

NRC Form 308  
(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   OF   0   2				PAGE (3) 1 OF 02														
TITLE (4) RPS Bus Breaker Trip Resulting in Loss of SDC																												
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)																		
MONTH	DAY	YEAR	YEA	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES NA				DOCKET NUMBER(S) 0   5   0   0   0															
0	1	0	7	8	4	8	4	-	0	0	2	-	0	2	0	5	3	0	8	4	0	5	0	0	0			
OPERATING MODE (9) 4		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																										
POWER LEVEL (10) 0   0   0		20.402(b)				20.406(e)				50.73(a)(2)(iv)				73.71(b)														
		20.406(a)(1)(i)				50.30(a)(1)				X 50.73(a)(2)(v)				73.71(a)														
		20.406(a)(1)(ii)				50.30(a)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 365A)														
		20.406(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(viii)(A)																		
		20.406(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)																		
		20.406(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)																		
LICENSEE CONTACT FOR THIS LER (12)																												
NAME Ronald W. Byrd/Licensing Engineer										TELEPHONE NUMBER 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 NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC																		
X	EID	BKIR	G080	N																								
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR												
YES (If yes, complete EXPECTED SUBMISSION DATE)												X NO																

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

Since January 7, 1984, several instances of RPS bus breaker trips have resulted in a loss of Shutdown Cooling. Dates of occurrences were January 7, 9, 11, 14, 19, and 20, and February 23 and 24.

Redundant trains of the shutdown cooling mode of RHR are supplied through a common inlet containing two motor-operated valves in series. The isolation logic for these valves receive power from the RPS bus. Loss of either RPS bus causes one or the other containment isolation valves to close, causing a total loss of shutdown cooling.

A trip on January 19 was due to a circuit board failure of an Electrical Protection Assembly (EPA). The remaining trips are attributed to voltage transients on the RPS buses. The time delay settings for the EPA breakers were increased to prevent trips on short transients. An increased tolerance range for the undervoltage EPA trip settings is being considered.

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NRC Form 365A  
(9-83)

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

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 4 -	0	0	2	0	2

TEXT (If more space is required, use additional NRC Form 365A's) (17)

Since January 7, 1984, several instances of RPS bus breaker trips have resulted in a loss of Shutdown Cooling. Dates of occurrences were January 7, 9, 11, 14, 19, and 20, and February 23 and 24. The reactor was in Cold Shutdown during each event. In each case operators restored Shutdown Cooling within one hour in accordance with Technical Specification 3.4.9.2. The trips occurred on both bus A and B with power supplied by either the motor generator set or the alternate supply.

A trip on January 14 also resulted in a full scram signal, an isolation of the Reactor Water Cleanup System, a Division 2 Auxiliary Building isolation, an initiation of Standby Gas Treatment B, and the initiation of Control Room Fresh Air Unit B in the isolated mode. This was due to a planned Division 1 electrical outage concurrent with the trip of the RPS B bus.

A trip on January 19 was attributed to a circuit board failure of an Electrical Protection Assembly (EPA). The trip occurred as a half scram signal was reset. The faulty EPA logic circuit card was replaced.

The remaining trips have been attributed to voltage transients on the buses. To preclude recurrence of these events, GGNS has completed three changes. They are as follows:

1. The time delay settings for the EPA trip logic circuitry has been increased from 0.1 seconds to 3.5 seconds. This is in accordance with recently issued Revision 3 of General Electric's RPS Specification 22A3771AE.
2. The output setting of the power supplies has been increased from 120V to 125V.
3. The motor generator overvoltage relay setting has been increased to 140V to prevent trips while transferring power sources at the increased output.

GGNS will also request a Technical Specification change to increase the voltage setpoint tolerances for EPA breaker trips. This is a final report.



# MISSISSIPPI POWER & LIGHT COMPANY

*Helping Build Mississippi*

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

May 30, 1984

NUCLEAR PRODUCTION 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-13  
File: 0260/L-835.0  
RPS Bus Breaker Trips Resulting in  
Loss of SDC  
LER 84-002-2  
AECM-84/0292

Attached is Licensee Event Report (LER) 84-002-2 which is a final report.

Yours truly,

L. F. Dale

Director of Nuclear Licensing & Safety

EBS/SHH:rg  
Attachment

cc: Mr. J. B. Richard (w/a)  
Mr. R. B. McGehee (w/o)  
Mr. N. S. Reynolds (w/o)  
Mr. G. B. Taylor (w/o)

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