MISSISSIPPI POWER & LIGHT COMPANY
Helping Build Mississippi
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JAMES P. McGAUGHY, JR.
ASSISTANT VICE PRESIDENT

September 16, 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, Director

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
Units 1 and 2
Docket Nos. 50-416/417
File 0260/15525/15526
PRD-81/10, Final Report,
Possible MSIV Drain Line
Overpressurization
AECM-81/356

Reference: AECM-81/113, 3/20/81

On February 18, 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 the potential for overpressurization of the Main Steam Isolation Valve (MSIV) Drain Line Piping.

We had previously determined that this condition is reportable under the provisions of 10CFR50.55(e), but not under 10CFR21 as reported in AECM-81/113, March 20, 1981.

Our final report giving corrective actions and actions to preclude recurrence is attached.

Yours truly,

For J. P. McGaughy, Jr.

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KDS:dr
ATTACHMENT

cc: See page 2

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Mr. T. B. Conner

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Final Report for PRD-81/10

I. Description of the Deficiency

The potential exists that the Main Steam Isolation Valve Drain Line piping between valves N1B21F021/F033 and Q1B21F113/F114 could be exposed to pressures greater than its designed pressure. This could be caused if valves F021 or F033 were open, passing condensate at main steam system pressure to valves F113 and F114. Concurrent with this, loss of BOP power would cause valves F113 and F114 to fail closed. Primary system pressure would then be imposed on some 3 inch HBD and 6 inch HBC lines. The piping is a common header for low point drain lines from the inside Main Steam Isolation Valves to the Main Condenser and is used for removing condensate generated during heatup and low power operation.

The failure of the piping could result in a degradation of the Auxiliary Building isolation capability due to increased building pressure. This deficiency affects the Nuclear Boiler System (B21) and is applicable to both Unit 1 and Unit 2. It does not affect the NSSS vendor.

II. Analysis of Safety Implications

During operation, while condensate/steam is flowing through valves F021/F033, an inadvertent closure of valves F113 or F114 would impose primary system pressure on various HBD and HBC piping downstream of F021/F033 as well as on valves F113 and/or F114. Valves F113 or F114 will close upon either loss of BOP power or loss of air to the valves (F113/F114 are Auxiliary Building isolation valves). A similar, but less likely, problem would result from an abnormal line-up (F113 or F114 closed) coincident with a loss of BOP power or air to F033 (fails open).

This deficiency, resulting in degradation of the Auxiliary Building environment, could affect the safety of operations of the nuclear power plant and is reportable under 10CFR50.55(e). Since the Nuclear Boiler System was not turned over to MP&L at the time the deficiency was detected, it is not reportable under 10CFR21.

III. Corrective Actions Taken

The deficiency was caused by an oversight in the design. Our design agent overlooked the impact of inadvertent closure of F113 or F114 and failed to design the piping and valves for the maximum operating conditions. The extent is limited to the Main Steam Line Drain Piping, for the Nuclear Boiler System (B21).

To correct the identified deficiencies design drawings have been revised to replace the cited overpressurized piping and valves. The 3 inch and 6 inch Sch 40 pipe was replaced with 3 inch and 4 inch Sch 80 pipe. The two auxiliary building isolation valves (Q1B21F113/F114) were also replaced with valves of the appropriate pressure rating. In addition, all connecting small piping and valves have been checked. The drain piping, to and including F114, is now capable of withstanding full primary system pressure. A review was also made of all piping which penetrates the auxiliary building to determine if a similar problem exists. This review verified that a similar problem does not exist in any other system.

The drawing revision that has been issued for the piping and valve replacement covers both Unit 1 and Unit 2. This will serve to prevent recurrence. The deficiency was determined to be an isolated incident which does not warrant changes to existing design control procedures. All corrective actions are scheduled to be completed by October 23, 1981.