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FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe      05000397  
AUTH. NAME      AUTHOR AFFILIATION  
ARBUCKLE, J.D.      Washington Public Power Supply System  
BEMIS, P.R.      Washington Public Power Supply System  
RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 98-009-00: on 980606, nuclear steam supply shutoff sys group 3 & 4 isolations during testing was noted. Caused by procedural deficiency. Counseled individuals involved in preparation. W/980701 ltr.

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

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • Richland, Washington 99352-0968

July 1, 1998  
GO2-98-114

Docket No. 50-397

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21**  
**LICENSEE EVENT REPORT NO. 98-009-00**

Transmitted herewith is Licensee Event Report No. 98-009-00 for WNP-2. This report is submitted pursuant to 10 CFR 50.73 and discusses the items of reportability, corrective action taken, and action to preclude recurrence.

Should you have any questions or desire additional information pertaining to this report, please call me or P.J. Inserra at (509) 377-4147.

Respectfully,

  
P.R. Bennis

Vice President, Nuclear Operations  
Mail Drop PE23

Attachment

cc: EW Merschhoff - NRC RIV  
KE Perkins, Jr. - NRC RIV, WCFO  
C Poslusny, Jr - NRC NRR  
PD Robinson - Winston & Strawn

NRC Senior Resident Inspector - 927N (2)  
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# LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <b>Washington Nuclear Plant - Unit 2</b>	DOCKET NUMBER (2) <b>50-397</b>	PAGE (3) <b>1 OF 4</b>
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TITLE (4)  
**Nuclear Steam Supply Shutoff System Group 3 and 4 Isolations During Testing**

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV. NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
06	06	98	98	009	00	07	01	98	FACILITY NAME	DOCKET NUMBER

OPERATING MODE	4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)								
POWER LEVEL	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)(vi)		OTHER
		20.405(a)(1)(iii)		50.73(a)(2)(i)				50.73(a)(2)(vii)(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, Licensing Technical Specialist	TELEPHONE NUMBER (Include Area Code) (509) 377-4601

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

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

**ABSTRACT:**

On June 6, 1998 at 1359 hours, with the plant in a shutdown condition for the annual maintenance and refueling outage, unexpected engineered safety feature isolations and initiations occurred during logic system functional testing of Traversing Incore Probe (TIP) System purge isolation valve TIP-V-15. During the test, an electrical jumper was removed as directed by the procedure. However, by design, removal of the jumper resulted in isolations and initiations associated with Nuclear Steam Supply Shutoff System Group 3 (reactor building and containment) and Group 4 (miscellaneous balance of plant) Division 2 trip systems and logic channels. The procedure incorrectly directed removal of the electrical jumper before resetting of the half-isolation signals during the test.

As an immediate corrective action, Control Room Operators responded in an appropriate and timely manner by taking action to restore all systems to pre-event lineup status. The cause of this event is a procedural deficiency. The procedure should have directed removal of the electrical jumper after resetting the half-isolation signals, rather than before.

Further corrective actions consist of counseling the individuals involved in the preparation and review of the procedure on the importance of attention to detail and self-checking during procedure development, and revising the logic system functional test prior to the next performance of the procedure.

There were no safety consequences associated with this event. No plant condition requiring the engineered safety features existed and all isolations and initiations occurred as designed. Therefore, this event had no impact on the health and safety of either the public or plant personnel.



# LICENSEE EVENT REPORT (LER)

## Nuclear Steam Supply Shutoff System Group 3 and 4 Isolations During Testing

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Washington Nuclear Plant Unit 2	50-397	98	009	00	2 OF 4

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

### Event Description

On June 6, 1998 at 1359 hours, with the plant in a shutdown condition for the annual maintenance and refueling outage, unexpected engineered safety feature isolations and initiations occurred during logic system functional testing of Traversing Incore Probe (TIP) [IG] System purge isolation valve TIP-V-15 [ISV]. During the test, an electrical jumper was removed as directed by the procedure.

Removal of the jumper resulted in isolations and initiations associated with Nuclear Steam Supply Shutoff System [BD] Group 3 (reactor building and containment) and Group 4 (miscellaneous balance of plant) Division 2 trip systems and logic channels. The following isolations and initiations occurred:

- Isolation of Reactor Building and Primary Containment Supply and Exhaust Ventilation [VB]
- Initiation of the Standby Gas Treatment System [BH]
- Isolation of Suppression Pool [BT] letdown (by means of the Fuel Pool Cooling System [DA])
- Isolation of the Equipment and Floor Drain Systems [BD]
- Initiation of the Control Room Emergency Ventilation System [VH]
- Isolation of the Reactor Closed Cooling Water System [CC]
- Shedding of Division 2, non-vital Buses MC-8C and MC-8E [EC]

The logic system functional test procedure incorrectly directed removal of the electrical jumper before resetting of the half-isolation signals. By design, removal of the jumper before resetting the half-isolation signals caused the engineered safety feature isolations and initiations. The procedure should have directed removal of the electrical jumper after resetting the half-isolation signals during the test.

### Immediate Corrective Action

Plant Control Room Operators secured Reactor Recirculation (RRC) [AD] System pump RRC-P-1A [P] due to loss of the reactor closed cooling water system. At 1400 hours, operators entered Emergency Operating Procedure (EOP) 5.3.1, "Secondary Containment Control," when Secondary Containment [NG] differential pressure was observed to be slightly greater than zero due to isolation of reactor building ventilation. At 1403 hours, secondary containment differential pressure was restored to within normal limits and operators exited EOP 5.3.1.

The operators also verified that the isolations and initiations were consistent with a Division 2 FAZ isolation and continued to respond in an appropriate and timely manner by taking action to restore all systems to pre-event lineup status.

# LICENSEE EVENT REPORT (LER)

## Nuclear Steam Supply Shutoff System Group 3 and 4 Isolations During Testing

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### Further Evaluation

1. This event is reportable in accordance with 10 CFR 50.73(a)(2)(iv) as an event or condition that resulted in manual or automatic actuation of any engineered safety feature.
2. During event recovery efforts, reactor core circulation and decay heat removal were maintained by means of operating the Residual Heat Removal System [BO], Loop B, in the shutdown cooling mode.
3. On June 6, 1998 at 1641 hours, event recovery efforts were completed in accordance with Abnormal Condition Procedure 4.12.4.6, "FAZ."

### Root Cause

The cause of this event was attributed to a procedural deficiency that occurred during the conversion process pertaining to implementation of the Improved Technical Specifications. The Supply System converted to the Improved Technical Specifications in March 1997.

Prior to the conversion, Plant Procedure (PPM) 7.4.3.2.2.1, "Containment Isolation - LSFT," was used to perform containment isolation logic system functional testing in accordance with the surveillance requirements of the Technical Specifications. The frequency for performing this procedure was once every 18 months. This procedure contained the correct sequence of steps to ensure that an unplanned engineered safety feature actuation would not occur. As part of the procedure, fuses were removed to simulate partial logic actuation and an electrical jumper was installed. Following re-installation of the fuses and resetting of the half-isolation signals, the jumper was then removed.

As part of the Improved Technical Specification implementation process, PPM 7.4.3.2.2.1 was converted to PPM TSP-CONT/ISOL-B501, "Containment Isolation - LSFT." Other than formatting changes to reflect the Improved Technical Specifications and editorial enhancements, no other changes to the procedure were planned. However, during the revision process, the steps were inadvertently re-sequenced such that the procedure now directed removal of the electrical jumper before resetting of the half-isolation signals. By design, removal of the jumper before resetting the half-isolations caused the engineered safety feature isolations and initiations.

In this particular case, the procedure was not reviewed to the level of detail necessary to ensure that there would be no unplanned engineered safety system actuations when the procedure was converted to reflect the Improved Technical Specifications. This was the first time that this section of the procedure had been performed since the conversion to the Improved Technical Specifications. The frequency for performing this procedure was also changed to once every 24 months as part of the conversion.



# LICENSEE EVENT REPORT (LER)

## Nuclear Steam Supply Shutoff System Group 3 and 4 Isolations During Testing

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

### Further Corrective Action

1. Individuals involved in the preparation and review of the procedure were counseled on the importance of attention to detail and self-checking during procedure development.
2. Prior to the next performance of the procedure, TSP-CONT/ISOL-B501 will be revised to correct the instructions for the logic system functional test.

### Assessment of Safety Consequences

There were no safety consequences associated with this event. No plant condition requiring the engineered safety features existed and all isolations and initiations occurred as designed. Therefore, this event had no impact on the health and safety of either the public or plant personnel.

### Similar Events

Although there have been safety system actuations in the past associated with less than adequate procedures, this is the first event where engineered safety system actuations were the result of a procedural deficiency that occurred as part of the conversion process associated with implementation of the Improved Technical Specifications.

