REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8706050352 DOC. DATE: 87/05/22 NOTARIZED: NO DOCKET #
FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397
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RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-006-00: on 870426, after shutdown margin demonstration, reactor protection sys tripped when last shorting link improperly installed. Cause determined to be design-related. Terminal strip arrangement will be evaluated. W/870522 ltr.

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

NOTES:

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	AEOD/DSP/TPAB	1	1	DEDRO	1	1
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	NRR/DREP/RPB	2	2	NRR/PMAS/ILRB	1	1
	NRR/PMAS/PTSB	1	1	REG FILE 02	1	1
	RES DEPY GI	1	1	RGN5 FILE 01	1	1
EXTERNAL:	EG&G GROH, M	5	5	H ST LOBBY WARD	1	1
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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Washington Nuclear Plant - Unit 2	0 5 0 0 0 3 9 7	1 OF 0 3

TITLE (4) Reactor Protection System Trip During Refueling Operations Due To Improper Installation of a Shorting Link Following Shutdown Margin Demonstration

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 6	8 7	8 7	— 0 0 6	— 0 0	0 5	2 2	8 7		0 5 0 0 0
										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 10 0	20.402(b)	20.405(c)	X	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	TELEPHONE NUMBER
J.D. Arbuckle, Compliance Engineer	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 NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On April 26, 1987 at 1933 hours, following a shutdown margin demonstration surveillance, a Reactor Protection System (RPS) trip occurred while the last shorting link was being installed. The link for RPS subchannel B2 was inadvertently placed at the wrong terminal board points. This caused an electrical short in the manual scram circuit which tied two power supplies together. As a result, two manual scram circuit fuses blew, which caused a reactor scram. Since the reactor was shutdown prior to the event, no actual control rod movement occurred as a result of the scram.

The two manual scram circuit fuses were replaced, the shorting link was installed properly and the system was restored to normal shutdown status.

The root cause of this event has been determined to be design-related in that the physical arrangement of the terminal strip in the Control Room cabinet makes it difficult to install the shorting links to the rear side of the terminal strip. An Engineering evaluation will be performed to consider changing this arrangement.

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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)

Plant Conditions

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

Event Description

On April 26, 1987 at 1933 hours, following a shutdown margin demonstration surveillance, a Reactor Protection System (RPS) trip occurred while the last shorting link was being installed (shorting links had already been properly installed in Divisions A1, B1, and A2). The link for RPS subchannel B2 was inadvertently placed at the wrong terminal board points (AA-70 and AA-71 instead of AA-69 and AA-70). This caused an electrical short in the manual scram circuit which tied two power supplies together. As a result, manual scram circuit fuses C72-F15C and C72-F15D blew. Loss of power to both RPS Division Manual Trip Relays resulted in a reactor scram. Since the reactor was shutdown prior to the event, no actual control rod movement occurred as a result of the scram.

The root cause of this event has been determined to be design-related in that the physical arrangement of the terminal strip in the Control Room cabinet makes it difficult to install the shorting links to the rear side of the terminal strip. This is particularly true of Control Room panel P611D where an existing wire is already landed at the rear side terminal, bottom screw.

Immediate Corrective Action

The two manual scram circuit fuses were replaced, the shorting link was installed properly and the system was restored to normal shutdown status.

Further Corrective Action

- The affected RPS circuitry will be checked, during routine surveillance testing, for possible damage prior to the next plant startup.
- An Engineering evaluation will be performed to consider changing the physical arrangement of the terminal strips to allow easier installation of the shorting links.

Safety Significance

There is no safety significance associated with this event in that the reactor was in cold shutdown prior to the event, there was no actual initiating condition and the RPS functioned as designed to cause a reactor scram. This event caused no threat to the safety of the public or plant personnel.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
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TEXT *(If more space is required, use additional NRC Form 366A's)* (17)

Similar Events

LER 86-006

EIIS Information

Text Reference	EIIS Reference	
	System	Component
Reactor Protection System	JC	----

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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

Docket No. 50-397

May 22, 1987

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

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 87-006

Dear Sir:

Transmitted herewith is Licensee Event Report No. 87-006 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.

Very truly yours,

C M Powers

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

CMP:lc

Enclosure:
Licensee Event Report No. 87-006

cc: Mr. John B. Martin, NRC - Region V
Mr. R. T. Dodds, NRC - Site (901A)
Mr. W. E. 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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