



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

32 JUL 13 AIO: 50
July 9, 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-82/32, Final Report,
Bettis Valve Actuator Yoke
Failure
AECM-82/313

On June 10, 1982, Mississippi Power & Light Company notified Mr. R. Butcher, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns a yoke failure in the Bettis valve actuators on Henry Pratt 24" Butterfly valves.

MP&L has evaluated this deficiency and the determination has been made that it is reportable under the provisions of both 10CFR50.55(e) and 10CFR21.

On July 7, 1982, MP&L notified Mr. R. Butcher, of your office, of the applicability of Part 21 and confirmed that the time requirements for the 10CFR50.55(e) written report would apply to the Part 21 report. Our Final Report is attached.

Yours truly

J. P. McGaughy, Jr.

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ACP:dr
ATTACHMENT

cc: See page 2

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Mr. J. P. O'Reilly
NRC

AECM-82/313
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cc: Mr. N. L. Stampley
Mr. R. B. McGehee
Mr. T. E. 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-82/32

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

J. P. McGaughey, Jr.
Assistant Vice-President, Nuclear Production
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-82/313, July 9, 1982. This deficiency was also reported under 10CFR21 by the Henry Pratt and G. H. Bettis Companies to the NRC in their letters dated June 15, 1982.

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

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 deficiency:

The actuators manufactured by the G. H. Bettis Company are mounted on 24" Butterfly valves supplied to Grand Gulf by the Henry Pratt Valve Company through the Bechtel Power Corporation.

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

A. Description of the Deficiency

During the investigation to determine the cause of the failure of the secondary containment isolation valve, 1P44-F118, to close during testing, it was noted that the valve actuator for the valve was noisy.

The investigation revealed that the actuator yoke was broken into two (2) parts. Further investigation revealed cracks on similar actuator yokes.

The cause of this deficiency has been determined to be a design deficiency in the T3 series yokes of the Bettis actuators. T3 series yokes, which had been bored to accommodate a 3" valve shaft and have 3/4" wide by 3/8" deep keyways, do not provide sufficient strength through the thickness of the yoke at the bottom of the keyway.

B. Analysis of Safety Implications

A failure of the actuator yokes could prevent these secondary containment isolation valves from performing their intended safety-related functions. This could have resulted in a loss of secondary containment integrity. If this occurred coincident with a postulated loss-of-coolant accident, potential site accident doses could exceed the limits specified in 10CFR100.

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

Mississippi Power and Light received information of the deficiency on June 8, 1982. We reported the deficiency to Mr. R. Butcher, of your office, as a Potentially Reportable Deficiency on June 10, 1982. An evaluation for Part 21 has been completed and the MP&L "Responsible Officer," Mr. J. P. McGaughey, Jr., will be notified when he returns to his office.

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

Henry Pratt notified the Commission on June 18, 1982, that they also supplied valves equipped with the Bettis actuators with the potential defect to the Tennessee Valley Authority, Hartsville 1, 2, 3, and 4, Phipps Bend 1 and 2 and to the Cleveland Electric Illuminating Company, Perry Units 1 and 2.

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 G. H. Bettis Company has issued Engineering Change Notice #7639 which corrects the deficiency in the T3 series yoke.

The inadequate actuator yokes on the Unit 1 identified valves have been replaced with modified yokes supplied by the Bettis Company. The modified yokes have a keyway depth of 1/4" instead of the original depth of 3/8". The increase of 1/8" of material at the bottom of the keyway has been determined by Bettis to be sufficient to prevent recurrence.

In order to assure that the inadequately designed yokes are replaced on the Unit 2 valves, the Unit 2 valve yoke discrepancy is being tracked using MP&L Material Nonconformance Report (MNCR) 00342-82.

B. Responsible Individual

C. K. McCoy
Nuclear Plant Manager
Mississippi Power & Light Co.
Responsible for Unit 1

T. H. Cloninger
Unit 2 Project Manager
Mississippi Power & Light Co.
Responsible for Unit 2

C. Length of Time to Complete Actions

All corrective actions for Unit 1 were completed on June 16, 1982.

Corrective actions for Unit 2 will be complete prior to fuel load for that Unit.

8. Any advice related to the deficiency ... 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.

bcc: Mr. D. C. Lutken
Mr. J. F. Fager
Mr. J. P. McGaughey, Jr.
Mr. J. F. Hudson
Mr. R. S. Trickovic
Mr. J. W. Yelverton
Mr. L. F. Dale
Mr. C. K. McCoy
Mr. T. H. Cloninger
Mr. R. A. Ambrosino
Mr. J. F. Pinto
Mr. L. E. Ruhland
MR. M. D. Archdeacon
Mr. C. C. Hayes
Mr. S. H. Hobbs
Mr. A. G. Wagner
Mr. R. F. Phares
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Mr. D. M. Houston
U. S. Nuclear Regulatory Commission
Division of Licensing
Washington, D. C. 20555