



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

JAMES P. MCGAUGHY, JR.
ASSISTANT VICE PRESIDENT

August 14, 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-81/22, Final Report,
Non Qualified HVAC Systems
AECM-81/265

Reference: AECM-81/148, 4/20/81

On March 20, 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 non-seismically qualified ventilation systems which provide environmental cooling of seismically qualified systems.

We have determined that, had this deficiency remained uncorrected, it could have adversely affected the safety of operations of the nuclear power plant and is therefore reportable under the provisions of 10CFR50.55(e). It is not reportable under the provisions of 10CFR21, as explained in the attached final report.

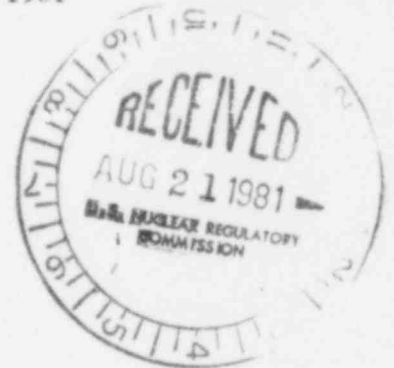
Yours truly,

J. P. McGaughy, Jr.

For

KDS:dr
ATTACHMENT

cc: See page 2



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Mr. J. P. O'Reilly
NRC

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Mr. T. B. Conner

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File

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FINAL REPORT TO PRD-81/22

I. Description of the Deficiency

The HVAC equipment rooms on Elevation 133'-0 of the Control Building and the Spent Fuel Pool Cooling Pump Room in the Auxiliary Building contain safety-related equipment which is seismically and environmentally qualified and must operate after a seismic event. NRC FSAR questions 010.24 and 010.25 requested information on how these rooms would be environmentally controlled after a seismic event. Upon review by our Architect/Engineer of the existing HVAC design, it was noted that HVAC to the Control Building HVAC Equipment Room and the Spent Fuel Pool Cooling Pump Room was provided only by non-seismically qualified HVAC systems. During the review, it was also noted that the Standby Gas Treatment System rooms, which required ventilation to avoid exceeding equipment qualification temperatures while operating, were not provided with a seismically qualified HVAC system.

This deficiency affects the Spent Fuel Pool Cooling System (G41), Control Room HVAC System (Z51), Standby Gas Treatment System (T48), and the Emergency Switchgear and Battery Rooms Ventilation System (Z77). It is applicable to both Unit 1, Unit 2, and Common. It does not apply to the NSSS vendor.

II. Analysis of Safety Implications

If this condition had remained uncorrected, the possibility exists that excessive temperatures could be attained in the rooms described, which could have affected the operation of the safety-related switchgear and emergency battery room fans, control room standby fresh air fans, the standby gas treatment systems fans, and spent fuel pool cooling pumps. Potentially, failure of this equipment could cause loss of secondary containment integrity, loss of control room environment, failure of safety-related switchgear, and loss of fuel pool cooling. Therefore, this deficiency is reportable under 10CFR50.55(e).

None of the HVAC systems had been turned over to MP&L, therefore this deficiency is not reportable by MP&L under the provisions of 10CFR21.

III. Corrective Actions Taken

The cause of the deficiency was a failure by our Architect/Engineer to address the operability requirements of interfacing safety-related equipment in the HVAC design. The deficiency extends to safety-related HVAC systems, safety-related switchgear, control room environment, and the secondary containment.

A review of safety-related equipment cooled by non-qualified HVAC systems, and having a potential for overheating, was conducted. Corrective actions were taken as follows:

- (1) For the HVAC equipment rooms, the Emergency Switchgear and Battery Rooms Ventilation System (Z77) has been redesigned to redirect surplus air from that system into the HVAC equipment room to maintain the temperature in the room within acceptable limits with the normal HVAC system inoperable.
- (2) For the spent fuel pool cooling pump room a redundant seismic Category I cooling system has been designed.
- (3) The Standby Gas Treatment System (SGTS, T48) has been redesigned to redirect room air from the Auxiliary Building corridor across to the SGTS equipment rooms to provide ventilation cooling for the safety-related equipment when the normal HVAC system is inoperable.

The design of the modifications to these systems has been completed. Installation will be completed by fuel load.