



Commonwealth Edison
Dresden Nuclear Power Station
R.R. #1
Morris, Illinois 60450
Telephone 815/942-2920

July 8, 1992

CWS LTR #92-371

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

Licensee Event Report 92-18, Docket 050237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2).

L. F. Germer for 7/9/92
Charles W. Schroeder
Station Manager
Dresden Nuclear Power Station

CWS/cfq

Enclosure

cc: A. Bert Davis, Regional Administrator, Region III
NRC Resident Inspector's Office.
File/NRC
File/Numerical

(ZDVR/655)

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Dresden Nuclear Power Station, Unit 2
 Docket Number (2) 0 5 0 0 0 2 3 7
 Page (3) 1 of 0 5

Title (4) Primary System Isolation Valve Closures Due To Reactor Water Cleanup System Isolations

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 6	1 8	9 2	9 2	0 1 8	0 0	0 7	0 7	9 2	N/A		
N/A											

OPERATING MODE (9) N

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

POWER LEVEL (10) 0 5 1	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
	<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 (Specify in Abstract below and in Text)
	<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: Kenneth H. Neal, Technical Staff System Engineer Ext. 2237
 TELEPHONE NUMBER: 8 1 5 9 4 2 1 - 2 9 2 0

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS
X	C E	P C V	C 6 0 0	N					

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15) X | NO

ABSTRACT (Limit to 1400 spaces, i.e, approximately fifteen single-space typewritten lines) (16)

On June 18, 1992, at 2326 hours, with Unit 2 at 51% of rated core thermal power, a Reactor Water Cleanup (RWCU) System isolation occurred after the operating RWCU recirculation pump, 1205-2B, tripped. During this evolution, the pressure increased momentarily to approximately 150 pounds per square inch gauge (psig), which resulted in Primary Containment Isolation motor operated valves (MOVs) 2-1201-1 and 2-1201-2 fully closing. The apparent cause of the pump trip is unknown. The isolation was reset at 0004 hours on June 19, 1992. As the Operator attempted to fill the RWCU system, the pressure increased to approximately 150 psig and the RWCU system again isolated. Pressure Control Valve (PCV) 2-1217 has previously been identified as a problem in the RWCU system due to disc wear, which has caused difficulty with RWCU pressure control. Nuclear Engineering Department (NED), the Site General Electric Company Engineer, and the System Engineer are assisting in the design of a new pressure control valve. This valve is scheduled to be replaced during the next Unit 2 refuel outage. At 0014 hours, the isolation was reset. The RWCU system was restarted without any further problems on June 19, 1992, at 0020 hours. This event had no safety significance because the isolation logic operated by design to prevent RWCU overpressurization, and there was minimal effect on reactor water chemistry. A previous similar RWCU isolation on Unit 3 was reported by LER 92-014/05000249.

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TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

However, the RWCU system is not currently operated with the original complement of three demineralizers in service. Prior to 1987, the two trains of heat exchangers were operated with two demineralizers (654 gpm each) and both RWCU recirculation pumps. This practice continued until approximately 1987 when single demineralizer operation was attempted in an effort to reduce the volume of radwaste being generated. Single demineralizer operation included use of one train of heat exchangers, one RWCU recirculation pump and one demineralizer. Single demineralizer operation did not have any known disadvantages and it produced excellent quality reactor water with low conductivity. Consequently, single demineralizer operation continued. When single demineralizer operation was implemented, it was not foreseen that the reduced flow rate of 600 gpm through PCV 2-1217 would result in pressure control difficulties.

Difficulty controlling pressure has previously caused spurious trips of the RWCU system. A Nuclear Engineering Department (NED) report, dated May 21, 1992, has confirmed that the system has been operating outside of the normal expected characteristics for PCV 2-1217.

In this particular event, an unplanned RWCU system isolation occurred following an unexpected RWCU recirculation pump trip; difficulty with RWCU pressure control resulted in RWCU system pressure reaching the isolation setpoint. The root cause of the unexpected RWCU recirculation pump 1205-2B trip could not be determined. Investigation by Electrical Maintenance under Work Request (WR) 09899 indicated no problems with the pump trip logic, which gives a pump trip on any of the following conditions: low suction pressure, high outlet temperature, or RWCU valve interlock conditions not satisfied. Instrument Maintenance will investigate further under WR 10271. The subsequent unplanned RWCU system isolation while performing the fill evolution was attributed to the previously described pressure control difficulties.

D. SAFETY ANALYSIS OF EVENT:

Although this event was not initiated by PCI sensors, it did result in the closure of PCI valves. This event had minimal operational significance because Unit 2 had no problems with reactor water chemistry or reactor pressure. The RWCU system automatically isolated, as designed, upon receipt of the high pressure signal. There was no effect on public health or safety. For these reasons, this event had minimal significance.

E. CORRECTIVE ACTIONS:

Immediate corrective action was to reset and restart the RWCU system at 0115 hours on May 24, 1992. The RWCU system then operated without further problems.

Work request (WR) 09899 was written to have Electrical Maintenance troubleshoot the 1205-2B trip. No problems were found. As described in Section C above, Instrument Maintenance will perform further investigation concerning the unplanned RWCU recirculation pump trip under WR 10271 by July 31, 1992 (237-200-92-115001).

NED, the Site General Electric Company Engineer, and the System Engineer assisted Control Components Inc. in the design of a new pressure control valve. This valve is scheduled to be replaced during the next Unit 2 refuel outage (237-200-92-07104), currently scheduled to start in January, 1993.

F. PREVIOUS OCCURRENCES:

There have been several recent RWCU trips. The most recent event is listed below.

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LER/Docket Numbers Title

92-014/05000249 Reactor Water Cleanup System Isolation During Fill and Vent Due To Pressure Control Problem

This event involved unplanned automatic closure of two Primary Containment Group III Isolation valves due to deficiency within the RWCU pressure control valve and/or its control system.

G. COMPONENT FAILURE DATA:

<u>Manufacturer</u>	<u>Nomenclature</u>	<u>Model Number</u>	<u>Mfg. Part Number</u>
Control Components Inc.	Disc Stack Assembly	N/A	723701005

An industry wide NPRDS data base search was performed on the disc stack assembly of the PCV valve and it revealed no previous occurrences.

