

NRC Form 306  
(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 012
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TITLE (4)  
Failed Relay Causes Shutdown Cooling Isolation

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		
0 4	1 0	8 6	8 6	0 1 2	0 0	0 5	1 2	8 6	DOCKET NUMBER(S) 0 5 0 0 0		

OPERATING MODE (9) 4

POWER LEVEL (10) 0 1 0 1 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)

20.402(b)	20.406(a)	<input checked="" type="checkbox"/>	80.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	80.38(a)(1)		80.73(a)(2)(v)	73.71(c)
20.406(a)(1)(ii)	80.38(a)(2)	<input checked="" type="checkbox"/>	80.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 386A)
20.406(a)(1)(iii)	80.73(a)(2)(i)		80.73(a)(2)(vii)(A)	
20.406(a)(1)(iv)	80.73(a)(2)(ii)		80.73(a)(2)(vii)(B)	
20.406(a)(1)(v)	80.73(a)(2)(iii)		80.73(a)(2)(viii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Ronald Byrd/Licensing Engineer	TELEPHONE NUMBER 6 1 0 1 4 3 7 1 2 1 4 1 9
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPD'S	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPD'S
X	J M R	L Y	A 1 0 9	N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)  NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

On April 10, 1986 at 0440 while in Cold Shutdown, containment isolation valve E12-F008 automatically closed due to a failed coil in a logic relay. The isolation valve is in a suction pipe common to both shutdown cooling loops of the Residual Heat Removal system. Alternate reactor coolant circulation methods were available. The "B" loop of shutdown cooling was restored to operation at 0555. Residual Heat was minimal with a reactor coolant temperature of approximately 110 degrees F. The relay is an Agastat model GPI, 120V, 60hz.

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NRC Form 308A  
(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)  Grand Gulf Nuclear Station - Unit 1	DOCKET NUMBER (2)  0 5   0   0   0   4   1   6	LER NUMBER (8)			PAGE (3)	
		YEAR 8   6	SEQUENTIAL NUMBER - 0   1   2	REVISION NUMBER - 0   0	0   2	OF 0   2

TEXT (If more space is required, use additional NRC Form 308A's) (17)

## A. REPORTABLE OCCURRENCE

On April 10, 1986 at 0440 while in Cold Shutdown, containment isolation valve E12-F008 automatically closed. Containment isolation is considered an Engineered Safety Feature (ESF) function. Valve E12-F008 is also common to both loops of the shutdown cooling mode of the Residual Heat Removal (RHR) system. This event was reported pursuant to 10CFR50.72(b)(2)(ii). This report is submitted pursuant to 10CFR50.73(a)(2)(iv) and 10CFR50.73(a)(2)(vii).

## B. INITIAL CONDITIONS

The plant was in mode 4, Cold Shutdown. RHR loop "B" was operating in the shutdown cooling mode. Reactor coolant temperature was approximately 110 degrees F.

## C. DESCRIPTION OF OCCURRENCE

On April 10, 1986 at 0440, containment isolation valve E12-F008 automatically closed. Because the isolation valve is in a suction pipe common to both loops of the RHR shutdown cooling mode, its closure causes both shutdown cooling loops to be inoperable. A Limiting Condition for Operation was entered in accordance with Technical Specification 3.4.9.2. Control Rod Drive flow and Reactor Water Cleanup system flow served as the alternate method of reactor coolant circulation. By 0555 on April 10, 1986, the RHR "B" loop was restored to operation by opening the circuit breaker and manually opening valve E12-F008.

## D. APPARENT CAUSE

The isolation logic for the E12-F008 valve deenergizes to automatically close the valve. The coil in relay B21-K129A failed on April 10, 1986. The deenergized state of the relay actuated the isolation function. The relay is an Agastat model GPI, 120V, 60hz. There were no generic failure mode implications.

## E. SUPPLEMENTAL CORRECTIVE ACTION

The failed relay was replaced on April 10, 1986 approximately 7 hours after the isolation.

## F. SAFETY ASSESSMENT

The plant had been in shutdown since April 7, 1986. Decay heat was minimal on April 10, 1986 with a reactor coolant temperature of 110 degrees F. Alternate reactor coolant circulation methods were available.



MISSISSIPPI POWER & LIGHT COMPANY

*Helping Build Mississippi*

P. O. BOX 1640, JACKSON, MISSISSIPPI 39215-1640

May 12, 1986

O. D. KINGSLEY, JR.  
VICE PRESIDENT - NUCLEAR OPERATIONS

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  
Failed Relay Causes Shutdown  
Cooling Isolation  
LER 86-012-00  
AECM-86/0137

Attached is Licensee Event Report (LER) 86-012-00 which is a final report.

Yours truly,

ODK:bms  
Attachment

cc: Mr. T. H. Cloninger (w/a)  
Mr. R. B. McGehee (w/a)  
Mr. N. S. Reynolds (w/a)  
Mr. H. L. Thomas (w/o)  
Mr. R. C. Butcher (w/a)

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