



# MISSISSIPPI POWER & LIGHT COMPANY

*Helping Build Mississippi*

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

March 15, 1984

JAMES P. MCGAUGHY, JR.  
VICE PRESIDENT

U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, N.W.  
Suite 2900  
Atlanta, Georgia 30303

Attention: Mr. J. P. O'Reilly, Regional Administrator

Dear Mr. O'Reilly:

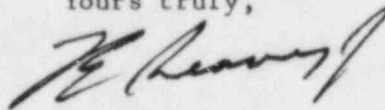
SUBJECT: Grand Gulf Nuclear Station  
Units 1 and 2  
Docket No. 50-416/417  
License No. NPF-13  
File 0260/15525/15526/16694.4  
PRD-83/13, Final Report for  
Unit 2, Load Shedding and  
Sequencing System Panels  
AECM-84/0148

Reference AECM-83/0609, 9/21/83

On September 21, 1983, Mississippi Power & Light Company notified Ms. L. Watson, of your office, of a Reportable Deficiency at the Grand Gulf Nuclear Station (GGNS). The deficiency concerns the incorrect operation of the Division I and II diesel generator load shedding and sequencing system panels with the automatic test feature on-line.

MP&L had previously determined that this deficiency is reportable under the provisions of 10CFR21 for Unit 1 and has since determined that it is reportable under the provisions of 10CFR50.55(e) for Unit 2. All details are contained in our attached Final Report. This report was originally due on March 1, 1984, however a two week extension was granted on that date by Mr. Caudles Julian.

Yours truly,

  
for J. P. McGaughy, Jr.

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Member Middle South Utilities System

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Mr. J. P. O'Reilly  
NRC

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cc: Mr. J. B. Richard  
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 UNIT 2

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

J. P. McGaughy, Jr.  
Vice-President, Nuclear  
P.O. Box 1640  
Jackson, Mississippi 39205

Notification of Part 21 reportability for Unit 1 made to Mr. J. P. O'Reilly, NRC, Region II by letter AECM-83/0609, September 21, 1983. Notification of 10CFR50.55(e) reportability for Unit 2 made to Ms. L. Watson, NRC, Region II by telephone on 10/14/83.

This deficiency was also reported under 10CFR21 by Vitro Laboratories to the NRC, Washington, D. C., in their letter dated August 19, 1983.

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

Grand Gulf Nuclear Station (GGNS) Units 1 and 2  
Port Gibson, Mississippi 39150

10CFR21 is not applicable for Unit 2 as the Load Shedding and Sequencing panels have not been turned over to MP&L. However, the deficiency is reportable under 10CFR50.55(e) for Unit 2.

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

The Load Shedding and Sequencing panels were manufactured by Vitro Laboratories, Silver Spring, Maryland and supplied to Grand Gulf by Bechtel Power Corporation, Gaithersburg, Maryland.

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

A. Description of the Deficiency

During the performance of the 18 month surveillance testing of the diesel generators, it was discovered that the Division I and II Load Shedding and Sequencing Panels, 1H22-P331 and P332, do not always respond as designed to a LOCA signal while the panels are in the Auto Test Mode. The Load Shedding and Sequencing System Auto Test Mode, which is on-line for normal system operation, inputs high frequency signals and decodes output signals to determine if the panel logic is capable of functioning. The deficiency involves a situation where the high frequency auto test signal does not get blocked upon receipt of a LOCA signal, and the LSS

panel responds to the accident at a speed determined by the high frequency clock. Thus the shed and sequence output relays do not have time to energize. This incorrect operation only occurs when the LOCA signal is input to the system coincident and synchronous with the test pulse and does not occur on the receipt of a loss of power signal or when the Auto Test Mode is off.

B. Analysis of Safety Implications

Division I and II ECCS Pumps would not be sequenced back on the ESF bus and therefore would not auto-start, if required.

Other loads would not shed or sequence at the right time.

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

Mississippi Power & Light received information of the deficiency on July 23, 1983. We reported the deficiency to Ms. L. Watson, of your office, as a Reportable Deficiency for Unit 1 on September 21, 1983. An evaluation for Part 21 was completed for Unit 1 and the MP&L "Responsible Officer," Mr. J. P. McGaughy, Jr., was notified. Notification of reportability under 10CFR50.55(e) for Unit 2 was made to Ms. L. Watson on October 14, 1983.

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

There are two (2) LSS panels on each Unit at Grand Gulf for a total of four (4). The location of other panels which have similar design deficiencies was reported to the NRC, Washington, D. C., by Vitro Laboratories in their letter of August 19, 1983.

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

A design modification was provided and installed by Vitro under DCP-83/0398 as a field change to the Unit 1 LSS panels. Retests of the panels were satisfactory.

For Unit 2, the printed circuit cards and card racks were returned to the manufacturer for modification to install the reset feature. The modification was completed as required.

B. Responsible Individual

Unit 1  
J. E. Cross  
Plant Manager  
Mississippi Power & Light Co.

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

C. Length of Time to Complete Actions

Corrective actions for Unit 1 are complete. The reinstallation and final checkout for Unit 2 is expected to be completed by April 27, 1984.

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.