

ENERGY NORTHWEST

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

August 1, 2000
GO2-00-131

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 NUMBERS 2000-004-00
AND 2000-005-00**

Transmitted herewith are Licensee Event Report (LER) Numbers 2000-004-00 and 2000-005-00 for WNP-2. These reports are submitted pursuant to 10 CFR 50.73. These reports discuss the items of reportability, corrective action taken, and actions to preclude recurrence.

The LERs noted above were to be submitted on July 27, 2000, per 10 CFR 50.73. The submittal date was extended to August 1, 2000, per telephone conversation with NRC Region IV on July 27, 2000. The extension of LER submittals is provided for in NUREG 1022, Revision 1.

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

Respectfully,



G.O. Smith
Vice President, Generation
Mail Drop 927M

Attachments

cc: EW Merschhoff - NRC-RIV
JS Cushing - NRC-NRR
INPO Records Center

NRC Senior Resident Inspector - 927N (2)
DL Williams - BPA/1399
TC Poindexter - Winston & Strawn

IE22

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) WNP- 2	DOCKET NUMBER (2) 50-397	PAGE (3) 1 OF 4
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TITLE (4)
Failure To Reset An Isolation Signal Caused An ESF Signal To Be Generated That Resulted In The Closure Of All Eight MSIVs While The Plant Was Shutdown

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	27	2000	2000	004	00	08	01	2000	FACILITY NAME	DOCKET NUMBER

OPERATING MODE	4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (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)(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 R.N. Sherman, Licensing Engineer	TELEPHONE NUMBER (Include Area Code) (509) 377-8616
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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)				EXPECTED	MONTH	DAY	YEAR
YES (If yes, completed EXPECTED SUBMISSION DATE).	X	NO					

ABSTRACT:

On June 27, 2000 at 0530 hours the plant was in Mode 4, cold shutdown. The operations crew was performing work in support of an electrical surveillance of the Reactor Protection System (RPS) Electrical Protection Assembly (EPA) circuit breakers. Residual heat removal (RHR) pump 2B had been secured from shutdown cooling, per procedure, in support of the surveillance test. The power supply for the RPS "B" bus was transferred from the alternate power supply to the normal power supply in support of the surveillance test. This caused a half scram signal and a "B" nuclear steam supply shutoff system (NSSSS) trip signal to be generated. The half scram logic had been reset. However, the NSSSS isolation logic was inadvertently not reset as part of the restoration activities following the RPS "B" bus power supply transfer. When the RPS "A" bus was de-energized as part of the planned transfer to the alternate power supply, it caused the "A" NSSSS trip logic relays to de-energize. This resulted in a closure signal to the MSIVs and all eight MSIVs closed. There were no safety consequences associated with this event. The contributing cause of this event is procedure noncompliance. An operator failed to complete a step in a procedure which would have reset the isolation logic and precluded the closure of the MSIVs. The root cause is ineffective oversight to consistently reinforce standards and expectations for this operating crew. The Operations Manager and or the Operations Crew Manager reviewed this event and its underlying causes with management from each operating crew. The personnel directly involved in this event are being remediated.

LICENSEE EVENT REPORT (LER)

Failure To Reset An Isolation Signal Caused An ESF Signal to Be Generated That Resulted In The Closure Of All Eight MSIVs While The Plant Was Shutdown

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
WNP-2	50-397	00	004	00	2 OF 4

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

Event Description

On June 27, 2000 at 0530 hours the plant was in Mode 4, cold shutdown. The operations crew was performing work in support of an electrical surveillance of the Reactor Protection System (RPS) [JC] Electrical Protection Assembly (EPA) circuit breakers. Residual heat removal (RHR) [BO] pump [P] 2B had been secured from shutdown cooling, per procedure, in support of the surveillance test. The power supply for the RPS "B" bus was transferred from the alternate power supply to the normal power supply in support of the surveillance test.

Note: When the power supply for the RPS "B" bus is shifted from either normal to alternate or from alternate to normal, a half scram signal and a "B" nuclear steam supply shutoff system (NSSSS) [BD] trip signal is generated. The RPS Power Source Selector Switch is a break before make switch. All eight Main Steam Isolation Valves (MSIVs) [JM] will close whenever both "A" and "B" trip systems are activated. Closure of all eight MSIVs is considered actuation of an Engineered Safety Feature (ESF) [JE].

The half scram logic had been reset. However, the NSSSS isolation logic was inadvertently not reset as part of the restoration activities following the RPS "B" bus power supply transfer. When the RPS "A" bus was de-energized as part of the planned transfer to the alternate power supply it caused the "A" NSSSS trip logic relays to de-energize. This resulted in a closure signal to the MSIVs and all eight MSIVs closed.

There were no safety consequences associated with this event. 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. The ESF actuation was not caused by a valid signal. However, the actuation occurred while the isolation system was in service.

The resident NRC inspector was notified. The NRC Operations Center was notified of the unexpected ESF actuation by means of the Emergency Notification System (ENS). The notification Event Number is 37121. The ENS notification cited 10CFR50.72(b)(2)(ii), ESF actuation.

Immediate Corrective Action

The NSSSS logic was reset. An Incident Review Board (IRB) investigated the event.

Further Evaluation

The IRB determined that the reactor operator (CRO2) assigned to the task of transferring the RPS "B" power supply from alternate to normal and then transferring the RPS "A" power supply from normal to alternate, for this evolution, had reviewed the procedure and provided a pre-job brief. The pre-job brief by CRO2 covered the steps that other operators would complete in support of the evolution. The steps that CRO2 would complete were summarized. In addition, earlier in the shift, the shift manager reviewed the isolation and trip signals that would be involved, and the need to reset them, with the control room supervisor (CRS).

LICENSEE EVENT REPORT (LER)

Failure To Reset An Isolation Signal Caused An ESF Signal to Be Generated That Resulted In The Closure Of All Eight MSIVs While The Plant Was Shutdown

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
WNP-2	50-397	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 4
		00	004	00	

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

During the evolution, CRO2 had the appropriate procedure in hand and was marking off steps as they were completed. When the appropriate equipment was secured, CRO2 transferred the RPS "B" bus power supply from alternate to normal and reset the half scram and the main steam line radiation monitor trips per the procedure. The next step in the procedure was to reset the NSSSS isolation signal. As CRO2 was preparing to reset the NSSSS isolation signal he was distracted by conversation with the CRS and CRO1 regarding how the surveillance would proceed. When the conversation was completed, CRO2 did not return to the place marked in the procedure indicating the steps that were completed. CRO2 proceeded to transfer the RPS "A" bus power supply from normal to alternate. When the break before make power source selector switch was operated an "A" half scram occurred and an "A" NSSSS isolation signal was generated. This caused an MSIV isolation signal to be generated as the "B" NSSSS signal had not been reset and all eight MSIVs closed at 0530 hours.

Cause

The contributing cause of this event is procedure noncompliance. An operator failed to complete a step in a procedure which would have reset the isolation logic and precluded the closure of the MSIVs. The root cause is ineffective oversight to consistently reinforce standards and expectations for this operating crew. The CRS displayed a reluctance to reinforce some management expectations for requiring a thorough pre-job brief for infrequently performed tasks (such as transferring RPS power), strict procedural compliance and proper peer checking. The Shift Manager failed to provide adequate coaching to establish this desired behavior in the CRS.

Further Corrective Action

1. The Operations Manager and or the Operations Crew Manager reviewed this event and its underlying causes with management from each operating crew.
2. The Reactor Operator involved in this event was removed from "at the controls" duties pending remediation.
3. The CRS involved in this event has been removed from License duties pending remediation.
4. The SM involved in this event is attending a 5-week leadership training program which focuses on setting, communicating and reinforcing expectations.

Assessment of Safety Consequences

There were no safety consequences associated with this event. The closure of the MSIVs while in Mode 4 did not impact plant safety because reactor coolant system temperature was limited to less than 200° F. The control rods were fully inserted at the time of the MSIV closure. The Emergency Core Cooling Systems that are required by technical specifications were available to perform their intended safety functions. This event did not represent a threat to the health and safety of the public or plant personnel. The significance of this event was evaluated and Energy Northwest has determined it meets the criteria for designation as a Green finding.

LICENSEE EVENT REPORT (LER)

Failure To Reset An Isolation Signal Caused An ESF Signal to Be Generated That Resulted In The Closure Of All Eight MSIVs While The Plant Was Shutdown

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
WNP-2	50-397	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 4
		00	004	00	

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

The event did not involve a loss of intended safety function. In addition, the event did not involve an event or condition that alone could have prevented the fulfillment of any safety functions described in 10CFR50.73(a)(2)(v).

Similar Events

LER 2000-005-00 reports an event that occurred on June 27, 2000, at 1529, which involved the inadvertent closure the inboard and outboard (all eight) MSIVs while the plant was in Mode 4. The ESF actuation was caused by a failure to follow a procedure in that an operator failed to completely bypass a nuclear steam supply shutoff system isolation signal. Both events involved the same operating crew. The root cause of each event is similar in that there was ineffective oversight to consistently reinforce standards and expectations for this operating crew.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) WNP- 2	DOCKET NUMBER (2) 50-397	PAGE (3) 1 OF 3
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TITLE (4)
Failure To Completely Bypass The Low Condenser Vacuum Trip Caused An ESF Signal To Be Generated That Resulted In The Closure Of All Eight MSIVs While The Plant Was Shutdown

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	27	00	2000	005	00	08	01	2000	FACILITY NAME	DOCKET NUMBER

OPERATING MODE	4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
		<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	x	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)				
POWER LEVEL	0	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)		<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)				
		<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)		<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> OTHER				
		<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)		<input type="checkbox"/> 50.73(a)(2)(viii)(A)					
		<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)		<input type="checkbox"/> 50.73(a)(2)(viii)(B)					
		<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)		<input type="checkbox"/> 50.73(a)(2)(x)					

LICENSEE CONTACT FOR THIS LER (12)

NAME R.N. Sherman, Licensing Engineer	TELEPHONE NUMBER (Include Area Code) (509) 377-8616
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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)				EXPECTED	MONTH	DAY	YEAR
YES (If yes, completed EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/>	NO	<input type="checkbox"/>				

ABSTRACT:
 On June 27, 2000 at 1529 with the plant in Mode 4, plant operators were performing a reactor cooldown. The reactor cooldown procedure requires four low condenser vacuum isolation logic keylock switches to be placed in the bypass position prior to breaking condenser vacuum. An operator was directed to bypass the low vacuum trip and placed only the C and D logic channels in bypass, leaving channels A and B in the normal position. When the main condenser vacuum was broken, a nuclear steam supply shutoff system (NSSSS) isolation signal was generated, closing all eight main steam isolation valves (MSIVs). There were no safety consequences associated with this event. The contributing cause of this event is procedure noncompliance. The operator assigned to bypass the low condenser vacuum trip placed only the C and D logic channels in bypass, leaving channels A and B in the normal position. When the main condenser vacuum was broken, an NSSSS isolation signal was generated, closing all eight MSIVs. The root cause of this event is ineffective oversight to consistently reinforce standards and expectations for this operating crew.

There were no safety consequences associated with this event.

The Operations Manager and or the Operations Crew Manager reviewed this event and its underlying causes with management from each operating crew. The personnel directly involved in this event are being remediated.

LICENSEE EVENT REPORT (LER)

Failure To Completely Bypass The Low Condenser Vacuum Trip Caused An ESF Signal to Be Generated and Resulted In The Closure Of All Eight MSIVs While The Plant Was Shutdown

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
WNP-2	50-397	00	005	00	2 OF 3

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

Event Description

On June 27, 2000 at 1529 with the plant in Mode 4, plant operators were performing a reactor cooldown. The reactor cooldown procedure requires four condenser low vacuum isolation logic keylock switches to be placed in the bypass position prior to breaking condenser vacuum. An operator was directed to bypass the low vacuum trip. The operator incorrectly placed only the C and D logic channels in bypass, leaving channels A and B in the normal position. When the main condenser vacuum was broken, an NSSSS isolation signal was generated closing all eight MSIVs.

There were no safety consequences associated with this event. This event is being reported in accordance with 10CFR50.73(a)(2)(iv) as an event or condition that resulted in an automatic actuation of an Engineered Safety Feature (ESF). The actuation occurred while the isolation system was in service.

The resident NRC inspector was notified of this event. The NRC Operations Center was notified of the unexpected ESF actuation by means of the Emergency Notification System (ENS). The Event Number is 37125.

Immediate Corrective Action

The low condenser vacuum isolation logic channels A and B were placed in bypass.

Further Evaluation

A reactor operator was directed to bypass the low condenser vacuum trip. The step required placing four keylock switches, channels A-D, in the bypass position. The operator checked out two keys, one for the channel C switch and one for channel D switch, and placed only channels C and D keylock switches in the bypass position. When the main condenser vacuum was broken an unanticipated NSSSS signal was generated and all eight MSIVs closed.

Cause

The contributing cause of this event is procedure noncompliance. The operator assigned to bypass the low condenser vacuum trip placed only the C and D channels in bypass, leaving channels A and B in the normal position. This resulted in the incomplete bypass of isolation logic that would have precluded the closure of the MSIVs. The root cause of this event is ineffective oversight to consistently reinforce standards and expectations for this operating crew.

Further Corrective Action

1. The Operations Manager and or the Operations Crew Manager reviewed this event and its underlying causes with management from each operating crew.
2. The Reactor Operator involved in this event is completing remediation which includes increased supervisory oversight.

LICENSEE EVENT REPORT (LER)

Failure To Completely Bypass The Low Condenser Vacuum Trip Caused An ESF Signal to Be Generated and Resulted In The Closure Of All Eight MSIVs While The Plant Was Shutdown

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
WNP-2	50-397	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 3
		00	005	00	

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

3. The CRS involved in this event has been removed from License duties pending remediation.
4. The SM involved in this event is attending a 5-week leadership training program which focuses on setting, communicating and reinforcing expectations.

Assessment of Safety Consequences

There were no safety consequences associated with this event. The closure of the MSIVs while in Mode 4 did not impact plant safety because reactor coolant system temperature was less than 200° F and the control rods were fully inserted. The Emergency Core Cooling Systems required by technical specifications were available and capable of performing their intended safety functions. This event did not pose a threat to the health and safety of the public or plant personnel. The significance of this event was evaluated and Energy Northwest has determined it meets the criteria for designation as a Green finding.

The event did not involve a loss of intended safety function. In addition, the event did not involve an event or condition that alone could have prevented the fulfillment of any safety functions described in 10CFR50.73(a)(2)(v).

Similar Events

LER 2000-004-00 reported an event that occurred on June 27, 2000, at 0530, which involved the inadvertent closure the inboard and outboard (all eight) MSIVs while the plant was in Mode 4. The ESF actuation was caused by a failure to follow a procedure in that an operator failed to reset a nuclear steam supply shutoff system trip signal. Both events involved the same operating crew. The root cause of each event is similar in that there was ineffective oversight to consistently reinforce standards and expectations for this operating crew.