

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				PAGE (3) 1 OF 0 3	
TITLE (4) Inadvertent ECCS Actuation and Reactor Scram While Shutdown															
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 2	1 4	8 5	8 5	0 0 9	0 0	0 3	1 5	8 5					0 5 0 0 0		
OPERATING MODE (9) 3			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)												
POWER LEVEL (10) 0 1 0 0			20.402(b)			20.405(c)			<input checked="" type="checkbox"/> 50.73(a)(2)(iv)			73.71(b)			
			20.405(a)(1)(i)			50.38(c)(1)			<input type="checkbox"/> 50.73(a)(2)(v)			73.71(c)			
			20.405(a)(1)(ii)			50.38(c)(2)			<input type="checkbox"/> 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)			<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 W.Byrd/Licensing Engineer										TELEPHONE NUMBER AREA CODE 6 1 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)

Maintenance technicians restoring a vessel level instrument to service caused a pressure disturbance on the instrument reference leg resulting in a Division 2 ESF actuation. The cause was due to the particular calibration procedure not specifying the valving sequence to be used to return reactor vessel level instrumentation to service. Whenever the restoration sequence is not specified by the particular calibration procedure, a generic procedure is utilized to restore the instrument. However, the sequence specified in the generic procedure was the reverse of the desired sequence for restoring this instrument.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Grand Gulf Nuclear Station - Unit 1	0 5 0 0 0 4 1 6 8 5 —	0 0 9	—	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 February 14, 1985, at 1009, maintenance technicians restoring a vessel level instrument to service caused a pressure disturbance on the instrument reference leg resulting in a Division 2 ESF actuation and a reactor scram.

Initial Conditions

The plant was in Hot Shutdown with a reactor pressure of 375 psig, a reactor temperature of 375°, and a normal reactor water level (36 inches). Maintenance technicians were checking the calibration of a reactor vessel differential pressure indicator which shares a common reference leg with several level transmitters.

Status of Redundant or Backup Systems

Not Applicable.

Nature of Occurrence

Maintenance technicians were performing Procedure 07-S-53-B21-2 to check the accuracy of reactor vessel instrument B21-PDI-R009B. The instrument provides indication only but shares a reference leg with several Division 2 vessel level transmitters. In restoring the instrument to service, a pressure disturbance was produced in the reference leg causing the vessel level instruments to sense a low level. This resulted in a half-scrum signal, a reactor recirculation pump trip, a containment isolation, and a Division 2 ECCS actuation.

Low Pressure Coolant Injection (LPCI) subsystems "B" and "C" initiated but did not inject due to elevated reactor pressure. The system was immediately secured following a vessel level verification. The Reactor Core Isolation Cooling (RCIC) system injected and was terminated as vessel level reached approximately +60 inches. Other system actuations included Standby Gas Treatment B, Drywell Purge Compressor B, Standby Service Water, and Standby Diesel Generator 12.

The Load Shedding and Sequencing System (LSS) actuation caused a loss of drywell cooling and instrument air. Service Air was lost when the P43F289 valve failed closed causing loss of cooling water to the air compressors. The scram valves drifted open due to the total loss of air, filling the scram discharge volume and causing the reactor to scram on high scram discharge volume level.

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

Immediate Corrective Actions

All systems were returned to normal status by 1135 the same day. Applicable Off-Normal Event procedures were performed.

Apparent Cause

The technicians used the sequence specified in general maintenance instruction 07-S-13-1, "Calibration of Instrument Loops", to restore the instrument to service. This method is used whenever the instrument restoration sequence is not specified. The valving sequence in this instruction was the reverse of the desired sequence causing a sudden pressure decrease and subsequent increase in the reference leg. The differential pressure sensed by vessel level transmitters indicated a false low reactor vessel water level condition.

The failure of the P43F289 valve was determined to be due to loss of inverter 1Y82, a non-safety related inverter, which was selected to its alternate power source for maintenance. The alternate power source was shed by the LSS actuation and resulted in the closing of P43F289.

Supplemental Corrective Action

All procedures utilized to calibrate vessel level instruments will be reviewed and corrected to include the proper valving sequence for removing and restoring instruments under test, prior to performing.

Safety Assessment

There was no actual problem with low vessel water level during this event.



MISSISSIPPI POWER & LIGHT COMPANY

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March 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
Inadvertent ECCS Actuation and
Reactor Scram While Shutdown
LER 85-009-0
AECM-85/0085

Attached is Licensee Event Report (LER) 85-009-0 which is a final report.

Yours truly,

L. F. Dale
Director

EBS/SHH:rg
Attachment

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

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