

LICENSEE EVENT REPORT

CONTROL BLOCK: (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 On July 18, 1983, an unanticipated activation of the Division II LOCA
03 logic occurred. All auto actions expected to occur did in fact occur,
04 except for the auto start of RHR "C" pump. The event had no affect on
05 the health and safety of the public and did not constitute a threat to
06 plant safety. This is reported pursuant to T.S.6.9.1.13.b. The event
07 was also reported pursuant to 10CFR 50.72.

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CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 The cause of the LOCA signal was a malfunctioning inverter. The failure
11 of the RHR "C" pump to start is believed to stem from the LSS (Load
12 Shed Sequence) panel (See LER 83-083). Apparently relay XK18 of the LSS
13 panel failed to get a signal to energize. A maintenance inspection
14 revealed no other problems. The inverter was replaced.

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NRC USE ONLY

NAME OF PREPARER

Ron Byrd

PHONE:

SUPPLEMENTARY INFORMATION TO
LER 83-084/03 X-1

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

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

Event Narrative:

This is an update to a previous report submitted on July 18, 1983. The event for which the report was submitted is described in the following paragraphs.

On July 18, 1983, at 2120 hours, an unanticipated activation of the Division II LOCA Logic occurred. All "auto" actions expected to occur did occur except for the auto start of RHR "C" pump. The RHR "B" pump was in shutdown cooling mode at the time of the event and was unavailable for auto initiation. The LOCA signal was produced by a malfunctioning inverter, JYK-701. The inverter was subsequently replaced.

Earlier, on July 14, 1983, a problem had been discovered with 24 Vdc power supply JYK-704 which is supplied 120 Vac by inverter JYK-701. All Division II ECCS subsystems were declared inoperable at that time. The problem was explained as low voltage to the Division II ECCS trip units. A Limiting Condition for Operation was entered pursuant to Technical Specification 3.5.2 until testing on Division I ECCS was completed one (1) hour later.

The sequence of events was explained as follows: The output voltage from inverter JYK-701 was oscillating similar to a sinusoidal wave. At 2120 hours on July 18, 1983, the negative peak of the voltage dipped to below the normal input rating of power supply JYK-704, this powered down instrument nest Z4 driving all instruments downscale which includes trip units B21-N691B and F wide range reactor level trip indicating units (Low Low Level 1), and in turn powering down relay K7 and K8 which energized to trip (K7, K8, and the trip indicating unit are all powered from power supply JYK-704). Following this the output from inverter JYK-701 was on the rise and rose above the normal input for JYK-704 which in turn sent power to B21-N691B, F and relays K7 and K8. However, since the response time of the trip unit is slower than that of the relays, K7 and K8 energized to seal in a LOCA signal before trip units B21-F691B or F could rise above their trip setpoints.

The RHR "C" breaker, fuse block, wiring, relays and handswitch were tested and inspected. No electrical problems were found. It is believed that the XK18 relay in the LSS panel did not receive a signal to energize. The deficiency noted in LER 83-083 would cause a failure of the RHR "C" pump to start automatically. This deficiency has been corrected.



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

September 26, 1983

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 - Unanticipated
Activation of the Division
II LOCA Logic
LER 83-084/03 X-1
AECM-83/0593

This letter submits an update to a previous report submitted on August 16, 1983. The event for which the report was submitted occurred on July 18, 1983, when an unanticipated activation of the Division II LOCA logic occurred. All automatic actions expected to occur did occur except for the automatic start of RHR "C" pump. This was reported pursuant to Technical Specification 6.9.1.13.b. The event was also reported pursuant to 10CFR 50.72.

Investigation and corrective action related to the subject LER is complete. Attached is LER 83-084/03 X-1 with Supplementary Information.

Yours truly,

L. F. Dale
Manager of Nuclear Services

EBS/SHH:sap
Attachment

cc: (See Next Page)

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MISSISSIPPI POWER & LIGHT COMPANY

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