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

May 12, 1981

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U.S. NUCLEAR REGULATORY COMMISSION

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-81/01, Final Report,
Transamerica Delaval Turbocharger
Lubrication
AECM-81/168

On January 2, 1981, Mississippi Power & Light Company notified Mr. P. K. VanDoorn, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns lubrication of the thrust bearings on Turbochargers manufactured by the Elliot Company for Delaval DSRV engines. Transamerica Delaval notified the NRC of a 10CFR Part 21 condition concerning the above on December 16, 1980.

Transamerica Delaval has designed a system modification correcting the above problem. We have determined that this deficiency is reportable under 10CFR50.55(e). Our final report on this matter is attached.

Yours truly,

For J. P. McGaughy, Jr.

KDS:mt
Attachment

cc: See page 2

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cc: Mr. N. L. Stampley
Mr. R. B. McGehee
Mr. T. B. Conner

Mr. Victor Stello, 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-81/01

I. Description of the Deficiency

Transamerica Delaval notified the NRC on 12/16/80 of a 10CFR Part 21 condition, which identified a potential problem with lubrication of the thrust bearings of the turbochargers which could result in engine non-availability. The engines identified with GGNS are SN70433/36 DSRV.

These turbochargers are manufactured by Elliot Company of Jeannette, Pa. They were installed on the engines by Transamerica Delaval and lubricated in accordance with Elliot Company recommendations.

The defect exists in the lubricating oil system that supplies oil to the turbocharger bearings. The design of this system permits lubricating oil to flow to the bearings only when the engine is running and prevents oil flow to the bearings when the engine is in the standby mode. The oil seal of the turbocharger is a labyrinth type seal and is only effective when the turbocharger is running. Because of the possibility of seal leakage when the turbocharger is at rest (engine standby mode) the turbocharger lubricating oil system is bypassed at this time.

II. Analysis of Safety Implications

Engine availability could be affected if the defect noted by Delaval is not corrected. If these engines fail, then the Standby Diesel Generator System, which provides emergency power to safety related systems required to operate for safe shutdown of the plant, would not be able to supply power in the event of the loss of offsite power. As such, the ability to safely shut down the plant and maintain it in a safe, shutdown condition would be impaired following a loss of offsite power. The deficiency is therefore reportable under 10CFR50.55(e). Since MP&L has not yet accepted the equipment, the deficiency is not reportable by MP&L under 10CFR21.

III. Corrective Actions Taken

Corrective actions include modifications to the lubrication oil system to permit lubrication oil to the thrust bearings of the turbochargers when the turbocharger is at rest (engine standby mode). The drawings and the parts list document this design change. Our Constructor is proceeding to order parts to be installed on the Unit 1 engines immediately upon receipt and on the Unit 2 engines at the time of their erection. Projected completion dates are 9/15/81 for Unit 1 and 6/1/83 for Unit 2. This design change is being specified for all engines to prevent future occurrence of this problem.