



MISSISSIPPI POWER & LIGHT COMPANY

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P.O. BOX 1640, JACKSON, MISSISSIPPI 39205

REGION II
GEORGIA
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JAMES P. McGAUGHY, JR.
ASSISTANT VICE PRESIDENT

December 1, 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-80/67, Final Report,
Installation of Ventilation
Fire Dampers
AECM-81/475

Reference: 1) AECM-81/160, 4/29/81
2) AECM-80/301, 12/3/80

On November 3, 1980, Mississippi Power & Light Company notified Mr. J. Rausch, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns the installation of fire dampers in ventilation systems.

Our investigation into this matter has determined that the deficiency is reportable under the provisions of 10CFR50.55(e) but is not reportable under the provisions of 10CFR21.

Our final report is attached.

Yours truly,

J. P. McGaughy, Jr.
for J. P. McGaughy, Jr.

ACP:dr
ATTACHMENT

cc: See page 2



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Mr. J. P. O'Reilly
NRC

AEC-81/475
Page 2

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

FINAL REPORT FOR PRD-80/67

I. Description of the Deficiency

The installation documents for fire dampers in heating, ventilating and air conditioning (HVAC) systems were not followed, and these installation documents lacked sufficient detail/design information and definitive instructions to ensure the integrity and/or the consistency of the installation. Also, non-safety-related fire dampers have been installed in safety-related HVAC systems.

The non-safety-related plant systems affected by this deficiency are: the Turbine Building Ventilation System (U41) the Radwaste Building Ventilation System (V41), the Water Treatment Building Ventilation System (X57) and the Control Building Ventilation System (Z17). Failure of these systems will not compromise any safety-related systems or prevent a safe shutdown of the plant.

The safety-related dampers affected by this deficiency are located in the following systems: the Standby Gas Treatment System (T48), the Fuel Handling Area Ventilation System (T42), the Auxiliary Building Ventilation System (T41), the Diesel Generator Building Ventilation System (X77), the Control Room HVAC System (Z51) and the Emergency Switchgear and Battery Room Ventilation System (Z77). Only the safety-related systems are addressed in this report.

This deficiency is applicable to Unit 1 and common areas. It is not reportable under the provisions of 10CFR21. The Diesel Generator Building Ventilation System was the only system which had been turned over to and accepted by MP&L. The deficiencies pertaining to this system were identified and documented prior to acceptance by MP&L.

The cause of the deficiency was the failure to issue adequate installation details, design drawings and definitive instructions. An additional cause of the deficiency was the failure of the installers to follow applicable drawings and instructions during installation.

Since this deficiency was identified, it has been determined that there are no structural differences between safety-related and non-safety-related Type I fire dampers which are smaller than 48" X 48". The only difference between safety-related and non-safety-related dampers is the fusible link and link mounting tab. One damper, 48" X 48", was found to be installed in a safety-related system without an ID tag, and through inspection it has been determined to be safety-related.

II. Analysis of Safety Implications

The determination has been made that the installed configuration of the fire dampers was not in accordance with the National Fire Protection Association (NFPA) and Underwriter's Laboratories (UL) requirements for a fire rated barrier. If a fire damper does not meet the requirements, then it can be postulated that a fire would not be confined by the barrier and could conceivably affect redundant trains of safety-related systems required for a safe shutdown of the plant. This deficiency is, therefore, reportable under 10CFR50.55(e).

The additional possibility exists that during a seismic event, a fire damper could fail closed and prevent a safety-related HVAC system from performing its intended safety function.

III. Corrective Actions Taken

Underwriters Laboratories evaluated and approved the damper penetration closures installed at the jobsite, following furnace testing. The manufacturer (Advanced Air) submitted the finalized instructions to UL for review and approval. UL has approved the finalized instructions. The Architect/Engineer's installation detail drawings have been revised to incorporate the revised UL approved instructions.

All damper installations have been inspected, and the Constructor has verified that all dampers used in safety-related systems are certified as safety-related.

Actions to preclude recurrence have been addressed whereas revised drawings and instructions were reissued to correct the condition. The original installers have been replaced by our Constructor who installed/reworked the systems in compliance with the revised details and instructions.

Permanent damper tags, noting the supplier, American Warming and Ventilating Co. (AWV), shop order numbers (seismic application), are now specified when purchasing fire dampers. This ensures that correlation of safety-related damper installation is verified.