



MISSISSIPPI POWER & LIGHT COMPANY
Helping Build Mississippi
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Victor Stello

JAMES P. McGAUGHY, JR.
 ASSISTANT VICE PRESIDENT

October 6, 1980

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

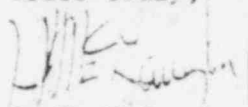
Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
 Units 1 and 2
 Docket Nos. 50-416/417
 File 0260/15525/15526
 PRD-80/20, Final Report, Damage
 to Intermediate Metallic Conduit
 AECM-80/245

Reference: 1) AECM-80/101, 5/14/80
 2) AECM-80/151, 7/5/80

On April 14, 1980, Mississippi Power & Light Company notified Mr. F. Cantrell of your office of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns damage to threaded metallic conduit, two inches and larger in diameter, resulting from improper use and adjustment of threading dies.

We have determined that this item is reportable under 10CFR 50.55(e). Bechtel Management Corrective Action Request (MCAR) Number 74 has been assigned to track corrective action until completion. Our final report on this matter is attached.

Yours truly,

 J. P. McGaughy, Jr.

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WDH:mt
 Attachment

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

Mr. Victor Stello, Director
 Division of Inspection & Enforcement
 U. S. Nuclear Regulatory Commission
 Washington, D.C. 20555

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FINAL REPORT FOR PRD-80/20

I. Description of the Deficiency

Adjustable threading dies caused damage to metallic conduit at Units 1 and 2 at the Grand Gulf Nuclear Station (GGNS). The damage resulted in sharp edges inside the conduit, which in turn damaged electrical cable being pulled through the conduit. Cable damage ranged from scrapes in the outer jacket to cuts in the insulation which exposed conductors.

This condition was first noted on Intermediate Metallic Conduit (IMC). Further investigation revealed that the deficiency was not limited to IMC, but occurred in threaded metallic conduit, two inches and larger in diameter which was joined to conduit type fittings. Improper adjustment and use of dull dies, along with too many threads being cut, left the conduit with a sharp, tapered end.

An investigation of conduit threaded in this manner and screwed into conduit type fittings revealed extrusions of small, sharp pieces of metal inside the conduit. The sharp pieces of metal were created when the tapered end of the threaded conduit "bottomed out" on the inner lip of the conduit type fitting and curled back on itself.

II. Safety Implications

This deficiency could affect safety of operations at the GGNS if electrical cables supplying power or control to safety equipment were shorted or open because of the sharp edges inside the conduit. No cases were found where this occurred. However, the possibility exists that, were this condition to have remained uncorrected, safety-related electrical cables might have been prevented from performing their safety function. Therefore, this deficiency is reportable under 10CFR50.55(e).

Specifically, electrical cables to RHR Loop A Test Return Valve Q1E12F024A-A were installed in conduit with this deficiency. This valve is normally closed and is opened remote-manually only for testing and suppression pool cooling. Our safety analysis revealed that a failure of the valve to open in the testing mode would not affect safety of operations. However, an undetected failure of this valve to open for post-accident suppression pool cooling could adversely affect safe shutdown of the plant. Additionally, failure of the valve to close during a LOCA, assuming that the valve is open for testing or suppression pool cooling purposes, could interfere with proper operation of the ECCS systems necessary for safe shutdown of the plant.

III. Corrective Actions Taken

Mississippi Power & Light Company and the Constructor have performed inspections to identify where the deficiency exists. A total of fifty-six (56) Nonconforming Reports have been issued documenting damaged metallic conduit and cable damage, as applicable. A Quality Control Stop Work Order #QCO10 was issued on April 11, 1980 to stop installation of metallic conduit and cable pulling into metallic conduit.

This Stop Order was lifted on July 8, 1980 based on the corrective action steps taken as follows:

1. The extent of the deficiency was determined;
2. Training was conducted in proper threading techniques for metallic conduit. Instruction was also conducted in proper inspection criteria listed in Bechtel Procedure WP/P-E-20; and
3. A 100% inspection was performed on all threaded metallic conduit, two inches and larger, which was installed and accepted prior to issuance of the Stop Work Order. Bechtel Management Request (MCAR) Number 74 was assigned to track resolution of these items.