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)	DOCKET NUMBER (2)	PAGE (3)
Grand Gulf Nuclear Station - Unit 1	0 5 0 0 0 4 1 6	1 OF 0 3

TITLE (4)
Reactor Scram on Low Reactor Water Level

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 1	2 9	8 5	8 5	0 0 2	0 0	0 2	2 6	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9): 0 1

POWER LEVEL (10): 0 5 1 2

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
20.405(a)(1)(ii)	50.36(c)(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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Angela H. Horton/Licensing Engineer	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 NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

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)

The Heater Drain Pump was being placed in the pump forward mode when the N23-F054 valve (heater drain pump discharge to the feed pump suction header) could not be opened. A change in system lineup was established to decrease differential pressure across the valve in an attempt to crack the valve open. This resulted in F054 going full open which diverted condensate supply to the reactor feed pumps back to the hotwell. A reactor low level scram occurred following feed pump trips on low suction pressure.

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☆ U.S.GPO:1984-0-454-481/18759

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 0 2	— 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 January 29, 1985 at 1820 hours a low water level 3 (11.4 inches) reactor scram occurred following the trip of both operating reactor feed pumps.

Initial Conditions

The plant was operating at approximately 52% power with two condensate pumps, two condensate booster pumps, and two reactor feed pumps maintaining the reactor water level. The N23-F054 valve (heater drain pump discharge to the feed pump suction heater) would not open electrically or manually.

Status of Redundant or Backup Systems

N/A

Nature of Occurrence

The Operations Shift was in the process of placing the B Heater Drain Pump in the pump forward mode when problems in opening the N23-F054 valve were experienced. It appeared that F054 would not open because of excessive differential pressure (approximately 500 psig) across the valve. F054 still failed to open after this differential pressure was reduced to 300 psig. The operations shift decided to place the Heater Drain System back in the cleanup mode and then attempt to crack open the valve. This was to be accomplished by giving F054 an open signal and having an operator open the breaker as soon as the valve began to move off its seat, but confusion in communications led to the valve going full open. The condensate supply to the Reactor Feed Pumps diverted through F054, F078, F510, and back to the condenser hotwell. This resulted in a low suction pressure trip of the feed pumps. Reactor water level decreased and the reactor scrammed on low water level. RCIC was initiated manually. When the level reached -42 inches, HPCS was initiated and a Containment/Drywell/Auxillary Building Level 2 isolation occurred. The level reached -47 inches before it was restored by HPCS and RCIC.

Immediate Corrective Action

Reactor Core Isolation Cooling (RCIC) was manually initiated to restore the reactor water level and the Off-Normal Event Procedure (ONEP) for a reactor scram was performed.

Apparent Cause

Licensed operators deviated from an approved procedure in order to correct a problem with F054 valve. The operators interpreted the Conduct of Operations Procedure to contain a permissive statement to allow deviation from plant procedures when performing valve lineups, but it did not apply in this situation.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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Grand Gulf Nuclear Station - Unit 1	0 5 0 0 0 4 1 6	8 5	— 0 0 2	— 0 0	0 3 OF 0 3

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

Supplemental Corrective Action

The System Operating Instruction for the Heater Drain System (04-1-01-N23-1) was changed to provide a better way of placing the Heater Drain Pumps in the pump forward mode. A caution against opening F078 and F054 at the same time was also added. The Conduct of Operations Procedure (01-S-06-2) was revised to clarify that deviations from approved written procedures are not permitted.

Safety Assessment

All reactor safety systems performed as designed.

MISSISSIPPI POWER & LIGHT COMPANY
Helping Build Mississippi
P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

February 26, 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-825.0
Reactor Scram on Low Reactor Water Level
LER 85-002-0
AECM-85/0063

Attached is Licensee Event Report (LER) 85-002-0 which is a final report.

Yours truly,

L. F. Dale
Director

EBS/JRH/SHH:rw
Attachment

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

Mr. James M. Taylor, Director (w/a)
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. J. Nelson Grace, Regional Administrator (w/a)
U. S. Nuclear Regulatory Commission
Region II
101 Marietta St., N.W., Suite 2900
Atlanta, Georgia 30323

IE22
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