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

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JAMES P. McGAUGHY, JR.
ASSISTANT VICE PRESIDENT

December 31, 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-81/49, Interim Report No. 1,
Thermal Cycling of Reactor Vessel
Head During Hot Operations
AECM-81/518

On December 1, 1981, Mississippi Power & Light Company notified Mr. F. S. Cantrell, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns thermal cycling of the reactor vessel head during Hot Operations

Mississippi Power & Light evaluated the deficiency and concluded that it was not reportable under the provisions of 10CFR50.55(e). The deficiency and the rationale for considering it not reportable were discussed with Mr. Cantrell when the deficiency was first reported on December 1, 1981. Mr. Cantrell understood our rationale but considered the event to be of such significance that he requested MP&L to submit a detailed written report of the event in the 10CFR50.55(e) format.

MP&L has requested General Electric to make a formal review of the incident. It is expected that this review will be received from GE and a final written report will be made to the NRC by February 19, 1982.

Attached is our Interim Report No. 1.

Yours truly,

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ATTACHMENT

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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. 1 FOR PRD-81/49

I. Description of the Deficiency

During Hot Operations testing, November 5, 1981, through November 10, 1981, the reactor vessel head experienced a number of thermal transients. Several of these exceeded the Technical Specification limits of 100° F/hr cooldown rate. Active fuel elements were not installed in the reactor vessel at the time the transients occurred. At no time were pressure/temperature limitations of the technical specifications exceeded.

A formal review of the known safety implications is being conducted by General Electric. This will also address the effects, if any, of the transient shortening the remaining thermal cycles available to the vessel during its lifetime.

II. Approach to Resolution of the Problem

The transients occurred as a result of actions taken to reduce the amount of temperature stratification in the reactor vessel bottom head region.

Investigations are being undertaken to determine procedural changes that may be necessary to ensure that adequate continuous coolant flow is maintained to prevent thermal stratification in the lower head region.

III. Status of Proposed Resolution

General Electric has been requested to perform a detailed analysis of the safety implications of the deficiency as well as the effect, if any, on the reactor vessel fatigue cycle lifetime.

IV. Reason Why a Final Report Will be Delayed

Mississippi Power & Light has not received the results from General Electric of their detailed review.

V. Date When Final Report Will be Submitted

We expect to submit a Final Report by February 19, 1982.