

# REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8710220176 DOC. DATE: 87/10/16 NOTARIZED: NO DOCKET #  
 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397  
 AUTH. NAME AUTHOR AFFILIATION  
 DAVISON, W. S. Washington Public Power Supply System  
 POWERS, C. M. Washington Public Power Supply System  
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-028-00: on 870916, inadvertent ESF actuation occurred when leak detection sys temp monitoring unit failed causing nuclear steam supply shutoff sys Group B isolation. Caused by component failure. Isolation logic reset. W/871016 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4  
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

## NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL		RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD5 LA	1 1		PD5 PD	1 1
	SAMWORTH, R	1 1			
INTERNAL:	ACRS MICHELSON	1 1		ACRS MOELLER	2 2
	AEOD/DOA	1 1		AEOD/DSP/NAS	1 1
	AEOD/DSP/ROAB	2 2		AEOD/DSP/TPAB	1 1
	ARM/DCTS/DAB	1 1		DEDRO	1 1
	NRR/DEST/ADS	1 0		NRR/DEST/CEB	1 1
	NRR/DEST/ELB	1 1		NRR/DEST/ICSB	1 1
	NRR/DEST/MEB	1 1		NRR/DEST/MTB	1 1
	NRR/DEST/PSB	1 1		NRR/DEST/RSB	1 1
	NRR/DEST/SGB	1 1		NRR/DLPQ/HFB	1 1
	NRR/DLPQ/QAB	1 1		NRR/DOEA/EAB	1 1
	NRR/DREP/RAB	1 1		NRR/DREP/RPB	2 2
	NRR/DRIS/SIB	1 1		NRR/PMAS/ILRB	1 1
	<u>REG FILE</u> 02	1 1		RES DEPY GI	1 1
	RES TELFORD, J	1 1		RES/DE/EIB	1 1
	RGN5 FILE 01	1 1			
EXTERNAL:	EG&G GROH, M	5 5		H ST LOBBY WARD	1 1
	LPDR	1 1		NRC PDR	1 1
	NSIC HARRIS, J	1 1		NSIC MAYS, G	1 1



**LICENSEE EVENT REPORT (LER)**

FACILITY NAME (1) Washington Nuclear Plant - Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 9 7										PAGE (3) 1 OF 0 3			
TITLE (4) Spurious Primary Containment Isolation Caused by Temperature Monitoring System Component Failure																							
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	9	1	6	8	7	0	2	8	0	0	1	0	1	6	8	7	0	5	0	0	0		
OPERATING MODE (9)				THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																			
POWER LEVEL (10) 0 9 8				20.402(b)				20.405(c)				X 50.73(a)(2)(iv)				73.71(b)							
				20.405(a)(1)(i)				50.38(c)(1)				50.73(a)(2)(v)				73.71(c)							
				20.405(a)(1)(ii)				50.38(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 W.S. Davison, Compliance Engineer														TELEPHONE NUMBER 5 0 9 3 7 7 - 2 7 2 6									
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																							
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs														
X	II J	IM IO IN	PI O I 5 5	YES																			
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR									
YES (If yes, complete EXPECTED SUBMISSION DATE)										NO													

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

On September 16, 1987 at 1707 hours, an inadvertent ESF actuation occurred when a Leak Detection (LD) System temperature monitoring unit failed causing a Nuclear Steam Supply Shutoff System (NS4) Group 8 isolation. This failure resulted in closure of RCIC-V-8, the Reactor Core Isolation Cooling System (RCIC) outboard steam supply isolation valve for the RCIC turbine. After thorough investigation in accordance with the Plant Abnormal Conditions Procedures, the Plant Operators reset the isolation logic and returned the RCIC System lineup to normal. The failed temperature monitoring module was replaced with a new unit, the temperature monitor channel was recalibrated and placed back into service. The root cause of the failure was identified as module deficiencies previously noted in NRC IE Information Notice No. 86-69. An engineering study, in progress prior to this event, concluded that the temperature monitoring system circuitry is to be modified to improve its reliability. WNP-2 is also pursuing replacement of this system with a more reliable design. There is no safety significance associated with this event in that there was no actual initiating Plant condition and all equipment functioned correctly. This event posed no threat to the health and safety of Plant personnel or the public.

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## 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 (5)				PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER				
Washington Nuclear Plant - Unit 2	0 5 0 0 0 3 9 7	8 7	0 2 8	0 0	0 2	OF	0 3	

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

Plant Conditions

- a) Power Level - 98%
- b) Plant Mode - 1 Power Operation

Event

On September 16, 1987 at 1707 hours, an inadvertant ESF actuation occurred when a Leak Detection (LD) System temperature monitoring unit failed causing a partial Nuclear Steam Supply Shutoff System (NS4) Group 8 Isolation which resulted in closure of RCIC-V-8, Reactor Core Isolation Cooling System (RCIC) Outboard Steam Supply Isolation valve for the RCIC Turbine.

The immediate cause of the event was determined to be component failure of the thermocouple monitor system point module unit. The failure produced an erroneous RCIC equipment area high temperature signal which resulted in the partial primary containment isolation signal.

The root cause of the point module failure has been identified to be module deficiencies previously noted within NRC IE Information Notice No. 86-69 "SPURIOUS ISOLATIONS CAUSED BY THE PANALARM MODEL 86 THERMOCOUPLE MONITOR".

Immediate Corrective Action

After thorough investigation in accordance with the Plant Abnormal Conditions Procedures, the Plant Operators reset the isolation logic and returned the RCIC system lineup to normal.

Further Evaluation and Corrective Actions

1. The LD system input channel for NS4 Group 8 and the RCIC system were inoperable for one (1) hour and twenty-five (25) minutes as a result of this event.
2. The failed temperature monitor is a Panalarm Model 86 manufactured by Riley Panalarm Company.
3. As a result of troubleshooting by plant technicians, the failed module was replaced with a new unit, the temperature monitor channel was recalibrated and placed back into service within five hours and four minutes of the initiating failure.
4. An engineering study involving these units was all ready in progress prior to this event. WNP-2 equipment history, information contained in the Nuclear Plant Reliability Data System (NPRDS), and NRC IE Information Notice No. 86-69 "SPURIOUS ISOLATIONS CAUSED BY THE PANALARM MODEL 86 THERMOCOUPLE MONITOR" were used as the basis. As a result of this study, the Panalarm units are presently being modified per the General Electric Service Information Letters (SIL) referenced within the IE Information Notice 86-69 to improve their reliability. WNP-2 is also pursuing complete replacement of this system with a more reliable design.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

Further Evaluation and Corrective Actions

5. These units are a previously identified engineering concern at WNP-2. They have been actively monitored by specially trained instrument technicians and engineers. The problem is at present the focus of an ongoing engineering study. The current surveillance program is a result of historical data and conclusions drawn from analysis of the systems ability to provide reliable isolation signals. To date all previous failures have been identified and corrected prior to the occurrence of spurious isolations. The current program of active surveillance and increased engineering effort is planned to continue until the problem is resolved.

Safety Significance

During the event, one LD System logic input channel for NS4 Group 8 isolation and the RCIC System were inoperable for one hour and twenty-five (25) minutes. During this period, an alternate LD input for the RCIC equipment room provided isolation capability for the RCIC turbine steam supply line by isolation of the inboard steam supply to the RCIC turbine RCIC-V-63 and its bypass RCIC-V-76. Both the High Pressure Core Spray (HPCS) and the Automatic Depressurization System (ADS) were available to provide for Reactor Pressure Vessel makeup during the inoperability of RCIC. As the primary non-Emergency Core Cooling System high pressure water supply, the RCIC system provides no accident mitigation function for any design basis accident. There is no safety significance associated with this event as there was no actual initiating Plant condition and RCIC-V-8 operated correctly to place the Primary Containment (NS4 Group 8) in an isolation condition. This event posed no threat to the health and safety of Plant personnel or to the public.

Similar Events

None

EIIS InformationText Reference

RCIC Turbine  
Leak Detection System (LD)  
Nuclear Steam Supply Shutoff System (NS4)  
Reactor Core Isolation Cooling System (RCIC)  
RCIC-V-8  
RCIC-V-63  
RCIC-V-76  
Temperature Monitoring Unit  
High Pressure Core Spray System (HPCS)  
Automatic Depressurization System (ADS)  
Point Module Unit

EIIS Reference

System	Component
BN	TRB
IJ	----
JM	----
BW	----
BN	V
BN	V
BN	V
IJ	TM
BG	----
SB	----
IJ	TM

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352

Docket No. 50-397

October 16, 1987

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: NUCLEAR PLANT NO. 2  
LICENSEE EVENT REPORT NO. 87-028

Dear Sir:

Transmitted herewith is Licensee Event Report No. 87-028 for the WNP-2 Plant. This report is submitted in response to the report requirements of 10CFR50.73 and discusses the items of reportability, corrective action taken, and action taken to preclude recurrence.

Very truly yours,



C.M. Powers (M/D 927M)  
WNP-2 Plant Manager

CMP:db

Enclosure:  
Licensee Event Report No. 87-028

cc: Mr. John B. Martin, NRC - Region V  
Mr. C. J. Bosted, NRC Site (M/D 901A)  
INPO Records Center - Atlanta, GA  
Ms. Dottie Sherman, ANI  
Mr. D. L. Williams, BPA (M/D 399)

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