MISSISSIPPI POWER & LIGHT COMPANY
Helping Build Mississippi
P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

JAMES P. McGAUGHY, JR.
ASSISTANT VICE PRESIDENT

June 12, 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-80/55, Final Report,
PGCC Cable Assemblies - Connector Extenders
AECM-81/203

References: 1. AECM-80/249, 10/13/80
2. AECM-81/40, 1/20/81

On September 12, 1980, Mississippi Power & Light Company notified Mr. M. Hunt, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns the incorrect installation of backshells on connectors used on certain cable assemblies supplied by General Electric. These cable assemblies were supplied for the Power Generation Control Complex (PGCC).

We have determined that this deficiency is not reportable under 10CFR50.55(e) or 10CFR21. Our final report is attached.

Yours truly,

For J. P. McGaughy, Jr.

EWC:dr
ATTACHMENT

cc: See page 2

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

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Mr. G. B. Rogers
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Mr. L. E. Ruhland
Mr. D. L. Hunt
Mr. A. G. Wagner
Mr. P. A. Taylor
PRD File
File

FINAL REPORT FOR PRD-80/55

I. Description of the deficiency

Certain PGCC cable assemblies supplied by General Electric were installed incorrectly. An adapter was used to connect fine-threaded extension pieces to the backshell of Cannon connectors. However, this adapter was incorrectly used with coarse-threaded extension pieces manufactured by Sunbank. Cable assemblies with this deficiency appear susceptible to disconnection, since they have less than one thread engagement joining the connector backshell with its Sunbank extension. Examples of systems affected are the Neutron Monitoring System (C51) and the Nuclear Boiler System (B21).

II. Analysis of Safety Implications

The NSSS vendor performed a special quality study on mismatch of threads-cable connectors to Sunbank adapters in order to determine the effect on safety. Quality Control inspectors visually inspected all panel and termination cabinet connectors for Unit 1. The results of their inspection plus a review of samples of all types of connectors, adapter rings, and Sunbank adapters revealed that the only potentially mismatched threads were Cannon connector size 20. Bending moment tests were performed on five (5) samples of the mismatched combinations to assure compliance with MIL-C-5015 G strength specifications. The required bending moment was applied at 90° intervals on each sample with no thread failures observed. The NSSS vendor therefore concluded that the connector assemblies could be "used as is," and that there would be no effect on safe operation of the plant. This deficiency does not meet the reporting requirements of 10CFR50.55(e) or 10CFR21.

III. Corrective Actions Taken

MP&L decided to remove the adapter rings for Unit 1. The work has been completed.

Concerning the preclusion for recurrence, revisions to clarify the proper use of the adapter ring are currently being processed for the Inspection Instruction IICA-002 and the purchase part drawing (19B9713) for the Sunbank adapter. Clarifying revisions on the Cable Shop Assembly Instruction Manual and shop QC instructions are now in place which control current shop work.