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ACCESSION NBR:8809080305 DOC.DATE:.88/08/29 NOTARIZED: NO DOCKET #
FACIL:50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397
AUTH.NAME AUTHOR AFFILIATION
ARBUCKLE,J.D. Washington Public Power Supply System
POWERS,C.M. Washington Public Power Supply System
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-027-00:on 880728,RWCU sys isolation on high differential flow occurred due to personnel error.
W/8 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 5
TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Washington Nuclear Plant - Unit 2	0 5 0 0 0 3 9 7	1 OF 0 4

TITLE (4) Reactor Water Cleanup (RWCU) System Isolation on High Differential Flow While Placing an RWCU Recirculation Pump in Service - Personnel 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 7	2 8	8 8	8 8	0 2 7	0 0	0 8	2 9	8 8		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 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 (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)	
		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
J.D. Arbuckle, Compliance Engineer	AREA CODE 5 0 9 — 3 7 7 - 2 1 1 1 5

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)

On July 28, 1988 at 0022 hours, the Reactor Water Cleanup (RWCU) System isolated on high differential flow during preparations to place an RWCU Recirculation Pump (RWCU-P-1A) in service. The other RWCU Recirculation Pump (RWCU-P-1B) was shutdown on July 27, 1988 at 2136 hours by Control Room Operators (CROs) due to excessive noise emanating from the pump.

Reactor Water Cleanup Recirculation Pump RWCU-P-1A was being prepared for startup by warming the pump casing in accordance with Plant Procedure (PPM) 2.2.3, "Reactor Water Cleanup System." A Plant System Engineer and Equipment Operator were stationed in the pump room. The System Engineer directed that heatup be controlled by blowdown flow to radwaste. In accordance with the procedure, the RWCU Filter Demineralizer Bypass Valve (RWCU-V-44) was cracked open and blowdown to radwaste was established by opening the RWCU Blowdown Flow Control Valve (RWCU-V-33). However, the System Engineer reported no noticeable heatup on the pump because the piping downstream of RWCU-V-44 was depressurizing due to the valve not being open far enough. Accordingly, both RWCU-V-44 and RWCU-V-33 were subsequently isolated. To preclude a system isolation on high differential flow, the system was repressurized by cracking open RWCU-V-44 in 20 second intervals.

During this evolution, an RWCU Filter Demineralizer was also placed in service, causing a further reduction in RWCU line pressure which resulted in an RWCU System inlet-to-outlet high flow differential (58.5 gpm for greater than 45 seconds). By design, both the RWCU Inboard Containment Isolation Valve (RWCU-V-1) and Outboard Containment Isolation Valve (RWCU-V-4) automatically closed. On July 28, 1988 at 0026 hours, the system was realigned and returned to pre-event status.

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

Abstract (Continued)

The root cause of this event is personnel error in authorizing and performing an evolution without up-to-date information or involvement by the responsible Control Room Operator and Supervisor.

Further corrective action includes modifying applicable Plant operating procedures to provide for improved communications within the Control Room.

This event posed no threat to the health and safety of either the public or Plant personnel.

Plant Conditions

a) Power Level - 100%
b) Plant Mode - 1 (Power Operation)

Event Description

On July 28, 1988 at 0022 hours, the Reactor Water Cleanup (RWCU) System isolated on high differential flow during preparations to place an RWCU Recirculation Pump (RWCU-P-1A) in service. The other RWCU Recirculation Pump (RWCU-P-1B) was shutdown on July 27, 1988 at 2136 hours by Control Room Operators (CROs) due to excessive noise emanating from the pump.

Reactor Water Cleanup Recirculation Pump RWCU-P-1A was being prepared for startup by warming the pump casing in accordance with Plant Procedure (PPM) 2.2.3, "Reactor Water Cleanup System". A Plant System Engineer and Equipment Operator (EO) were stationed in the pump room and had the appropriate pyrometer attached to the pump flange. The System Engineer requested that approximately 25 gpm flow be put through the pump while he monitored heatup rate. After consulting the procedure, and confirming with the System Engineer (through the EO in the pump room), the control Room Staff decided to use applicable steps of Section G, "RWCU System Startup at Elevated Temperature", in PPM 2.2.3.

The System Engineer then directed that heatup be controlled by blowdown flow to radwaste. In accordance with the procedure, the RWCU Filter Demineralizer Bypass Valve (RWCU-V-44) was cracked open and blowdown to radwaste was established by opening the RWCU Blowdown Flow Control Valve (RWCU-V-33). However, the System Engineer reported no noticeable heatup on the pump because the piping downstream of RWCU-V-44 was depressurizing due to the valve not being open far enough. Accordingly, both RWCU-V-44 and RWCU-V-33 were subsequently isolated. To preclude a system isolation on high differential flow, the system was repressurized by cracking open RWCU-V-44 in 20 second intervals.

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

During this evolution, a Radwaste Control Room Operator (RWO) contacted the Main Control Room and informed an extra CRO on duty that he had completed precoating RWCU Filter Demineralizer Unit "A" and was ready to place it in service. The CRO initially denied the RWO authorization to put the unit in service, but changed his mind when the RWO told him that the plan was to put the unit on line to enable the Control Room to initiate blowdown to the main condenser. Apparently the Shift Support Supervisor (SSS) on the previous shift had briefed the RWO of the possibility of using the unit and blowing down to the condenser. This information was passed on to the on-duty RWO, who assumed that it was to be done when precoating was completed.

The RWCU Filter Demineralizer was subsequently placed in service, causing a further reduction in RWCU line pressure which resulted in an RWCU System inlet-to-outlet high flow differential (58.5 gpm for greater than 45 seconds). By design, both the RWCU Inboard Containment Isolation Valve (RWCU-V-1) and Outboard Containment Isolation Valve (RWCU-V-4) automatically closed.

On July 28, 1988 at 0026 hours the system was realigned and returned to pre-event status.

The root cause of this event is personnel error in authorizing and performing an evolution without up-to-date information or involvement by the responsible Control Room Operator and Supervisor. A contributing factor was not ensuring that proper procedural barriers and cautions were in place for the specific evolution being performed (e.g. warmup of RWCU-P-1A at rated conditions).

Immediate Corrective Action

The RWCU System was realigned and repressurized, and the pump subsequently warmed.

Further Corrective Action

1. The RWO was counselled on the importance of clearing all major evolutions with the on-duty Shift Support Supervisor.

2. The CRO was counselled on the importance of verifying that all Plant evolutions are authorized by the responsible CRO and Control Room Supervisor, prior to implementation of such activity.

3. PPM 2.2.3 will be revised to provide additional guidance on warmup of RWCU-P-1A and 1B at rated conditions. In addition, a caution statement will be added to notify the Control Room prior to placing an RWCU Filter Demineralizer on line.

4. Applicable Plant operations procedures will be modified to provide for improved communications within the Control Room.

Safety Significance

There is no safety significance associated with this event in that there was no actual leak and the RWCU System isolated as designed. Accordingly, this event posed no threat to the health and safety of either the public or Plant personnel.

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

Simliar Events

There have been a number of other LERs associated with RWCU differential flow problems; however, none with the same root cause.

EIIS Information

Text Reference	EIIS Reference	
	System	Component
Reactor Water Cleanup (RWCU) System	CE	- - - - -
RWCU-P-1A (Recirculation Pump)	CE	P
RWCU-P-1B (Recirculation Pump)	CE	P
RWCU-V-44 (Filter Demineralizer Bypass Valve)	CE	FCV
RWCU-V-33 (Blowdown Flow Control Valve)	CE	FCV
RWCU-DM-1A (Filter Demineralizer)	CE	FDM
RWCU-V-1 (Inboard Containment Isolation Valve)	CE	ISV
RWCU-V-4 (Outboard Containment Isolation Valve)	CE	ISV

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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

Docket No. 50-397

August 29, 1988

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

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 88-027

Dear Sir:

Transmitted herewith is Licensee Event Report No. 88-027 for the WNP-2 Plant. This report is submitted in response to the report requirements of 10CFR50.73 and discusses the items of reportability, corrective action taken, and action taken to preclude recurrence.

Very truly yours,

C M Powers

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

CMP:lg

Enclosure:
Licensee Event Report No. 88-027

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

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