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(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

PUBLICITY

ISSUED (44) DESCRIPTION (45)

NRC USE ONLY

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

PHONE: _____

Supplementary Information to
LER 83-187/03 X-1

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

Technical Specification Involved: 3.4.9.2
Reported Under Technical Specification: 6.9.1.13.b

Event Narrative

At 2324 on November 22, 1983, maintenance technicians filling a reference leg caused a spike on reactor vessel level transmitters. This resulted in several Division I automatic actuations including an injection by the Low Pressure Core Spray pump. The plant was in Cold Shutdown at the time of the event. The LPCS injection lasted for 1 minute 40 seconds and raised the vessel level from 58 inches to 104 inches on the Upset Range level recorder. Reactor coolant temperature was approximately 121°F.

Other automatic actuations were:

- o Division I Diesel Generator start
- o Division I LSS initiated for a LOCA
- o Auxiliary Building Outboard isolations
- o Standby Gas Treatment started
- o Control Room Fresh Air Unit started
- o RWCU isolated
- o Shutdown Cooling Loop "A" isolated
- o LPCI "A" pump attempted to start twice but tripped each time due to its suppression pool suction valve being closed for Shutdown Cooling operation.

Computer printouts reviewed following the event indicated that RPS bus "A" experienced some voltage transients. Power supplies for APRMs A, C, E, and G tripped off at the same time the manual scram relay computer point indicated a trip at 2327:47 hours. The manual scram relay trip reset 0.5 seconds later and tripped again at 2327:54 hours. It reset approximately 7 seconds later. Operators verified that RPS bus "A" was energized by the motor generator set.

A subsequent investigation revealed the shields on computer cables were not connected which would have contributed to erroneous indications on the computer. These shields are now being connected. Design Change 83/3552 was completed March 16, 1984, which removed the neutron monitor power supply ground from the chassis ground and connected it to a signal common bus to prevent ground loops which could result in spurious trips.

The cause of the ESF actuations was due to personnel error in filling the reference legs. The Reference Leg Check Procedure (07-S-13-23) was not used for this activity. Technicians were working under a work authorization to investigate and correct a mismatch in the narrow-range level indicators.

Transmitter C34-LT-N004A was found to have a milliamp output higher than expected. Historically, this has indicated that the reference leg needed filling, therefore, the technicians were instructed by their supervisor to fill the reference leg. When the fill supply valve was opened, a pressure spike was placed on several level transmitters sharing the common reference leg resulting in a reactor half scram signal and ESF initiations.

The generically written Reference Leg Check procedure is being revised to provide guidance in filling reference legs associated with vessel instrumentation. The Maintenance Assistant Plant Manager issued a memo to the I&C Supervisors emphasizing the importance of using the procedure when filling reference legs associated with vessel instrumentation. The maintenance supervisor was reprimanded. This is submitted as a final report.



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

84 MAR 2 10:00
March 26, 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 - Spike on Reactor
Vessel Level Transmitters
Results in Division I Automatic
Actuations
LER 83-187/03 X-1
AECM-84/0176

This letter submits an update to a previous report submitted on December 22, 1983. The event for which the report was submitted occurred on November 22, 1983, when maintenance technicians filling a reference leg caused a spike on reactor vessel level transmitters. This resulted in several Division I automatic actuations including an injection by the Low Pressure Core Spray pump and an isolation of Shutdown Cooling. The plant was in Cold Shutdown at the time of the event. Shutdown Cooling was restored within one hour as required by Technical Specification 3.4.9.2. This was reported pursuant to Technical Specification 6.9.1.13.b.

Our investigation into the cause of the event is complete. Corrective actions to prevent recurrence are complete or are in the process of being completed. This is a final report. Attached is LER 83-187/03 X-1 with Supplementary Information.

Yours truly,

L. F. Dale
Manager of Nuclear Services

EBS/SHH:rg
Attachment

cc: See next page

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MISSISSIPPI POWER & LIGHT COMPANY

cc: Mr. J. B. Richard (w/a)
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