



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

JAMES P. McGAUGHY, JR.
ASSISTANT VICE PRESIDENT

September 20, 1982

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
License No. NPF-13
Docket Nos. 50-416/417
File 0260/15525/15526
PRD-82/21, Interim Report No.
3, SSW "A" Loop System Flow
AECM-82/408

Reference: 1) AECM-82/214, 5/17/82
2) AECM-82/278, 6/14/82

On April 15, 1982, Mississippi Power & Light Company notified Mr. F. Cantrell, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns a low flow condition through the "A" Standby Service Water (SSW) Pump.

We have determined that this deficiency is reportable under the provisions of both 10CFR50.55(e) and 10CFR21 for Unit 1 and 10CFR50.55(e) for Unit 2.

Attached is our Interim Report No. 3. We expect to submit a Final Report prior to the first refueling outage on Unit 1.

This deficiency is applicable to both Unit 1 and Unit 2. To prevent recurrence on Unit 2, minimum flow requirements will be taken into consideration when Unit 2 subsystems are designed.

Yours truly,

J. P. McGaughy, Jr.

KDS:dr
ATTACHMENT

cc: See page 2

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Mr. J. P. O'Reilly
NRC

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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. 3 FOR PRD 82/21

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

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

Notification of Part 21 applicability made to Mr. F. Cantrell, NRC, Region II by telephone on May 10, 1982.

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

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

10CFR21 is applicable only to Unit 1

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

The design was provided to Grand Gulf by the 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

The "A" loop of the Standby Service Water (SSW) System is designed to automatically provide cooling water to the Reactor Core Isolation Cooling (RCIC) Room Cooler on a RCIC initiation signal. As soon as the steam supply valve to the RCIC system leaves the fully closed position, an initiation signal is provided to start the SSW loop "A" pump, open the pump discharge valve, and the cooling tower return valve. This provides a flow path for the RCIC Room Cooler.

The flow in the SSW system during this mode of operation is significantly less than that required to keep the SSW pump cool during operation. Approximately 95 gpm is used in the system during this mode of operation. The SSW pump requires approximately 2000 gpm to prevent heat buildup in the pump.

The design does not allow for a minimum flow path in the SSW loop "A" when the SSW System is automatically started due to a RCIC initiation signal. All other automatic starts of both the SSW loop "A" and SSW loop "B", initiated by an automatic start of another system, provide adequate flow in the SSW loops to prevent pump damage.

B. Analysis of Safety Implications

The loss of the SSW loop "A" pump could prevent the removal of heat from plant auxiliaries, such as the Standby Diesel Generator 11 and the Low Pressure Core Spray (LPCS) Room Cooler, which require cooling during an emergency shutdown of the plant. It could also prevent the use of the SSW system as the ultimate heat sink used for removal of the decay heat generated by the reactor core.

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

Mississippi Power and Light received information of the deficiency on April 15, 1982. We reported the deficiency to Mr. F Cantrell, of your office, as a Potentially Reportable Deficiency on that date and as reportable under 10CFR21 by telephone on May 10, 1982. Since that date MP&L has filed two (2) Interim Reports to inform the Commission of the progress and status of the evaluation of this deficiency.

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

The deficiency affects only the "A" loop of the Standby Service Water System at GGNS.

We do not have knowledge of the location of other deficient designs of this type 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.

A. Corrective Actions Taken

Plant procedures which will ensure that minimum pump flow is provided when the SSW system is automatically started due to a RCIC initiation have been issued.

An interim design that will ensure that minimum pump flow is established when the SSW pumps have been started by an automatic signal is being reviewed. A permanent plant design change which would automatically provide minimum pump flow any time the SSW pumps are running will be developed at a later date. A permanent design change is not appropriate at this time due to other possible modifications to the SSW system.

Our Architect/Engineer is aware of the problem and will ensure that minimum flow requirements are taken into consideration when Unit 2 subsystems are designed.

B. Responsible Individual

Unit 1
C. K. McCoy
Plant Manager
Grand Gulf Nuclear Station
Mississippi Power & Light Co.

Unit 2
T. H. Cloininger
Unit 2 Project Manager
Grand Gulf Nuclear Station
Mississippi Power & Light Co.

C. Length of Time to Complete Actions

Mississippi Power and Light received information of the deficiency on April 15, 1982.

The required procedures have been issued. The interim design change will be implemented prior to 5% power.

We expect to submit a Final Report giving details of the permanent design change prior to the first refueling outage on Unit 1.

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.