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)
Washington Nuclear Plant - Unit 2

DOCKET NUMBER (2) 0 5 0 0 0 3 9 7

PAGE (3) 1 OF 0 3

TITLE (4)
Reactor Protection System Actuation

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	0 7	8 5	8 5	0 3 0	0 0	0 5	3 1	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9): 4

POWER LEVEL (10): 0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

20.402(b)	20.405(c)	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)	X 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)	50.72(b)(2)(ii)
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
R. L. Koenigs, Compliance Engineer	AREA CODE 5 0 9 — 3 7 7 - 2 5 0 1 Ext. 2279

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)

At approximately 1350 hours on May 7, 1985, a Reactor Protection System Actuation occurred on Reactor Pressure Vessel (RPV) level 3 (+13 inches). Operators were in the process of returning the "A" Residual Heat Removal (RHR) loop to the Emergency Core Cooling System (ECCS) lineup from the shutdown Cooling (SDC) mode lineup. Both RHR-V-6A (suction from SDC) and RHR-V-4A (suction from suppression pool) were opened simultaneously providing a flowpath from the Reactor Pressure Vessel directly to the Suppression Pool, causing a rapid RPV water level decrease to the scram setpoint. The SDC mode of RHR isolated automatically, as required. The operating Control Rod Drive pump tripped on low suction pressure due to a suction filter high differential pressure and the Scram Discharge Volume (SDV) vent and drain valves failed to close, as required, following the SCRAM. This was determined to be the result of a clearance order issued on the backup scram air solenoid valves. The CRD system was restarted and RPV level restored to normal. Level decreased to +5 inches on the narrow range level recorder (RFW-LR-608) and no initiation of Emergency Core Cooling Systems operation resulted.

Corrective action included procedure changes, additional permanent warning identification tags and personnel counseling.

IE22
1/1

NRC Form 366
9-83)

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 5	— 0 3 0	— 0 0	0 2 OF 0 3

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

Plant Conditions

a) Power Level - 0%
b) Plant Mode - 4

Event

At 1350 hours on May 7 1985, Control Room operators were in the process of removing Residual Heat Removal (RHR) pump RHR-P-2A from the Shutdown Cooling Mode of operation and returning the system to the standby Emergency Core Cooling System (ECCS) lineup. The operator involved had reviewed the procedure prior to the evolution and was aware of the effect of having valves RHR-V-6A (suction for shutdown cooling mode operation) and RHR-V-4A (suction from the suppression pool) open simultaneously, which would result in the loss of Reactor Pressure Vessel (RPV) water inventory to the Suppression Pool. The operator initiated a "close" signal to RHR-V-6A and then initiated an "open" signal to RHR-V-4A. This took place approximately 30 seconds after the initiation of RHR-V-6A closure. Stroke times for both valves are in the range of 90-100 seconds; hence the RPV water inventory began draining to the Suppression Pool. RPV level immediately decreased to Level 3 (+13 inches) and a Reactor Protection System (RPS) actuation occurred, the Shutdown Cooling (SDC) Mode of RHR automatically isolated, both RHR pumps tripped and the operating Control Rod Drive (CRD) pump tripped on low suction pressure due to high suction filter differential pressure. The lowest RPV water level recorded during the transient was +5 inches on the narrow range recorder (RFW-LR-608). The CRD system was restarted, re-establishing a water feed path to the RPV.

Subsequently, it was noticed that the Scram Discharge Volume (SDV) vent and drain valves CRD-V-10/180, 11/181) had not closed, as required, following the scram. CRD-V-180 (vent) and CRD-V-181 (drain) were manually closed to isolate the volume and an investigation begun. RPV level was returned to normal with CRD flow, the Scram was reset and RHR-P-2B was placed in service in the Shutdown Cooling mode of RHR. The RPV was without forced circulation for less than one hour which is consistent with the Plant Technical Specification requirement. RPV metal temperature readings were taken throughout the transient until forced circulation was re-established. The cause of the SDV vent and drain valves failure to close was traced to a clearance order which secured power to the relay circuit for the backup scram valve solenoids. The clearance order, which had been implemented to allow completion of a plant modification, placed the SDV in an abnormal configuration. The circuit involved actuates on a scram signal to de-energize relays that cause air to vent through air solenoid valves (CRD-V-9, V-182) which cause the SDV vent and drain valves to close.

Immediate Corrective Action

The CRD System was returned to operation at 1359 hours and the SDV was isolated manually by closing CRD-V-180 (vent) and CRD-V-181 (drain) at approximately 1417 hours. RPV level was restored to normal at approximately 1435 hours.

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 5	— 0 3 0	— 0 0	0 3 OF 0 3

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

Further Corrective Action

- Operations supervision has met with the specific operator involved and discussed the overall effects and results from the lack of attentiveness to details concerning this event. The need for increased awareness and maintenance of overall plant status, including the scope and magnitude of results associated with normal and off normal operation of systems in the Control Room was emphasized.

- Plant procedures, PPM 2.4.2 (Residual Heat Removal) and PPM 4.12.1.1 (Control Room Evacuation) have been reviewed and procedure deviations incorporated to preclude similar events of this nature from reoccurring in the future.

- Permanent "Red" indentification tags will be added as permanent "Caution" tags to the Control Room Panel (P-601) and at the Remote Shutdown Panel to further emphasize the potential for RPV draindown with both valves "open" simultaneously.

- This LER will be required reading for all licensed operators.

Safety Significance

There is no safety significance associated with this event. The High Pressure Core Spray (HPCS) system is provided to maintain RPV water level in order to assure that the Reactor core is adequately cooled for small primary system breaks which result in a loss of coolant. The Low Pressure Core Spray (LPCS) and RHR systems, although primarily designed for water inventory makeup, following a large pipe break, can also be used to mitigate the consequences of small RPV water inventory losses for the RPV pressure at which this event occurred. LPCS, HPCS and RHR "B" and "C" LPCI functions were operable at the time of this event. RPV level was restored by CRD system and no ECCS actuation was required. The failure of the SDV vent and drain valves to close was corrected by manual isolation of these valves.

Similar Events

Refer to LER 84-091

EIIS References

Text Identification	EIIS Reference System	Component
RPS	JC	NA
RHR-V-4A/-6A	BO	ISV
RPV	AC	RPV
SDV	AA	VSL
CRD Pump	AA	D
CRD-V-10/11/180/181	AA	ISV
RFW-LR-508	SJ	LR
CRD-V-8/[illegible]82	AA	RSV

Washington Public Power Supply System
P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

Docket No. 50-397

May 31, 1985

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

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 85-030

Dear Sir:

Transmitted herewith is Licensee Event Report No. 85-030 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 the follow-up report to the verbal notification given at 1440 hours on May 7, 1985.

Very truly yours,

JW Baker for

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

CMP:la

Enclosure:
Licensee Event Report No. 85-030

cc: Mr. John B. Martin, NRC - Region V
Mr. A. D. Toth, NRC - Site (901A)
Ms. Dottie Sherman, ANI
INPO Records Center - Atlanta, GA

IE22
1/1