



# MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

June 15, 1982

JAMES P. McGAUGHY, JR.  
ASSISTANT VICE PRESIDENT

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. 50-416/417  
File 0260/15525/15526  
PRD-81/44, Interim Report No. 5,  
Valves And Actuators Not  
Manufactured Under A QA Program  
AECM-82/279

References: 1) AECM-82/177, 4/20/82  
2) AECM-82/97, 3/15/82  
3) AECM-82/45, 1/29/82  
4) AECM-81/470, 11/30/81

On October 29, 1981, Mississippi Power & Light Company notified Mr. P. A. Taylor, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerned unqualified Bettis Air Actuators on Henry Pratt Valves.

As stated in AECM-82/177, we have completed our investigation for Henry Pratt valves with Bettis actuators and have determined that this deficiency is not reportable under the provisions of 10CFR50.55(e). However, we are investigating the possibility that other type valve actuators and other valve appurtenances may have similar deficiencies. Details are included in our attached Interim Report. We expect to submit a Final Report by September 24, 1982.

Yours truly,

*J. P. McGaughy, Jr.*  
J. P. McGaughy, Jr.

ATR/RDC:dv  
ATTACHMENT

cc: See page 2

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Mr. J. P. O'Reilly  
NRC

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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

INTERIM REPORT NO. 5 FOR PRD-81/44

I. Description of the Deficiency

Bettis Air Actuators furnished with certain Henry Pratt butterfly valves were not typical of the units used for original Qualification Testing. Investigative data indicated that the delivered valve actuators did not match the units originally qualified. In some cases, there has been a design difference between the actuators that were delivered and the units that were qualified. In all cases, the materials of construction have been different.

The defective actuators are located in both Unit 1 and Unit 2.

The deficiency is known to affect the Containment Cooling System (M41), the Auxiliary Building Ventilation System (T41), the Fuel Handling Area Ventilation System (T42), and the Control Room HVAC System (Z51).

The actuator was seismically tested and successfully passed the seismic qualification tests. The actuator components were inspected to determine size and configuration. In most cases, the measured dimensions agreed with the dimensions on the vendor drawings or in the stress reports. Minor discrepancies existed in the air and spring cylinder dimension. However, these are considered acceptable since they have little or no effect on the center of gravity of the cylinder, the analysis, or the actuator operation. The most critical dimensions and sizes for design stress considerations were consistent between design documents and jobsite measurements. Based on the conformance of the critical dimensions and the design safety-factors, our Architect/Engineer has determined that the actuator dimensions and components comply with the design documents. Therefore, this deficiency is not significant in final design, would not affect the safety of operations of the nuclear power plant, and is not reportable under the provisions of 10CFR50.55(e) for the Bettis actuators on the Henry Pratt valves.

Additionally, an evaluation of the materials used in the actuators has determined that failure of the actuators due to degradation of the internals would not affect safety. The actuators are spring return models and would fail in the safe position.

II. Approach to Resolution of the Problem

The specific cause of the deficiency is that the actuators were not manufactured under a QA program by the G. H. Bettis Company.

MP&L has elected to expand the scope of this PRD to include all valves manufactured for GGNS. This investigation is to determine the following for valves supplied for both the NSSS and BOP Systems:

- a. If quality programs were implemented by vendors during the manufacturing of not only valve actuators but also other valve appurtenances.
- b. The acceptability of actuators and other valve appurtenances that may not have been manufactured under quality assurance program.

### III. Status of Proposed Resolution

Although it has been determined that failure of the Bettis actuators due to degradation of the internals would not affect safety, MP&L has elected to upgrade the seals, lubricants, and coating on the pins and rollers.

Investigations to determine the acceptability of QA programs and the acceptability of other type actuators and other valve appurtenances are continuing in both the NSSS and the BOP scopes of supply.

### IV. Reason Why A Final Report Will Be Delayed

The investigation noted in item III above has not been completed.

### V. Date When Final Report Will Be Submitted

A Final Report is expected to be submitted by September 24, 1982.