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August 10, 1992

U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Attention: Document Control Desk

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
Automatic Isolation of RWCU System
LER 92-015-00

GNRO-92/00104

Gentlemen:

Attached is Licensee Event Report 92-015-00 which is an interim report.

Yours truly,

WTC/BAB/cg
attachment

cc: Mr. D. C. Hintz (w/a)
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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1): Grand Gulf Nuclear Station

DOCKET NUMBER (2): 0 5 0 0 0 4 1 6

PAGE (3): 1 OF 0 3

TITLE (4): Atomatic Isolation of RWCU System

EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR		SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
0 7	0 9	9 2	9 2	—	0 1 5	— 0 0	0 8	1 0	9 2		0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (8)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
1	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10): 1 1 0 0	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: AREA CODE
Bruce A. Burke / Licensing Engineer	6 0 1 4 3 7 - 1 6 1 3

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
X YES (If yes, complete EXPECTED SUBMISSION DATE)	NO		0 3	1 0	9 3

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

Automatic actuation of the reactor water cleanup (RWCU) system inboard containment isolation valves occurred on July 9, 1992. The leak detection system (LDS) RWCU heat exchanger room high temperature annunciator alarmed simultaneous to the isolation. No leakage of RWCU or other systems was observed.

Investigation is continuing to determine exact cause(s) of the isolation. LDS features sensitive Riley Panalarm temperature switches. It is believed that this spurious isolation was actuated by an LDS trip signal generated by a Riley Panalarm switch. The leak detection logic actuates RWCU containment isolation valves on a single channel trip signal. A final report will be submitted after the investigation has determined the cause(s).

The actuation of the RWCU isolation system did not compromise the safe operation of GGNS. All safety related equipment operated as designed. The safety and health of the general public was not affected by this event.

NRC Form 366A
(9-83)

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Grand Gulf Nuclear Station	0 5 0 0 0 4 1 6	9 2	— 0 1 5	— 0 0	0 2 OF 0 3

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

A. Reportable Occurrence

Automatic actuation of reactor water cleanup (RWCU) system [CE] Division 1 containment isolation valves [NH] occurred at Grand Gulf Nuclear Station (GGNS) on July 9, 1992 at approximately 0422 hours. Automatic actuation of these RWCU system valves by a leak detection system (LDS) [JM] signal is an engineered safety feature (ESF) [JE] actuation. This event is reportable per 10 CFR 50.73(a)(2)(iv).

B. Initial Conditions

The plant was in Operational Condition 1 at approximately 100 percent power with reactor water at approximately 532 degrees F and 1020 psig. The RWCU system was in steady state operation with both cleanup pumps in service upon isolation.

C. Description of Occurrence

RWCU inboard isolation valves closed automatically. This occurred simultaneous to a RWCU heat exchanger room high temperature alarm in the control room.

LDS temperature switch E31-TS-N620A or differential temperature switch E31-TDS-612A would have initiated the alarm. Neither trip unit switch nor any other switch in either division of LDS was found to be in the trip condition upon inspection following the isolation. No leakage of RWCU or other systems was observed during inspection following the isolation. Temperatures were normal in the RWCU heat exchanger room. RWCU operation was restored on July 9, 1992 at 1722 hours.

D. Apparent Cause

Investigation has not determined the exact cause(s) of the isolation signal. It is believed that this actuation of the RWCU inboard isolation valves was triggered by an LDS trip signal. The cause of the signal is unknown, although spurious operation of temperature switch E31-TS-N620A or E31-TDS-N612A is suspected.

Trip logic for actuation of RWCU containment isolation valves requires only a single channel (i.e., non-coincident) trip signal from LDS. LDS features Riley Panalarm temperature switches. These sensitive switches have caused numerous RWCU isolations due to spurious operation. No other system transient which preceded or coincided with the isolation is known to have initiated the event.

A final report will be submitted after the investigation has determined the cause. Recent RWCU isolation events attributed to spurious operation of temperature switches were reported in LER 91-006, LER 91-015, and LER 92-014.

* U.S.GPO 1988-0-624-536/455

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Grand Gulf Nuclear Station	0 5 0 0 0 4 1 6	9 2	— 0 1 1 5	— 0 0	0 3 OF 0 3

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

E. Safety Assessment

The actuation of the RWCU isolation system did not compromise the safe operation of GGNS. The RWCU outboard isolation valves were operable and not affected by this transient. Safety systems functioned as designed upon receipt of the isolation signal. Other ESF systems were available to perform their intended function and responded as designed. The safety and health of the general public was not compromised by this event.

F. Additional Information

Energy Industry Identification System (EIIS) codes are identified in the text within brackets [ ].