

## ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8906260144 DOC.DATE: 89/06/16 NOTARIZED: NO DOCKET #  
 FACIL:50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397  
 AUTH.NAME AUTHOR AFFILIATION  
 ARBUCKLE,J.D. Washington Public Power Supply System  
 POWERS,C.M. Washington Public Power Supply System  
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-019-00:on 890524,RHR sys shutdown cooling containment  
 isolation valve (ESF) closure due to personnel error.  
 W/8 ltr.

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 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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	NRR/DEST/ICSB 7	1 1	NRR/DEST/MEB 9H	1 1
	NRR/DEST/MTB 9H	1 1	NRR/DEST/PSB 8D	1 1
	NRR/DEST/RSB 8E	1 1	NRR/DEST/SGB 8D	1 1
	NRR/DLPQ/HFB 10	1 1	NRR/DLPQ/PEB 10	1 1
	NRR/DOEA/EAB 11	1 1	NRR/DREP/RPB 10	2 2
	NUDOCS-ABSTRACT	1 1	REG FILE 02	1 1
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	RGN5 FILE 01	1 1		
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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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

Docket No. 50-397

June 16, 1989

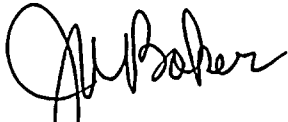
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Subject: NUCLEAR PLANT NO. 2  
LICENSEE EVENT REPORT NO. 89-019

Dear Sir:

Transmitted herewith is Licensee Event Report No. 89-019 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:lg

Enclosure:  
Licensee Event Report No. 89-019

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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## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Washington Nuclear Plant - Unit 2										DOCKET NUMBER (2) 0   5   0   0   0   3   9   7   1   OF   0   4										PAGE (3) 1 OF 0 4				
TITLE (4) Residual Heat Removal System Shutdown Cooling Containment Isolation Valve (Engineered Safety Feature) Closure 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	5	2	4	8	9	8	9	0	1	9	0	0	0	6	1	6	8	9	0   5   0   0   0					
OPERATING MODE (9) 5		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																						
POWER LEVEL (10) 0   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)				50.36(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 J.D. Arbuckle, Compliance Engineer										TELEPHONE NUMBER AREA CODE 5   0   9   3   7   7   -   2   1   1   5														
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																								
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS														
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)																								
<p>On May 24, 1989 at 0642 hours, while in operational condition 5 with the reactor head removed, the reactor cavity flooded up and the fuel pool gates removed, the Inboard Residual Heat Removal (RHR) Shutdown Cooling Supply Valve (RHR-V-9) automatically isolated when a Contractor Maintenance Electrician lifted a wire de-energizing the valve control relay. Closure of RHR-V-9 is interlocked with the RHR Shutdown Cooling pumps so that RHR-P-2A tripped on valve closure. Valve RHR-V-9 is a Nuclear Steam Supply Shutoff System (Containment Isolation) Valve. By 0650 hours the wire had been reterminated, RHR-V-9 opened, RHR-P-2A restarted and shutdown cooling restored.</p> <p>The root cause of the event was personnel error in that a Contractor Maintenance Electrician exceeded the authorized work by lifting a lead not listed within the work package documents. A properly reviewed and authorized change should have been obtained from the Field Engineer in charge of the work prior to proceeding. Corrective actions consisted of 1) counselling the individual involved, 2) training appropriate contractor personnel on applicable Plant procedures, and 3) performing an assessment of RHR Shutdown Cooling isolations which have occurred.</p> <p>There is no safety significance associated with this event. At the time of the isolation 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. In this event, shutdown cooling was restored within eight minutes.</p>																								

## 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 9	— 0 1 9	— 0 0	0 2	OF	0 4

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

Plant Conditions

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

Event Description

On May 24, 1989 at 0642 hours the Inboard Residual Heat Removal (RHR) Shutdown Cooling Supply Valve (RHR-V-9) automatically isolated when a Contractor Maintenance Electrician lifted a wire which de-energized the valve control relay. Valve RHR-V-9 closure is interlocked with Shutdown Cooling RHR pumps (RHR-P-2A and RHR-P-2B) so that closure of RHR-V-9 tripped RHR-P-2A. Valve RHR-V-9 is a Nuclear Steam Supply Shutoff (Containment Isolation) Valve. At the time of the event the Plant was in a shutdown condition for the annual maintenance and refueling outage. Also, RHR Loop A was operating in the Shutdown Cooling Mode.

At the time of the event a Contractor Maintenance Electrician was working on a Plant Modification Record (PMR) for improving the Leak Detection System by upgrading signal processing and diagnostic capabilities. The electrician was attempting to land a wire on a terminal behind the terminals associated with relay LD-RLY-K04B. In order to gain access he lifted a wire to relay LD-RLY-K04B. Relay LD-RLY-K04B is designed to open on RHR Area High temperature which could indicate a leak of high temperature primary coolant in the RHR equipment room. Lifting the wire caused the same result as an area high temperature actuation; the valve control relay is deenergized and RHR-V-9 closes.

Immediate Corrective Action

The lifted wire was immediately re-terminated. By 0650 hours (eight minutes after the initiating event), Plant Operators had opened RHR-V-9, started RHR-P-2A and restored shutdown cooling.

Further Evaluation and Corrective ActionA. Further Evaluation

1. This event is reportable under 10CFR50.73(a)(2)(iv) as, "an event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF)."
2. There were no structures, systems or components that were inoperable at the start of this event that contributed to the event.
3. The root cause of the event was personnel error in that the Contractor Maintenance Electrician performed work outside that authorized in the work package, and not in accordance with Plant procedures. Plant procedures were not the cause of this event.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

4. As noted in the Similar Events Section of this LER, a similar event (which occurred on May 20, 1989) was reported in LER 89-017. Further corrective actions taken as a result of the event described in LER 89-017 were not fully implemented at the time this event occurred (May 24, 1989).

**B. Further Corrective Action**

1. The Contractor Maintenance Electrician was counselled on the importance of remaining within the authorized bounds of plant work packages and in the specifics of rigorously following the "Determ/Reterm Data Sheet." This action was completed on May 24, 1989 at 1315 hours.
2. Contractor personnel working on the Leak Detection Plant modification were retrained on the applicable Plant procedures and reminded of the proper methods for obtaining authorization prior to performing work outside the scope of that contained in the work package. This action was completed on May 30, 1989 at 1630 hours.
3. Tool box meeting training sessions for all Contractor Maintenance Electricians were held emphasizing the necessity of remaining within the bounds of approved work packages. Emphasis was given to rigorously following "Determ/Reterm Data Sheets" and stopping work when it appeared necessary to disturb other equipment. Changes to work packages utilizing the Field Engineer to initiate the appropriate documentation was also discussed. This action was completed on May 30, 1989 at 1630 hours.
4. An overall assessment of the RHR Shutdown Cooling isolations which have occurred is currently being performed by the Plant Technical and Nuclear Safety Assurance Groups.

**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 within eight minutes, well within the time frame allowed by Technical Specifications. Accordingly, this event caused no threat to the safety of either the public or Plant personnel.

**Similar Events**

LERs 87-005, 87-008 and 89-017



## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

EIIS InformationText ReferenceEIIS Reference

System      Component

Residual Heat Removal (RHR) Shutdown Cooling Supply Valve  
(RHR-V-9)  
Pump RHR-P-2A  
Nuclear Steam Supply Shutoff System  
Pump RHR-P-2B  
Leak Detection System  
Residual Heat Removal Shutdown Cooling Supply Valve Relay  
(LD-RLY-K04B)

B0      ISV  
B0      P  
BD      ---  
B0      P  
IJ      ---  
B0      94