

Attachment to AECM-84/0055

PHONE

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SUPPLEMENTARY INFORMATION TO  
LER 83-083/01 X-2

Mississippi Power & Light Company  
Grand Gulf Nuclear Station - Unit 1  
Docket No. 50-416

Technical Specification Involved: N/A  
Reported Under Technical Specification: 6.9.1.12.1 and 6.9.1.12.e

Event Narrative:

This is an update to a previous report submitted on August 31, 1983. The event for which the report was submitted is described in the following paragraphs.

On July 16, 1983, Division I was given a LOCA signal in accordance with the Standby Diesel Generator 11 eighteen (18) month functional test. All intended results were demonstrated except for the following:

1. SSW valves P41-F113, F160A and F238 did not reposition.
2. The RHR LPCI "A" injection valve E12-F042A did not open.
3. The required Division I loads did not shed from the Division I bus (15AA).

For the SSW valves the causes are as follows:

o F113 (SSW Fill Tank Outlet Valve)

Contacts R4-M4 of relay R7 malfunctioned and the relay was replaced. Contacts R4-M4 (normally closed contacts when the relay is deenergized) are used to energize the 42R device and thus drive the valve shut on a LOCA. Relay type is AGASTAT.

o F160A (Outboard Outlet From Drywell Purge Compressor)

Contacts R1-M1 of relay R8 malfunctioned and the relay was replaced. Contacts R1-M1 (normally closed contacts when the relay is deenergized) are used to energize the 42F device and thus drive the valve open on a LOCA. Relay type is AGASTAT.

o F238 (Outlet From ESF Room Cooler)

Problem was found to be a tripped 49 (thermal overload) device. The device was reset and the valve was retested satisfactorily. On a valid LOCA, this device is not in the logic circuit.

For the RHR LPCI "A" injection valve the cause is as follows:

Contacts R1-M1 of relay K24A malfunctioned. Contacts R1-M1 (normally closed contacts when the relay is deenergized) serve to energize K23A which in turn opens the valve on a valid LOCA signal (level 1). Relay is AGASTAT.

For the Load Shed and Sequencing (LSS) panel the cause is as follows:

A test pulse signal which is periodically sent through the logic "blocked" the LOCA signal from being processed. When the test pulse signal is input and a signal is received superimposed on the test signal the LSS panel should "hold onto" the LOCA signal and process it as though the pulse was not there, allowing completion of the required actions. The test pulse signal lasts for such a short duration that it is never seen as a valid LOCA signal (signal has cleared before relays have time to act) and is not meant to block the LOCA signal, however, tests were conducted and the above verified i.e., when a LOCA signal was input to the system coincident and synchronous with the test pulse signal, the LOCA signal was found to be lost.

Corrective actions implemented or being implemented are as follows:

All subject relays were replaced in the field. The vendor for the LSS panel (Vitro) has subsequently verified that a design problem exists for both Division I and II and that ECCS pumps will not start if the LOCA signal occurs at exactly the same time that the test pulse is initiated. In addition, the exact same test was re-performed on July 25, 1983, and the results were totally satisfactory (test pulse and LOCA not superimposed on one another).

Design Change Package 83/398 implemented modifications to the logic circuitry to insure proper response to real input while in the automatic test mode. The LSS deficiency was also reported pursuant to 10CFR 21 in PRD 83/13.

The Agastat relay failures were determined to be generic for pre-August, 1977 Agastat GP series relays. This was reported in LER 83-121/03 X-2 and PRD 83/12. AECM-84/0024 also contains additional information.

This is a written followup report consistent with the reporting requirements of Technical Specification 6.9.1.12 paragraphs (e) and (i) and is submitted as a final report.



# MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

February 6, 1984

NUCLEAR PRODUCTION DEPARTMENT

U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta St., N.W., Suite 2900  
Atlanta, Georgia 30303

Attention: Mr. J. P. O'Reilly, Regional Administrator

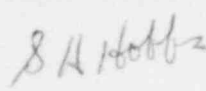
Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station  
Unit 1  
Docket No. 50-416  
License No. NPF-13  
File 0260/L-835.0  
Update Report - Standby Diesel  
Generator 11 Eighteen Month  
Functional Test  
Unsatisfactory  
LER 83-083/01 X-2  
AECM-84/0055

This letter submits an update to a previous report submitted on August 31, 1983. The event for which the report was submitted occurred on July 16, 1983, when a LOCA signal was simulated for the performance of an eighteen (18) month Emergency Diesel Generator functional test. Several Standby Service Water System valves did not reposition, the LPCI "A" injection valve did not open and the applicable Division I electrical loads did not shed as required. This was reported pursuant to Technical Specification 6.9.1.12.e and 6.9.1.12.i.

Modifications and retesting of the Load Shedding and Sequencing panel are complete. Investigation into the cause of the relay failures is complete. This is a final report. Attached is LER 83-083/01 X-2 with Supplementary Information.

Yours truly,

  
L. F. Dale  
Manager of Nuclear Services

EBS/SHH:sad  
Attachment

cc: (See Next Page)

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## MISSISSIPPI POWER &amp; LIGHT COMPANY

cc: Mr. J. B. Richard (w/a)  
Mr. R. B. McGehee (w/o)  
Mr. T. B. Conner (w/o)  
Mr. G. B. Taylor (w/o)

Mr. Richard C. DeYoung, Director (w/a)  
Office of Inspection & Enforcement  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Document Control Desk (w/a)  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555