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

PRODUCTION DEPARTMENT

September 8, 1980

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
Units I and II
Docket Nos. 50-416/417
File 0272/15525/15526
PRD-80/48, RPV Sensing
Lines, Interim Report
AECM-80/209

On August 8, 1980, Mississippi Power & Light Co., notified Mr. M. Hunt, of your office, of a Potentially Reportable Condition (PRD) regarding the possibility of reflective insulation in the annular space between the reactor vessel and shield dislodging during a loss of coolant accident (LOCA) and shearing RPV vessel level sensing lines.

We are continuing to investigate the safety implications and reportability of this matter. Our interim report is attached. We expect to provide our final determination of reportability and proposed corrective actions by May 15, 1981.

Yours truly,

For J. P. McGaughy, Jr.
Assistant Vice President
Nuclear Production

WDM:rh
Attachment

cc: (over)

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Attention: Mr. J. P. O'Reilly, Director

cc: Mr. N. L. Stampley
Mr. R. B. McGehee
Mr. T. B. Conner

[redacted]
Division of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

INTERIM REPORT FOR PRD-80/48

DESCRIPTION OF THE DEFICIENCY

If a Loss of Coolant Accident (LOCA) were to occur at the Grand Gulf Nuclear Station (GGNS), the reflective insulation in the annular space between the reactor vessel and shield wall could dislodge and produce missiles sufficient to shear any of the one-inch vessel level sensing lines. The potential for this condition exists in the LOCA case where a slot break occurs in one of the twelve reactor recirculation pump discharge lines. The force of the escaping steam and water could create pressure waves spreading around the reactor vessel and shield wall. These pressure waves could cause pieces of the reflective insulation to break off and become missiles. This event is known as annulus pressurization (AP).

The potential exists, therefore, that this deficiency, were it to have remained uncorrected, could have adversely affected the safety of operation of the GGNS.

APPROACH TO RESOLUTION OF THE DEFICIENCY

The Constructor and NSSS vendor are performing engineering analyses to determine whether this deficiency could adversely affect safe operation of GGNS.

The approach for corrective action will be determined on the basis of these analyses.

STATUS OF PROPOSED RESOLUTION

Analysis to date has shown that the most massive insulation block may be accelerated sufficiently to shear any one-inch vessel level sensing line it impacts. The analysis is continuing and is being tracked under MCAR #97.

REASON FOR DELAYING FINAL REPORT

Engineering analysis is incomplete.

PROJECTED FINAL REPORT SUBMITTAL DATE

May 15, 1981