



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

JAMES P. McGAUGHY, JR.
ASSISTANT VICE PRESIDENT

September 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, Director

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
Unit 2
Docket Nos. 50-416/417
File 0260/15525/15526
PRD-80/72, Final Report
Bettis Spring Return Actuators
AECM-81/282

References: 1) AECM-81/197, 6/16/81
2) AECM-81/42, 1/23/81

On December 22, 1980, Mississippi Power & Light Company notified Mr. P. K. Van Doorn, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns the spring guide sleeve shifting internally on safety related actuators supplied by GH-Bettis to valve manufacturers.

On November 18, 1980, GH-Bettis reported this deficiency to the NRC under the provisions of 10CFR21. Working with our Constructor, we have determined that this deficiency, had it remained uncorrected, could have affected the safety of operations of the nuclear power plant and is thus reportable by us under 10CFR50.55(e). It is not reportable by Mississippi Power & Light under 10CFR21 as explained in our attached final report.

There is a discrepancy in our last report to the NRC dated June 16, 1981, letter AECM-81/197. The attachment reads "Final Report to PRD-80/72." This should have been "Interim Report No. 2 to PRD-80/72."

Yours truly,

J. P. McGaughy, Jr.

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ATTACHMENT

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Member Middle South Utilities System

Mr. J. P. O'Reilly
NRC

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FINAL REPORT TO PRD-80/72

I. Description of the Deficiency

GH-Bettis Corporation notified the NRC on November 13, 1980, in accordance with 10CFR21, of a condition concerning N521C-SR/N522C-SR actuators. Bettis supplies actuators to several valve manufacturers. The condition was identified during surveillance testing by the R&D Laboratory of GH-Bettis Corporation of their 521C-SR actuator, where a defect was discovered which may affect actuators presently installed in safety related service. It was found that the spring guide sleeve shifting internally could prevent the movement of the actuator. This failure to actuate can only occur in the normal power stroke, and if the "0" degree position of the valve is actually past the normal "0" of the actuator. The spring stroke of the actuator, which is the normal safety function stroke, is unaffected by this defect.

Model N51C-SR-80 actuators were furnished on Henry Pratt Valves supplied to our Constructor for GGNS Unit 2. A total of five (5) of these valves have been purchased for Combustible Gas Control (E61) System. Four of the above valves are currently in storage. The fifth valve, MPL Number Q1E61F007, was returned to Henry Pratt Company for "new loads" testing on March 25, 1980. This deficiency does not apply to the NSSS vendor.

II. Analysis of Safety Implications

Our Constructor has evaluated the identified valves with the defective GH-Bettis actuators on them for effect on safety of plant operations and has determined that the cited actuators may not allow the valves to perform their intended function in the event of an accident. Therefore, the condition has been determined to be reportable under 10CFR50.55(e). It is not reportable under 10CFR21 because the affected items have not been turned over to MP&L.

III. Corrective Actions Taken

The cause of the problem was a design deficiency as reported by GH-Bettis Corporation to the NRC. The extent is limited to five (5) actuators mounted on valves which function in the containment isolation or containment purge service within the Combustible Gas Control (E61) System.

To correct the deficiency, GH-Bettis has redesigned the actuator. The five (5) identified Grand Gulf actuators will be repaired in accordance with prescribed procedures furnished by GH-Bettis. Repair of these actuators is expected to be completed by October 31, 1981. To preclude recurrence of the condition, the manufacturer has issued an Engineering Change Notice to correct the problems with the defective manufactured parts.