

CATEGORY 1

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 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397
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 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 98-008-00: on 980531, inadvertent full scram during RPV leak testing in Mode 4 was noted. Caused by change in mgt techniques. Revised procedures to take into account addl water head in pressure sensing lines. W/980624 ltr.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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

June 24, 1998
GO2-98-106

Docket No. 50-397

U.S. Nuclear Regulatory Commission
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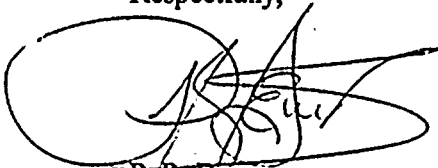
Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21**
LICENSEE EVENT REPORT NO. 98-008-00

Transmitted herewith is Licensee Event Report No. 98-008-00 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 letter, please call me or Mr. P. J. Inserra at (509) 377-4147.

Respectfully,



P/R. Bemis
Vice President, Nuclear Operations
Mail Drop PE23

Attachment

cc: EW Merschoff - NRC RIV
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PDR ADOCK 05000397
S PDR

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Washington Nuclear Plant - Unit 2	DOCKET NUMBER (2) 50-397	PAGE (3) 1 OF 3
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TITLE (4)

INADVERTENT FULL SCRAM DURING RPV LEAK TESTING IN MODE 4

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
05	31	98	98	008	00	06	24	98	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9) 4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)										
POWER LEVEL (10) 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
	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 T.J. Powell, Licensing Technical Specialist	TELEPHONE NUMBER (Include Area Code) (509) 377-4161
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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)

YES (If yes, completed EXPECTED SUBMISSION DATE).	NO <input checked="" type="checkbox"/>	EXPECTED	MONTH	DAY	YEAR
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ABSTRACT:

On May 31, 1998 at 0843, WNP-2 experienced an unexpected reactor scram. All rods were fully inserted at the time of the scram. Reactor pressure vessel leak testing and individual rod scram timing were in progress when the scram occurred. The scram was initiated by the main steam isolation valve (MSIV) scram interlock. A recent procedure revision did not account for actual test conditions present when the reactor vessel water level is above normal as was the case during this event. The root cause review has determined that change management techniques were not adequately applied. Specifically, the risks and consequences associated with the change were not adequately reviewed or assessed.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Washington Nuclear Plant - Unit 2	50-397	98	008	00	2 OF 3

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

Event Description

On May 31, 1998 at 0843, during the performance of surveillance procedure OSP-RPV-R801 'RPV Leak Test' the plant experienced an unexpected reactor scram. Control rod drive (CRD) scram time testing was also in progress. The scram was initiated by the main steam isolation valve (MSIV) scram interlock of the reactor protection system (RPS) [JC]. At the time of the scram all rods were fully inserted and the outboard MSIVs were closed.

The MSIV scram logic was initially bypassed. This scram signal is bypassed if: 1) the mode switch is not in run; and 2) the reactor pressure is less than 1053 psig, as sensed at MS-PS-20A, B, C, & D. During the leak test, the outboard MSIVs are closed and the mode switch is not in run - both requirements of the procedure. With the reactor pressure vessel (RPV) flooded up, as required by procedure, more head than normal was on the pressure switches. As pressure was increased in the vessel head air space within the range allowed by procedure (1020 - 1050 psig), the extra head in the pressure switch sensing lines (which are connected to RPV via the condensing chambers) caused these switches to actuate resulting in the scram.

Further Evaluation

This event is being reported per the requirement of 10CFR50.73(a)(2)(iv) as an event or condition that resulted in an automatic actuation of an Engineered Safety Feature (ESF), including the Reactor Protection System. The scram occurred as a result of the pressure switches associated with the MSIV scram interlock reaching the pressure setpoint. This setpoint was reached by a combination of additional water head on the pressure switches (which was not anticipated by the procedure revision) and the nominal reactor pressure achieved during the leak test conditions.

The pressure switches are connected by instrument tubing to condensing chambers located at a higher elevation than the switches. During normal operations a constant head of water is maintained between the condensing chamber and the pressure switches. The pressure switches are calibrated for this normal head of water. The condensing chamber is also connected to the reactor vessel allowing reactor pressure to be sensed by the switches. Normally reactor vessel level is lower than the condensing chamber connections to the vessel. During the leak test, vessel water level is brought up above these connections. Thus, additional water head (via the condensing chamber connection to the vessel) was present on the pressure switches during the leak test.

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

Root Cause

The root cause review has determined that change management techniques were not adequately applied. Specifically, the risks and consequences associated with the test procedure change were not adequately reviewed or assessed. This determination for the root cause is based on the fact that surveillance procedure OSP-RPV-R801 was revised prior to implementation of the leak test in order to permit scram time testing concurrent with leak testing. Previously, the leak test had been performed with a manual scram inserted which precluded executing both tests at the same time. The procedure revision did not account for the extra water head present on the pressure switches when the vessel is filled with water as is the case during the leak test. When test pressure at the vessel head was increased within the range allowed by procedure (1020 - 1050 psig), this test pressure combined with the unaccounted water head in the pressure sensing lines and resulted in enough pressure to trip the switches and cause the scram.

Further Corrective Action

The surveillance procedure will be revised to take into account any additional water head in the pressure sensing lines prior to the next required annual performance of the test.

This event will be a 'lessons learned' topic covered in the Engineering Support training program.

Assessment of Safety Consequences

There was no safety impact as a consequence of this event. The specific conditions which led to this event are present only during execution of the RPV leak test as directed by surveillance procedure OSP-RPV-R801. This procedure is performed only during the annual refueling outage. All control rods were fully inserted at the time of the scram and all plant systems operated as designed.

Similar Events

There is no recent record of a scram occurring during performance of an RPV leak test.

