



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

JAMES P. McGAUGHY, JR.
ASSISTANT VICE PRESIDENT

April 21, 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
Docket Nos. 50-416/417
File 0260/15525/15526
PRD-82/14, Interim Report No. 1,
Division II Diesel Generator
Trip
AECM-82/176

On March 22, 1982, Mississippi Power & Light Company notified Mr. R. Butcher, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns a bolt on the Delaval diesel rear crankcase cover which sheared off during diesel operation and subsequently entered the generator and damaged the stator.

We have evaluated this deficiency and have determined that it is reportable under the provisions of 10CFR50.55(e) for the Unit 1, Division II diesel generator. It is indeterminate at this time as to whether this deficiency is applicable to the Unit 1, Division I diesel generator and/or the Unit 2, Division I and II diesel generators. We are still investigating the applicability of 10CFR21.

Details are in our attached Interim Report. We expect to submit a Final Report by June 25, 1982.

Yours truly,

J. P. McGaughy, Jr.

RDC:dr
ATTACHMENT

cc: See page 2

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Member Middle South Utilities System

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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. 1 FOR PRD-82/14I. Description of the Deficiency

During the performance of a 24 hour run test, the Unit 1, Division II diesel generator manufactured by Transamerica Delaval, Inc. tripped on a "Generator Differential" which was accompanied by an observed electrical arcing flash inside the generator. In a subsequent inspection of the generator, it was found that the stator insulation had been damaged and that a 15/16" bolt head from a 5/8" bolt was embedded in the stator. The degraded stator insulation resulted in a phase to phase short in the stator that damaged the generator. It was determined that the bolt head was from a bolt on the diesel's rear crankcase cover that had sheared off and entered the generator through the air gap on the end of the generator.

It is indeterminate at this time as to whether this deficiency is applicable to the Unit 1, Division I diesel generator and/or the Unit 2, Division I and II diesel generators.

This deficiency could have adversely affected the safety of operations of the nuclear plant at any time through out the life-time of the power plant if there were a loss of off-site power at that time. We are still investigating the applicability of 10CFR21.

II. Approach to Resolution of the Problem

The cause, extent, and corrective action cannot be formulated until an analysis and determination is made as to the failure mode of the bolt. The following corrective actions have been completed or are proposed.

1. The generator was replaced with a generator from Unit 2.
2. The Unit 1, Division I and II, diesels' rear crankcase cover bolts were replaced with new SAE Grade 5 bolts from stock.
3. A design change will be initiated to install protective caging on the generator air gaps.
4. All bolts removed from the Unit 1, Division I and II, diesels' rear crankcase covers will be sent to an independent laboratory for failure analysis.
5. The damaged generator has been dispositioned to Bechtel for return to vendor.

III. Status of Proposed Resolution

All proposed actions are expected to be completed by June 16, 1982.

IV. Reasons Why a Final Report Will Be Delayed

The Final Report will be issued when an analysis and determination is made as to the failure mode of the bolt.

V. Date When A Final Report Will Be Submitted

MP&L expects to submit a Final Report concerning this matter on or before June 25, 1982.