

REGULATOR INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8705290095 DOC. DATE: 87/05/21 NOTARIZED: NO DOCKET #
 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397
 AUTH. NAME AUTHOR AFFILIATION
 WASHINGTON, S. L. Washington Public Power Supply System
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-005-00: on 870421, reactor containment inboard RHR shutdown cooling supply valve automatically isolated. Caused by personnel error. Lifted neutral lead replaced, RHR-V-9 reopened & plant engineer counseled. W/870521 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
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	SAMWORTH, R	1 1		
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	2 2
	AEOD/DOA	1 1	AEOD/DSP/ROAB	2 2
	AEOD/DSP/TPAB	1 1	DEPRO	1 1
	NRR/DEST/ADE	1 0	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
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	NRR/DREP/RPB	2 2	NRR/PMAS/ILRB	1 1
	NRR/PMAS/PTSB	1 1	<u>REG FILE</u> 02	1 1
	RES DEPY GI	1 1	RCNS 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

TOTAL NUMBER OF COPIES REQUIRED: LTTR 42 ENCL 40

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Washington Nuclear Plant - Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 p 17 1				PAGE (3) 1 OF 0 13		
TITLE (4) Residual Heat Removal Shutdown Cooling Containment Isolation Valve Closed Due To Personnel Error																
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	4	2	1	8	7	8	7	0	0	5	0	0	0	0	0	
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																
OPERATING MODE (9)		5	20.402(b)				20.406(e)				<input checked="" type="checkbox"/> 50.73(a)(2)(iv)				73.71(b)	
POWER LEVEL (10)		0	20.406(a)(1)(i)				50.36(e)(1)				<input type="checkbox"/> 50.73(a)(2)(v)				73.71(e)	
			20.406(a)(1)(ii)				50.36(e)(2)				<input type="checkbox"/> 50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 308A)	
			20.406(a)(1)(iii)				50.73(a)(2)(i)				<input type="checkbox"/> 50.73(a)(2)(vii)(A)					
			20.406(a)(1)(iv)				50.73(a)(2)(ii)				<input type="checkbox"/> 50.73(a)(2)(vii)(B)					
			20.406(a)(1)(v)				50.73(a)(2)(iii)				<input type="checkbox"/> 50.73(a)(2)(x)					
LICENSEE CONTACT FOR THIS LER (12)																
NAME S.L. Washington, Compliance Engineer										TELEPHONE NUMBER 5 0 9 3 7 7 - 1 2 0 8 1 0						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC						
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)

While in operational condition 5 with the reactor head removed, the reactor cavity flooded, and the fuel pool gates removed, at 0148 hours on April 21, 1987 the Reactor Containment Inboard Residual Heat Removal (RHR) Shutdown Cooling Supply Valve (RHR-V-9) automatically isolated. The cause of the isolation is attributed to relay replacement efforts being performed by Plant staff. This event caused the loss of RHR Shutdown Cooling.

The event occurred when the neutral wire of the relay being replaced was lifted to permit the new relay base installation. This caused an interruption on the neutral side of the RHR-V-9 isolation relay because the neutral leads are commonly connected.

The cause of the event was personnel error by the Plant engineer in not checking all required information sources prior to directing the lifting of the lead.

There is no safety significance associated with event. At the time of the event the reactor water level was greater than 22 feet above the reactor vessel flange which provides a large heat sink for core cooling and adequate time to restore RHR Shutdown Cooling or initiate an alternate decay heat removal method. RHR Shutdown Cooling was restored in less than one hour. In addition, an alternate method of shutdown cooling was available if needed.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

TEXT (If more space is required, use additional NRC Form 368A's) (17)

Plant Conditions

- a) Power Level - 0%
- b) Plant Mode - 5 (Refueling)

Event Description

While in operational condition 5 with the reactor head removed, the reactor cavity flooded and the fuel pool gates removed at 0148 hours on April 21, 1987 the Inboard RHR Shutdown Cooling Supply Valve (RHR-V-9) automatically isolated when Plant electricians lifted a wire which de-energized the valve control relay. The RHR Shutdown Cooling Supply Valve is a Nuclear Steam Supply Shutoff (Containment Isolation) Valve. The closing of RHR-V-9 resulted in the loss of a suction path to the RHR Shutdown Cooling Loops. RHR-V-9 is interlocked to the Shutdown Cooling RHR pumps to trip the pumps when the valve goes closed.

At 0212 hours on April 21, 1987 RHR Shutdown Cooling was re-established using RHR Loop A.

The relay changeout work which caused this event was scheduled to be done when the reactor vessel head was removed and the reactor cavity flooded (reactor water level greater than 22 feet above the reactor vessel flange). With the reactor cavity flooded a large heat sink is available for core cooling, and adequate time is provided to restore RHR Shutdown Cooling or initiate an alternate method.

At the time of the event a Plant engineer was directing Plant electricians who were replacing another electrical relay (MS-RLY-K72 a valve control relay for Reactor Water Sample Isolation Valve RRC-V-19). The neutral wires for both relays were commonly connected so when the neutral wire for the relay being replaced was lifted it also interrupted the neutral side of relay MS-RLY-K29. De-energizing the K-29 relay causes RHR-V-9 to close.

The root cause of the event was personnel error by a Plant engineer, who directed the electricians to lift the lead prior to checking all information sources to determine the effect of lifting the lead. The Plant engineer was directing the work using an electrical elementary diagram only. He should have also reviewed the associated electrical connection diagram to determine the effect of lifting this lead. Plant Procedures were not the cause of this event.

Immediate Corrective Action

Plant electricians replaced the lifted neutral lead and RHR-V-9 was reopened. Plant operators completed actions to return RHR Shutdown Cooling Loop A to service.

Further Corrective Action

The Plant engineer was counseled on the importance of checking all required information sources prior to lifting leads.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		87	0 0 5	0 0	0 3	OF	0 3

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

A Maintenance and Operational Bulletin will be published which describes the use of common neutrals in Control Room panels and the proper steps to be taken to determine the effect of lifting a lead in these panels. The Bulletin will be required reading for appropriate plant operators, engineers, and craftsmen. In addition, the Bulletin will be republished annually.

Safety Significance

There is no safety significance associated with this event. At the time of the event the reactor vessel head was removed and reactor water level was greater than 22 feet above the reactor vessel flange. These conditions provide a large heat sink for core cooling with adequate time to restore RHR Shutdown Cooling or initiate an alternate method of decay heat removal. RHR Shutdown Cooling was restored in less than one hour, and an alternate decay heat removal system was available if needed. Secondary containment although not necessary during the Plant conditions at this time, was maintained throughout the event. Reactor core circulation was provided by the Reactor Water Cleanup System and the CRD System was operational. This event caused no threat to the safety of the public or plant personnel.

Similar Events

LER 85-022

EIIS InformationText ReferenceEIIS Reference

	System	Component
Reactor Containment	C	----
Residual Heat Removal Shutdown Cooling Supply Valve	BO	ISV
Residual Heat Removal Shutdown Cooling Supply Valve Relay	BO	94
Nuclear Steam Supply Shutoff Valve		ISV
Reactor Water Sample Isolation Valve	AD	ISV
Reactor Water Sample Isolation Valve Relay	AD	94
Control Rod Drive System	AA	--
Reactor Water Cleanup System	CE	--

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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

Docket No. 50-397

May 21, 1987

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

Subject: NUCLEAR PLANT NO.2
LICENSEE EVENT REPORT NO. 87-005

Dear Sir:

Transmitted herewith is Licensee Event Report No. 87-005 for WNP-2 Plant. This report is submitted in response to the report requirements of 10CFR50.73 and discusses the item of reportability, corrective action taken, and action taken to preclude recurrence.

This is a follow-up to the verbal notification given at 0240 hours on April 21, 1987.

Very truly yours,

C.M. Powers

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

CMP: db

Enclosure:
Licensee Event Report No. 87-005

cc: Mr. John B. Martin, NRC - Region V
Mr. R. T. Dodds, NRC Site (M/D 901A)
Mr. B. Milbrot, BPA (M/D 399)
INPO Records Center - Atlanta, GA
Ms. Dottie Sherman, ANI
Mr. C. E. Revell, BPA (M/D 399)

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