



# MISSISSIPPI POWER & LIGHT COMPANY

*Helping Build Mississippi*

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

JAMES P. McGAUGHY, JR.  
ASSISTANT VICE PRESIDENT

August 31, 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-80/70, Interim Report #1  
Flexible Conduit Grounding  
AECM-81/302

On December 10, 1980, 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 the potential loss of solid metal grounding of the flexible conduit used by our NSSS Supplier in the Power Generation Control Complex (PGCC) equipment.

We have determined that this deficiency, had it remained uncorrected, could have adversely affected the safety of operations of the nuclear power plant and is reportable under the provisions of 10CFR50.55(e). Investigation is continuing into the reportability of this deficiency under 10CFR21.

We expect to submit a final report by October 20, 1981. Attached is our interim report.

Yours truly,

KDS:dr  
ATTACH:ENT

cc: See page 2

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Mr. J. P. O'Reilly  
NRC

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

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File

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INTERIM REPORT NO. 1 TO PRD-80/70

I. Description of the Deficiency

The flexible conduit contained in Power Generation Control Complex (PGCC) equipment, designed and supplied by General Electric, has a potential loss of solid metallic grounding at the termination cabinet and/or the panel.

In the termination cabinet installations, the conduit is firmly attached with a locking ring to a termination module, which is an acceptable ground connection. However, the termination module is ultimately mounted on a painted (high electrical resistance) surface. No procedures had been issued by the manufacturer, to insure that the paint was removed from the panel surfaces before termination modules were mounted, or to check that the termination module made a low-resistance connection to the panel steel.

In the NSSS this could affect the Reactor Protection System, the Nuclear Steam Supply Shutoff System and the Neutron Monitoring System. This applies to both Unit 1 and Unit 2.

One of the purposes of the flexible conduit is to provide a low resistance path to ground under certain short-circuit conditions. This insures that upstream fuses will melt and thereby prevent "hot shorts" which have the potential for preventing the completion of a protective function (de-energizing various circuits). There is the potential of loss of solid metallic grounding of the flexible conduit either at the termination cabinet or at the panel. This has the potential for preventing operation of fail-safe logic associated with the Reactor Protection System. Therefore, this deficiency is reportable under the provisions of 10CFR50.55(e). The investigation into reportability under the provisions of 10CFR21 is continuing.

General Electric filed a report on this condition to the NRC under 10CFR21 on December 8, 1980. This was a letter to Mr. Victor Steillo, Jr., Washington, D. C., from Dr. Glenn G. Sherwood, Manager of Safety and Licensing Operation.

II. Approach to Resolution of the Problem

The cause of the deficiency is that there was no procedure to insure that paint was removed from panel surfaces before termination modules were mounted. Also, there was no procedure to check that the termination module makes a low-resistance connection to the panel steel. The deficiency affects all flexible conduit in the PGCC.

The NSSS vendor (General Electric) has issued Field Disposition Instructions (FDI) WATP and WBNY to provide a method of grounding these flexible conduits. Clamps with ground wires will be provided to insure a positive low resistance path to ground, which will correct the deficiency.

To prevent recurrence of the problem, GE has issued a grounding requirement procedure.

III. Status of Proposed Resolution

The Field Disposition Instructions have been issued. Work will be completed prior to fuel load.

IV. Reason Why a Final Report Will Be Delayed

Mississippi Power & Light has not completed the evaluation of the reportability of this deficiency under the provisions of 10CFR21.

V. Date When Final Report Will Be Submitted

We expect to submit our final report by October 20, 1981.