

NRC Form 366  
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Grand Gulf Nuclear Station - Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 4 1 6 1				PAGE (3) 1 OF 0 3	
TITLE (4) Reactor Scram Due to Main Generator Trip															
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)					
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES NA				DOCKET NUMBER(S) 0 5 0 0 0		
0 8	0 7	8 5	8 5	0 3 0	0 0	0 9	0 5	8 5					0 5 0 0 0		
OPERATING MODE (9) 1		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)													
POWER LEVEL (10) 01819		20.402(b)				20.405(c)				<input checked="" type="checkbox"/> 50.73(a)(2)(iv)				73.71(b)	
		20.405(a)(1)(i)				50.36(c)(1)				<input type="checkbox"/> 50.73(a)(2)(v)				73.71(c)	
		20.405(a)(1)(ii)				50.36(c)(2)				<input type="checkbox"/> 50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
		20.405(a)(1)(iii)				50.73(a)(2)(i)				<input type="checkbox"/> 50.73(a)(2)(viii)(A)					
		20.405(a)(1)(iv)				50.73(a)(2)(ii)				<input type="checkbox"/> 50.73(a)(2)(viii)(B)					
		20.405(a)(1)(v)				50.73(a)(2)(iii)				<input type="checkbox"/> 50.73(a)(2)(x)					
LICENSEE CONTACT FOR THIS LER (12)															
NAME Ronald Byrd/Licensing Engineer										TELEPHONE NUMBER AREA CODE 6 0 1 4 3 7 - 2 1 4 9					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)															
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs						
X	TJ	CION	H10716	N											
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR	
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)										<input checked="" type="checkbox"/> NO					
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)															

On August 7, 1985 at 1402, a painter inadvertently bumped an electrical cable from a transmitter which senses the outlet flow rate of the generator primary cooling water. Due to a faulty instrument plug connector, an open circuit occurred which caused the flow rate instrument to fail downscale. The low primary water flow signal tripped the generator resulting in a reactor scram. Six main steam line safety relief valves lifted to control reactor pressure.

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(9-83)

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Grand Gulf Nuclear Station - Unit 1	0 5 0 0 0 4 1 6	8 5	—	0 3 0	—	0 0	0 2 OF 0 3

TEXT (If more space is required, use additional NRC Form 368A's) (17)

Description of Reportable Occurrence

On August 7, 1985 at 1402, the reactor automatically scrambled when the turbine generator tripped due to a false generator cooling water low flow rate signal.

Initial Conditions

The plant was operating at 89 percent reactor power.

Status of Redundant or Backup Systems

Not Applicable

Nature of Occurrence

Two transmitters sense the generator rotor primary water outlet flow rate to provide a generator trip on low flow. Normally a low flow trip must be actuated by both instruments. However, if one instrument is in high gross failure (pegged high), the logic allows the other to trip the generator if it senses a low flow with additional conditions being satisfied. Due to the flow rate, the flow orifice size, and the flow rate transmitter range, the flow at that time was causing both instruments to indicate a high gross failure.

On August 7, 1985 at 1402 a painter bumped a cable to one of the two transmitters which sense generator rotor primary water outlet flow. This resulted in a loss of power to the transmitter causing it to fail low. Since the other instrument was in high gross failure, the Electronic Generator Protection (EGP) circuitry sensed a trip condition for both channels and tripped the turbine. The reactor automatically scrambled on a turbine control valve fast closure. The reactor recirculation pumps shifted to the low frequency motor generator sets. Six safety relief valves lifted to control pressure as their low-low setpoint was reached.

Immediate Corrective Actions Taken

The operators carried out the actions of the off-normal event procedure. The minimum water level reached was +2.5 inches and water level was restored with the feedwater system. The low water level signals were reset within 30 seconds following the scram.

Apparent Cause

The cause of the trip was due to a faulty instrument plug connector. The operating flow of the generator cooling water which caused the instrument high gross failure signals was also a contributing factor. If one instrument had not been in high gross failure, a generator trip would not have occurred when one of the instruments failed low.

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Supplemental Corrective Action

The faulty plug connector was repaired. The water flow was reduced to clear the high gross failure signals. The transmitters and/or the flow orifice will be replaced when materials and sufficient outage time are available.

Safety Assessment

All safety systems functioned properly. ECCS systems were not required to operate. The reactor reached a maximum pressure of 1103 psig and a minimum water level of +2.5 inches. The plant was restarted at 1447 on August 8, 1985.



# MISSISSIPPI POWER & LIGHT COMPANY

*Helping Build Mississippi*

P. O. BOX 1640, JACKSON, MISSISSIPPI 39215-1640

September 5, 1985

NUCLEAR LICENSING & SAFETY DEPARTMENT

Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Gentlemen:

SUBJECT: Grand Gulf Nuclear Station  
Unit 1  
Docket No. 50-416  
License No. NPF-29  
File: 0260/L-835.0  
Reactor Scram Due to Main Generator  
Trip  
LER 85-030-0  
AECM-85/0284

Attached is Licensee Event Report (LER) 85-030-0 which is a final report.

Yours truly,

L. F. Dale  
Director

EBS/SHH:vog  
Attachment

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