

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 OF 0 3				PAGE (3) 1 OF 03		
TITLE (4) Reactor Scram Due to Turbine 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 6	0 4	8 5	8 5	0 2 1	0 0	0 7	0 3	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) 0 9 1 7		20.402(b)				20.406(e)				<input checked="" type="checkbox"/> 50.73(a)(2)(iv)				73.71(b)		
		20.406(a)(1)(i)				50.36(e)(1)				50.73(a)(2)(v)				73.71(a)		
		20.406(a)(1)(ii)				50.36(e)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
		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 Angela H. Horton/Licensing Engineer										TELEPHONE NUMBER 6 0 1 4 3 7 - 1 2 1 4 9						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS						
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 June 4, 1985, condenser vacuum was lost when the suction valve of Steam Jet Air Ejector "A" closed due to intermittent low flow signals. This resulted in a turbine trip caused by the hydraulic low condenser vacuum trip mechanism. The reactor scrambled when the turbine stop and control valves closed.

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NRC Form 366A
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION

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 2 1	-	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 June 4, 1985 at 0550 the reactor scrammed due to a turbine trip caused by the hydraulic low condenser vacuum trip mechanism.

Initial Conditions

The plant was operating at approximately 97 percent reactor power.

Status of Redundant or Backup Systems

Not applicable.

Nature of Occurrence

Just prior to the scram, the operators had observed the decreasing condenser vacuum and were in the process of determining the cause when the turbine tripped. It was noted that the low vacuum annunciator in the control room did not alarm prior to the turbine trip. The reactor scrammed and the recirculation pumps transferred to slow speed due to the turbine stop and control valves closing. Eleven safety relief valves (SRVs) lifted to initially control reactor pressure and the low-low setpoint logic was actuated. Bypass valves then controlled pressure and the SRVs closed.

Immediate Corrective Actions Taken

The applicable off-normal-event procedures were carried out and the plant was stabilized.

Apparent Cause

The loss of vacuum to the condensers was caused by suction valve F003 of Steam Jet Air Ejector (SJAE) "A" being closed. The orifice in the drain line from the SJAE steam supply line moisture separator to the condenser had become fouled causing water to accumulate in the moisture separator. The water was then drawn into the steam supply line in intermittent slugs causing flow element K013 to sense low steam flow. Each time the control circuit for valve F003 received the low flow signal the valve closed incrementally.

Supplemental Corrective Action

Both SJAE lines were cleaned and a manual isolation valve was installed on the SJAE "A" moisture separator drain line between the orifice and the condenser. This will allow periodic cleaning of this drain line without breaking the vacuum. System Operating Instruction 04-1-01-N62-1 was revised to reflect this change and SJAE "A" has been designated the preferred train for SJAE startup for main condenser evacuation because of the capability of isolating the moisture separator drain line orifice.

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

The turbine vacuum trip annunciation circuitry in the control room has been changed so that it senses vacuum from the same line as the gauge on the front standard of the turbine deck which is located nearer the turbine low vacuum trip unit.

Safety Assessment

All safety systems performed as required. No setpoints for ECCS initiation were reached.



MISSISSIPPI POWER & LIGHT COMPANY

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July 3, 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 Turbine
Trip
LER 85-021-0
AECM-85/0206

Attached is Licensee Event Report (LER) 85-021-0 which is a final report.

Yours truly,

L. F. Dale
Director

JRM/EBS/SHH:clr
Attachment

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