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

The date on which our responsible officer was notified was November 19, 1981.

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

The eight valves with the noted condition are installed in system M-41, containment cooling system, Unit I. The supplier, Henry Pratt, has stated that the problem is limited in scope to valves supplied to Grand Gulf only and was an isolated case.

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:

Henry Pratt has provided new solenoid valves, model #NP831655E. Henry Pratt's documentation is being revised to incorporate the proper solenoid valves. This action will be completed by December 31, 1981.

The new solenoids have been provided to MP&L. MP&L will replace the incorrect solenoids with the new solenoids prior to fuel load.

Startup Field Report #SFR-1-M-1386 identified the condition on April 29, 1981.

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

Since the deficiency did not originate with Bechtel, we have no advice to offer.

Very truly yours,

J. R. Valdez

JRV:dc31.0