

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 1 6	PAGE (3) 1 OF 0 3
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TITLE (4) Reactor Scram due to Low Condenser Vacuum
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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		DOCKET NUMBER(S)	
0	9	1	6	8	5	8	5	0	3	6	0	0
1	0	1	5	8	5	0	0	1	0	1	5	8
									NA		0	
											5	
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OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)																			
	20.402(b)					20.405(e)					X 50.73(a)(2)(iv)					73.71(b)				
	10.405(a)(1)(i)					50.36(e)(1)					50.73(a)(2)(v)					73.71(c)				
	10.405(a)(1)(ii)					50.36(e)(2)					50.73(a)(2)(vii)					OTHER (Specify in Abstract below and in Text, NRC Form 366A)				
	20.405(a)(1)(iii)					50.73(a)(2)(i)					50.73(a)(2)(viii)(A)									
	20.405(a)(1)(iv)					50.73(a)(2)(ii)					50.73(a)(2)(viii)(B)									
20.405(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 1 0 1 4 3 1 7 - 1 2 1 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	CAUSE	SYSTEM

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)

On September 16, 1985, the reactor automatically scrambled due to a turbine trip on low condenser vacuum. The low vacuum was caused when the condenser circulating water pumps tripped on low lube water flow. A breaker supplying power to the control circuitry for the domestic water pumps (which supply the source water for the lubrication of the circulating water pumps) was inadvertently opened. The loss of power to the control circuitry resulted in the improper operation of both domestic water pumps creating the low lube water flow condition.

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NRC Form 366A
(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 6	- 0 0	0 2	OF 0 3

TEXT (If more space is required, use additional NRC Form 366A's) (17)

Description of Reportable Occurrence

On September 16, 1985, at 0812, the reactor automatically scrambled when the turbine tripped due to a low condenser vacuum.

Initial Conditions

The plant was operating at 100 percent reactor power.

Status of Redundant or Backup Systems

Both circulating water pumps were in operation maintaining condenser vacuum.

Nature of Occurrence

On September 16, 1985, at 0810 operators received a circulating water pump low lube water pressure alarm. An operator was dispatched to investigate. Anticipating a condenser circulating water flow reduction, operators reduced reactor power by decreasing reactor recirculation flow using the flow control valves. Operators then transferred both reactor recirculation pumps to the low frequency motor generators to continue the power reduction when it became apparent that the circulating water pumps were about to trip. Both circulating water pumps subsequently tripped due to a low lube water flow signal. Circulating water pump "A" was restarted, but it again tripped on low lube water flow.

At 0812 the condenser vacuum dropped to the turbine trip setpoint. The turbine trip occurred while reactor power was over 30 percent resulting in a reactor trip. The maximum reactor pressure following the scram was 1023 psig. The minimum water level was -11.6 inches. The reactor water level was restored at 0813 using the feedwater system.

Immediate Corrective Actions Taken

Operators carried out the actions of the scram Off Normal Event Procedure and stabilized plant conditions.

Apparent Cause

The lubricating water to the circulating water pump shaft bearings is provided by either of two lube water pumps. This lubricating water is drawn from the domestic water system and is supplied to the suction of the lube water pumps by either of two domestic water pumps.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

An investigation revealed that the control circuitry for the domestic water pumps was without power due to a breaker that was inadvertently opened. Further investigation failed to determine the cause of the open breaker, however, at the time, maintenance activity was in progress in the breaker panel area. The loss of power to the control circuitry resulted in the improper operation of both domestic water pumps creating the low lube water flow condition.

Supplemental Corrective Action

MP&L is evaluating a proposed design change which would allow the plant service water system to become an automatic source of lubricating water upon a loss of domestic water flow. Administrative controls to better assess the potential impact of contractor work in the area of essential equipment are being evaluated.

Safety Assessment

No ESF systems were required to operate. Reactor water level was restored with the feedwater system. The reactor pressure did not require the operation of safety relief valves. The plant restarted on September 17, 1985, at 0145.



MISSISSIPPI POWER & LIGHT COMPANY

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October 15, 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 Low
Condenser Vacuum
LER 85-036-0
AECM-85/0332

Attached is Licensee Event Report (LER) 85-036-0 which is a final report.

Yours truly,

L. F. Dale
Director

EBS/SHH:bms
Attachment

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