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

JAMES P. McGAUGHY, JR.
ASSISTANT VICE PRESIDENT

December 14, 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. 50-416/417
File 0260/15525/15526
PRD-81/46, Final Report,
Rockbestos Series 100 Coaxial
Cable
AECM-81/489

On November 13, 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 concerns Rockbestos Series 100 Coaxial Cable.

The attached Final Report is submitted with two (2) attachments. Attachment 1 concerns the deficiency and its reportability under the provisions of 10CFR50.55(e) for MP&L. Attachment 2 concerns a Part 21 report submitted on behalf of Bechtel Power Corporation. On November 23, 1981, MP&L and Bechtel notified Mr. P. A. Taylor, of your office, of the Part 21 and confirmed that the 10CFR50.55(e) time requirements for submission of a written report could be applied to the Bechtel 10CFR21 report.

Yours truly,

For J. P. McGaughy, Jr.

ACP:dr
ATTACHMENTS: 1. MP&L Final Report
2. Bechtel Part 21 Report

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 FOR PRD-81/46

I. Description of the Deficiency

Rockbestos has determined that their solid dielectric coaxial cable, construction series RSS-6-100 through RSS-6-112, may be subject to failures due to shorting of the center conductor to the braided shield at temperatures above 230° F.

Expansion of the dielectric when it is heated causes foreshortening of the braid shield, which in turn results in longitudinal compression and kinking of the center conductor. This kinking combined with heat may cause mechanical and/or thermal stress cracking of the polymer LD inner layer, permitting electrical failure.

The Process Radiation Monitoring System (D-17) was the only system in which the subject cable was installed. However, additional cable reels had been received on site by our Constructor.

This deficiency is applicable to both Unit 1 and Unit 2. This deficiency is not reportable under the provisions of 10CFR21 for MP&L in that the system containing the cable had not been turned over to MP&L.

The cause of the deficiency was the inability of Rockbestos solid dielectric coaxial series cable to withstand temperatures above 230° F without the possibility of the inner conductor shorting to the braid shield.

II. Analysis of Safety Implications

Had the deficiency gone uncorrected/undetected, the remaining Rockbestos Series 100 solid dielectric coaxial cable, available on site, could have been scheduled for use and installed in safety-related systems in Unit 1 or Unit 2 where the temperature exceeds 230° F.

Had the subject cable been installed in plant areas which exceed temperatures of 230° F, cable failure could occur, affecting the ability of safety-related systems to function as designed. Therefore, the determination has been made that this deficiency is reportable under the provisions of 10CFR50.55(e).

III. Corrective Actions Taken

Four (4) cables (1A0AD17A, 1B1AD17A, 1C2AD17A and 1H3AD17A) were installed in areas where the temperature rating is above 230° F. Each of the four (4) cables have been replaced with qualified cable supplied by Raychem Corporation.

The reels of Rockbestos Cable (codes IYA, IBA, IGA and IOA) have been tagged for use only with prior Project Engineering approval. The cable will be used only in areas subject to temperatures less than 230° F.

ATTACHMENT "A" TO MQBC-81/491

PRD-81/46

ROCKBESTOS COAXIAL CABLE

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

   J. W. Yelverton
   Field Supervisor of QA
   Mississippi Power & Light Company
   Port Gibson, Mississippi 39150

   Per telephone call on November 23, 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 facility which contains a defect:

   The Grand Gulf Nuclear Power Station
   Unit I and Unit II
   Port Gibson, Mississippi 39150

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

   Supplied to the Grand Gulf Project by the Rockbestos Company, 285 Nicoll Street, New Haven, Connecticut, 06511.

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

   a. The Rockbestos Company has determined that their solid dielectric coaxial construction series RSS-6-100 through RSS-6-112 may be subject to shorting of the center conductor to the braided shield at temperatures above 230°F.

   b. Had the deficiency remained uncorrected, the Rockbestos Series 100 Solid Dielectric Coaxial Cable could have been scheduled for use in safety related systems in Unit I or Unit II applications. The installation of the subject cable in safety related applications, in plant areas where the temperature could exceed the limits of the cable (230°F), could have created a substantial safety hazard. That is, the failure of the cable could have prevented safety related equipment from performing safety functions.

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

   The date on which our responsible officer was notified was November 23, 1981.

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

   The Rockbestos Company Series 100 solid dielectric cables RSS-6-112, and RSS-6-104 were supplied to the Grand Gulf Nuclear Station for use in Unit I and Unit II.

   We do not have knowledge of the location of defective cable 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:

   The four (4) cables (1A0AD17A, 1B1AD17A, 1C2AD17A, 1H3AD17A) have been replaced with qualified cable supplied by Raychem Corporation. Non-conformance Report 6091, tracked this corrective action.

   The reels of Rockbestos cable (Codes IYA, IBA, IGA, and IOA) on site, have been tagged for use only with prior Bechtel Project Engineering approval. Cable will be used only in areas subject to temperature of less than 230°F.

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

   A Part 21 report, concerning the subject deficiency was filed by the General Atomics Company of San Diego, California on May 15, 1981. The General Atomics report did not reference the GGNS.

   As the deficiency did not originate with Bechtel, we do not have any further advice to offer.

Very truly yours,

J. R. Valdez

JRV:dc42.0