

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8706190065 DOC. DATE: 87/06/11 NOTARIZED: NO DOCKET #
 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397
 AUTH. NAME AUTHDR AFFILIATION
 WASHINGTON, S. L. Washington Public Power Supply System
 POWERS, C. M. Washington Public Power Supply System
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-010-00: on 870512, ESF actuations occurred. Caused by inadequate plant procedure. Plant operators restarted Reactor Protection Sys Motor Generator A & returned RHR shutdown cooling & RWCU sys to operation within 1/2 h. W/870611 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/ROAB	2 2
	AEOD/DSP/TPAB	1 1	DEDRO	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
	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/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
	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 2DOCKET NUMBER (2)
0 5 0 0 0 3 9 1 7 1 OF 0 3

PAGE (3)

TITLE (4)

Emergency Safety Feature Actuations Caused By Procedure 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	1	2	8	7	8	7	0	1	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)			20.402(b)			20.406(a)			<input checked="" type="checkbox"/> 60.73(a)(2)(iv)			73.71(b)					
POWER LEVEL (10)			20.406(a)(1)(i)			60.36(a)(1)			<input type="checkbox"/> 60.73(a)(2)(v)			73.71(c)					
0			20.406(a)(1)(ii)			60.36(a)(2)			<input type="checkbox"/> 60.73(a)(2)(vi)			OTHER (Specify in Abstract below and in Text, NRC Form 366A)					
0			20.406(a)(1)(iii)			60.73(a)(2)(i)			<input type="checkbox"/> 60.73(a)(2)(vii)(A)								
			20.406(a)(1)(iv)			60.73(a)(2)(ii)			<input type="checkbox"/> 60.73(a)(2)(vii)(B)								
			20.406(a)(1)(v)			60.73(a)(2)(iii)			<input type="checkbox"/> 60.73(a)(2)(x)								

LICENSEE CONTACT FOR THIS LER (12)

NAME
Steven L. Washington, Compliance Engineer

TELEPHONE NUMBER

AREA CODE
510 931 771-1 201810

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

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)
☒ NO

EXPECTED SUBMISSION DATE (15)

MONTH
DAY
YEAR

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

On May 12, 1987 WNP-2 was shutdown with the reactor cavity flooded and in the Refueling mode of operation. At 1237 hours, a Plant electrician while calibrating the Plant Oscillograph, inadvertently caused the loss of offsite power supply (TRS). Plant emergency bus SM-7, which was being supplied by TRS, automatically switched to the alternate offsite power supply (TRB); however, the momentary loss of power caused the Reactor Protection System Motor Generator A (RPS-MG-A) to trip. The loss of RPS A power causes an Outboard Nuclear Steam Supply Shutoff System (NSSSS) isolation of Groups 1 (Main Steam Line Drains only), 2, 5, 6, and 7. NSSSS Group 6 isolates Residual Heat Removal (RHR) Shutdown Cooling and NSSSS Group 7 isolates Reactor Water Cleanup System (RWCU). In addition, the loss of RPS A power causes an NSSSS Group 3 (Primary and Secondary Containment Ventilation and Purge Systems) isolation including Standby Gas Treatment (SGT) System actuation.

Plant operators restarted RPS-MG-A and restored all systems to their pre-event lineup in less than one hour.

The cause of the event was an inadequate Plant Procedure which failed to provide steps to fully isolate the circuit being calibrated. This procedural inadequacy allowed a portion of the circuit to become energized and trip a plant lockout relay (E-RLY-86TS) on overcurrent.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Washington Nuclear Plant - Unit 2	0 5 0 0 0 3 9 7 8 7	—	0 1 0	—	0 0 0	2	OF 0 3

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

There is no safety significance associated with this event as no actual Plant condition requiring the Emergency Safety Feature (ESF) actuations existed and all ESF actuations occurred as designed. The reactor cavity was flooded providing a large heat sink, which allows adequate time to restore RHR Shutdown cooling. Shutdown Cooling was restored in less than one hour.

Plant Conditions

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

Event Description

At 1237 hours on May 12, 1987 a Plant electrician inadvertently caused the loss of offsite power supply TRS. At that time, power to emergency bus SM-7 was aligned to the TRS supply and, on the loss of TRS, this bus switched automatically to the alternate offsite power supply TRB. The other two Plant emergency buses (SM-4 and SM-8) were unaffected by this event and were aligned to the normal plant power supply (TRN), which in this case was a third offsite power supply.

The loss of power to SM-7 caused RPS-MG-A to trip. The loss of RPS A power caused an NSSSS Outboard Containment Isolation. The outboard isolations occurred for NSSSS Group 1 (Main Steam Line drains only), Group 2 (Reactor Water Sample Valves), Group 5 (Residual Heat Removal and Traversing In-Core Probe) (TIP) Systems, Group 6 (RHR Shutdown Cooling), and Group 7 (Reactor Water Cleanup). Both the RHR Shutdown Cooling and RWCU Systems were in operation at the time of the event and were tripped off by the event.

In addition the loss of RPS A power causes an NSSSS Group 3 (Primary and Secondary Containment Ventilation and Purge System) isolation. The NSSSS Group 3 isolation is caused by loss of power to Reactor Building Exhaust Radiation Monitors a non-NSSSS ESF trip signal. All required Group 3 actions occurred as designed including the automatic start of the Standby Gas Treatment System.

Plant Operators responded by restarting RPS-MG-A and restoring RHR Shutdown Cooling and RWCU within 30 minutes. A total restoration of all systems to their pre-event lineup was completed within one hour.

The event occurred during calibration of the Plant Oscillograph by a plant electrician. The Plant Oscillograph is an instrument which monitors performance of the Plant Electrical Systems. The Plant electrician was using a Plant Procedure which did not include steps to fully isolate the circuit being calibrated. This made the circuit polarity sensitive in that the positive and neutral test leads must be connected to specific sides of the test switch used to isolate the circuit being calibrated. The procedure did not provide specific test equipment connection instructions. When the Plant electrician connected the test equipment leads, the positive lead was connected to the unisolated side of the test switch which powered an overcurrent relay as both the test equipment power supply and the overcurrent relay were connected to the same ground. This caused a plant lockout relay to trip, and subsequently tripped the TRS power supply breakers.



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Washington Nuclear Plant - Unit 2	0 5 0 0 0 3 9 7 8 7	—	0 1 0	—	0 0 0	3	OF 0 3

TEXT (If more space is required, use additional NRC Form 365A's) (17)

The root cause of the event was an inadequate Plant Procedure. The procedure did not include steps to install a test plug to fully isolate the circuit being calibrated, nor did it include specific instructions, relating to polarity, for connecting the test equipment lead.

Immediate Corrective Action

Plant Operators restarted RPS-MG-A and returned RHR Shutdown Cooling and the RWCU System to operation within 30 minutes. All Plant systems were restored to their pre-event lineup in less than one hour.

The Plant oscillograph calibration was completed using the test plug to isolate the test switch terminal.

Further Corrective Action

The Plant Procedure will be revised to require that the test plug be installed prior to connecting the test equipment. With the test plug installed the circuit to be calibrated is fully isolated and not polarity sensitive.

Safety Significance

There is no safety significance associated with this event because no Plant condition requiring the ESF actuations existed and all ESF actuations occurred as designed. The loss of RHR Shutdown Cooling was not a problem because the reactor cavity, which was flooded for refueling, provides a large heat sink which allows adequate time to either restore RHR Shutdown Cooling or establish an alternate shutdown cooling path. This event posed no threat to the safety of the public or Plant personnel.

Similar Events

86-008

EIIS Information

Text Reference

Offsite Power Supply (TRS)
Alternate Offsite Power Supply (TRB)
Reactor Protection System (RPS)
Reactor Protection System Motor Generator (RPS-MG-A)
Nuclear Steam Supply Shutoff System (NSSSS)
Residual Heat Removal System (RHR)
Reactor Water Cleanup System
Plant Lockout Relay (E-RLY-86TS)
Normal Plant Power Supply (TRN)
Traversing In-Core Probe (TIP)
Plant Oscillograph
Standby Gas Treatment (SGT)
Reactor Building Radiation Monitor Exhaust

EIIS Reference
System Component

EA
EA
JC
JC
BD
BO
CE
EA 86
EA
IG
EA OSG
BH
IL



WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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

Docket No. 50-397

June 11, 1987

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

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 87-010

Dear Sir:

Transmitted herewith is Licensee Event Report No. 87-010 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 1315 hours on May 12, 1987.

Very truly yours,



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

CMP:ac

Enclosure:

Licensee Event Report No. 87-010

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

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