



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

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JAMES P. McGAUGHY, JR.
ASSISTANT VICE PRESIDENT

December 1, 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, 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-81/42, Interim Report No. 1,
NUREG-0588
AECM-81/473

On October 15, 1981, Mississippi Power & Light Company notified Mr. P. A. Taylor, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns equipment determined to be unqualified during the investigation of the NUREG-0588 Requirements

In a previous telephone conversation with your Mr. F. S. Cantrell on August 3, 1981, MP&L agreed to the following:

1. Reporting, under 10CFR50.55(e), the first piece of equipment reviewed under the qualification plan which were it "to have remained uncorrected could have adversely affected the safety of operations of the nuclear power plant".
2. Submitting interim reports approximately every three months after the first report, adding additional equipment found not to be qualified and which also "could adversely affect safety".
3. Submitting a final report on completion of the qualification work, referencing previous interim reports.

This report was originally due your office on November 16, 1981, but a two week extension was requested and granted by Mr. P. A. Taylor on November 17, 1981.

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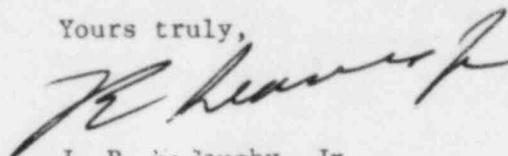
Mr. J. P. O'Reilly
NRC

AECM-81/473
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Attached is our Interim Report No. 1 identifying that equipment previously reported and since determined to be reportable within the meaning of 10CFR50.55(e) and that equipment previously reported and since determined not to be reportable within the meaning of 10CFR50.55(e).

We expect to submit our next Interim Report by March 1, 1982.

Yours truly,


701 J. P. McGaughy, Jr.

ATR:dr
ATTACHMENT

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 #1 TO PRD-81/42

1. Description of Deficiency

As a result of NUREG-0588, "Environmental Qualification Requirements", MP&L initiated a review to determine the acceptability of the specified equipment. The initial review has revealed that certain equipment is not qualified for its intended safety-related use. The equipment identified, to date, is as follows:

A. NSSS Scope of Supply

1. MSIV Limit Switches, NAMCO Model EA740
2. HPCS Motor Operated Valve, Limitorque, Model SB-3-100
3. Schutte & Koerting (S&K) Flow Meter

B. BOP Scope of Supply

1. Butterfly Valve Position Switches, NAMCO Model EA170
2. Gould Handswitch M-009B

2. Safety Implications

Each item will be discussed in the enclosures to this attachment.

Enclosures:

1. NAMCO EA740
2. HPCS Motor Operated Valve
3. S&K Flow Meter
4. NAMCO EA170 Position Switches
5. Gould Handswitch M-009B

Component: MSIV Limit Switches
Manufacturer: NAMCO - Model EA 740

1. Description

The limit switches for the MSIV's were manufactured in 1975. They were NAMCO Model EA-740 Limit Switches. These were never environmentally qualified (no test report) for their intended application.

The MSIV Limit Switches are used in the MSIV-Leakage Control System (MSIV-LCS) to isolate or interlock the LCS depending on the in-board MSIV position indication. The LCS is used following a Design Basis Accident (DBA) recirculation line break to collect MSIV seat leakage and direct it to the Standby Gas Treatment System in Auxiliary Building for processing.

Since the limit switches had not been environmentally qualified for their intended use, their failure could adversely affect the safety of operations of the plant and is, therefore, reportable within the meaning of 10CFR50.55(e).

2. Approach to Resolution of the Problem

NAMCO has, since 1975, modified and qualified the EA-740 switches to meet IEEE 323-1974. These new switches will be purchased and used to replace the existing switches. Additionally, the new switches will be tested to obtain a five (5) year qualified life.

3. Status of Proposed Resolution

The new switches are expected to be installed by December 31, 1981, and the additional testing is expected to be completed by June, 1982.

4. Reason Why A Final Report Will Be Delayed

As noted in the letter of transmittal.

5. Date When A Final Report Will Be Submitted

As noted in the letter of transmittal.

Component: HPCS Motor Operated Valve
Manufacturer: Limitorque Model SB-3-100

1. Description

Adequate test data does not exist to support the qualification of the Limitorque Model SB-3-100 valve actuator used on valve (E22-F004) in the High Pressure Core Spray System (HPCS).

This valve is the HPCS injection valve and is required to open during the first minute of an accident to initiate HPCS flow to the core. Subsequently, the valve serves as an isolation valve to terminate HPCS flow on high reactor water level or by operator action.

Failure of the valve to perform its intended safety function could adversely affect the safety of operations of the plant and is, therefore, reportable within the meaning of 10CFR50.55(e).

2. Approach to Resolution of the Problem

The actuator components are to be replaced by components which have been extensively type tested for abnormal environmental conditions. The aging tests, however, are considered inadequate to meet the requirements of NUREG-0588. Therefore, additional testing will be accomplished by June 1982 to obtain a fully qualified actuator.

3. Status of Proposed Resolution

The unqualified components in the Unit 1 valve actuator will be replaced by December 31, 1981 and additional testing is being undertaken with a projected completion of June 1982.

4. Reason Why A Final Report Will Be Delayed

As noted in the letter of transmittal.

5. Date When A Final Report Will Be Submitted

As noted in the letter of transmittal.

Component: Flow Meter

Manufacturer: Schutte & Koerting (S&K) Model 20-9651-8550

1. Description

The S&K flow meter is subject to only radiation as a harsh environment. Pressure, temperature, and humidity are non-harsh for this device. The radiation environment will affect the function of the Teflon washer located in the flow meter.

The flow meter is used in the MSIV - Leakage Control System (MSIV-LCS). The MSIV-LCS, including instrumentation and circuits necessary for the functioning of the system, are designed in accordance with standards applicable to an engineered safety feature.

2. Analysis of Safety Implications

The flow meter measures leakage flow in a 1" pipeline toward the low pressure manifold. The flow meter can act as a flow rate regulating check valve in both directions. If the Teflon washer is deformed due to radiation, then the alignment of LVRT coil can be affected. However, the flow meter will continue to perform the necessary function of physically limiting the leakage flow to the Low Pressure Manifold. The flow sensor is a fail-safe design and it activates an alarm under high leakage flow conditions. This alarm is used for initiation of isolation of the in-board LCS system. If the failure of the Teflon washer effects a misalignment of the LVRT coil, an erroneous flow signal can be generated.

This failure, however, will not adversely affect the safety of operations of the plant because the flow meter will continue to perform its limiting function and an erroneous high-leakage flow signal will cause the initiation of measures to isolate the in-board LCS system.

This deficiency, therefore, is not reportable within the meaning of 10CFR50.55(e).

3. Corrective Actions Taken

Even though the failure of the flow meter would not adversely affect safety, it does not meet the NUREG-0588, Category II requirements. To meet these requirements, the Teflon washer will be replaced with a brass washer and the flow meter will be recalibrated.

It is expected that the flow meter will be modified by June, 1982.

Component: Position Switches EA-170
Manufacturer: NAMCO Controls

1. Description

The NAMCO Model EA-170 Position Switches are installed on 24 valves both inside and outside containment. The affected systems are: Standby Liquid Control, Combustible Gas Control, Fuel Pool Cooling & Cleanup, Containment Cooling, Condensate & Refueling Water Transfer & Storage, Plant Service Water, Auxiliary Building Ventilation, and Fuel Handling Area Ventilation.

There are either no environmental qualification test reports available or the material used in these switches has a maximum service temperature of only 225° F. Therefore, the switches would not remain functional in the elevated temperatures during a Loss of Coolant Accident (LOCA) or High Energy Line Break (HELB).

This deficiency is, therefore, reportable within the meaning of 10CFR50.55(e).

2. Approach to Resolution of the Problem

The switches will be replaced with qualified NAMCO EA-740 switches prior to fuel load.

3. Status of Proposed Resolution

Procurement action has been initiated to obtain the NAMCO Model EA-740 switches. It is expected that it will require 10 weeks for delivery and installation of the switches.

4. Reason Why A Final Report Will Be Delayed

As noted in the letter of transmittal.

5. Date When A Final Report Will Be Submitted

As noted in the letter transmittal.

Component: Handswitch
Manufacturer: Gould, Inc. M009B

1. Description

The handswitch is not qualified to withstand the radiation levels in its present location. The handswitch is used in the Standby Service Water System which removes heat from plant auxiliaries during an emergency shutdown of the plant.

2. Analysis of Safety Implications

The specific application of the handswitch is in relation to the Residual Heat Removal (RHR) Loop B Heat Exchangers. When the RHR Heat Exchangers are not in operation, the tube side piping is flushed with demineralized water supplied by the makeup water system to purge the heat exchanger of impurities and minimize corrosion and fouling. The demineralized water is brought in through a supply valve which is operated with local handswitch HS-M009B.

The failure of the handswitch will not adversely affect the function of the RHR Heat Exchangers to perform their intended safety function. The handswitch only controls water to flush piping when the Heat Exchangers are not in operation.

This deficiency, therefore, is not reportable within the meaning of 10CFR50.55(e).

3. Corrective Actions Taken

Even though the failure of the handswitch would not adversely affect safety, it does not meet the NUREG-0588 requirements. To meet these requirements the handswitch will be relocated to reduce the radiation exposure of the handswitch to acceptable limits.

It is expected the handswitch will be relocated prior to fuel load.



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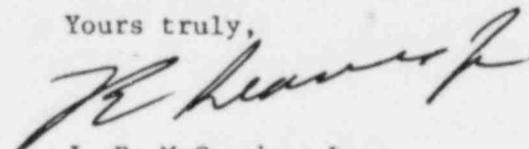
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