



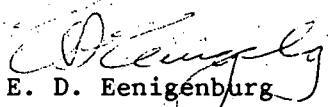
**Commonwealth Edison**  
Dresden Nuclear Power Station  
R.R. #1  
Morris, Illinois 60450  
Telephone 815/942-2920

August 6, 1991

EDE LTR #91-483

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

Licensee Event Report #91-019-0, Docket #050237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2)(iv).

  
E. D. Eenigenburg  
Station Manager  
Dresden Nuclear Power Station

EDE/ade

Enclosure

cc: A. Bert Davis, Regional Administrator, Region III  
File/NRC  
File/Numerical

(ZDVR/286)

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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   3
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Title (4) Primary Containment Isolation Valve Closure Due to Reactor Water Cleanup System Isolation

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

OPERATING MODE (9) POWER LEVEL (10) 0   2   0	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)	
	<input type="checkbox"/> 20.402(b)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.73(a)(2)(v)
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.73(a)(2)(vii)
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(x)
		<input type="checkbox"/> 73.71(b)
		<input type="checkbox"/> 73.71(c)
		<input type="checkbox"/> Other (Specify in Abstract below and in Text)

LICENSEE CONTACT FOR THIS LER (12)

Name John Reid, Technical Staff System Engineer	Ext. 2380	TELEPHONE NUMBER AREA CODE 8   1   5   9   4   2   -   2   9   2   0
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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)

<input checked="" type="checkbox"/> Yes (If yes, complete EXPECTED SUBMISSION DATE)	<input type="checkbox"/> NO	Expected Submission Date (15)	Month	Day	Year
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On July 14, 1991 at 1935 hours with Unit 2 at 20% power, a Reactor Water Cleanup (RWCU) system isolation occurred with Primary Containment isolation Motor Operated Valves (MOV) 2-1201-1 and 2-1201-2 fully closing. Operations personnel were adjusting RWCU system flow when the RWCU system isolated. The 2B RWCU Recirculation Pump (RP) inlet pressure measured downstream from the pressure reducing station indicated a pressure spike from 100 psig to 155 psig on recorder 2-1290-12. The 2B RWCU RP automatically tripped and the RWCU system automatically isolated on a high pressure signal (nominal setpoint for these automatic actions is 150 psig). Although these automatic actions were not initiated by Primary Containment Isolation logic, the RWCU system isolation did result in closure of Primary Containment Isolation MOVs 2-1201-1 and 2-1201-2. The cause of the RWCU system isolation was attributed to control difficulties within the RWCU flow controller. The immediate corrective action was to reset and restart the RWCU system. This event had no safety significance because the trips occurred as required when challenged by the pressure spike to protect the RWCU piping and isolation of the RWCU system for short periods has no effect on reactor coolant chemistry limits. The Technical Staff will investigate potential improvements to the RWCU flow controller to facilitate smoother control under low power conditions. A previous RWCU valve closure event was reported by LER 91-14/050237.

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

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 2527 Mwt rated core thermal power

Nuclear Tracking System (NTS) tracking code numbers are identified in the text as (XXX-XXX-XX-XXXXX)

EVENT IDENTIFICATION:

Primary Containment Isolation [JM] Valve Closure Due To Reactor Water Cleanup [CE] System Isolation

A. CONDITIONS PRIOR TO EVENT:

Unit: 2                                      Event Date: July 14, 1991                                      Event Time: 1935 Hours  
 Reactor Mode: N                                      Mode Name: Run                                      Power Level: 20%  
 Reactor Coolant System (RCS) Pressure: 940 psig

B. DESCRIPTION OF EVENT:

On July 14, 1991 at 1935 hours with Unit 2 at 20% power, a Reactor Water Cleanup (RWCU) system isolation occurred resulting in Primary Containment Isolation Motor Operated Valves (MOVs) 2-1201-1 and 2-1201-2 fully closing. Operations personnel were adjusting RWCU system flow when the RWCU system isolated on a "high pressure downstream of Non-Regenerative Heat Exchangers" signal. The 2B RWCU recirculation pump inlet pressure measured downstream from the pressure reducing station indicated a pressure spike from 100 psig to 155 psig on recorder 2-1290-12. The 2B RWCU recirculation pump automatically tripped and the RWCU system automatically isolated when challenged by the pressure spike. These automatic actions occurred as expected at a nominal setpoint of 150 psig. Although this event was not initiated by Primary Containment Isolation logic, it did result in closure of Primary Containment Isolation MOVs 2-1201-1 and 2-1201-2. There were no systems or components inoperable at the beginning of this event which contributed to the event. Immediate corrective action was to restart the RWCU system.

C. APPARENT CAUSE OF EVENT:

This report is submitted in accordance with Title 10 of the Code of Federal Regulations Part 50 Section 73(a)(2)(iv), which states that any event that results in the manual or automatic actuation of any Engineered Safety feature, including the Reactor Protection System (RPS), must be reported.

The cause of the RWCU recirculation pump trip and system isolation was the momentary pressure spike. The automatic actions occurred as expected to protect the RWCU piping. Review of this event with Operations and Instrument Maintenance personnel indicates that the underlying cause is a control difficulty within the RWCU flow controller, particularly at low power conditions. During startup, Operators have difficulty achieving and maintaining the proper RWCU system pressure/flow relationship. This is due to the relatively narrow bands within which the pressure control valve (PCV-2-1217) and the flow control valve (FCV-2-1219) must operate in under these conditions. In order to stabilize RWCU operation, the pressure control station is operated in the automatic mode, while the flow control station is operated in the manual mode. The Operator manually adjusts flow control valve position to achieve the desired flow. As such, flow control valve position must be manually readjusted to compensate for changing system conditions.

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

A history review indicates that a modification was previously installed to provide a small bypass line to facilitate smoother startup of the RWCU system with the reactor at pressure. The bypass line modification has been a significant improvement; however, review of this event concluded that further study of the flow controller configuration is needed with the objective of providing easier system operation.

D. SAFETY ANALYSIS OF EVENT:

The purpose of the RWCU system is to maintain reactor water chemistry within Technical Specification requirements. As this event was promptly resolved and the RWCU system was returned to service immediately, Technical Specification limits were not exceeded. The RWCU system automatically isolated, as designed, upon receipt of a high pressure signal in the RWCU system. There was no effect on public health or safety. For these reasons, this event had no safety significance.

E. CORRECTIVE ACTIONS:

The Technical Staff System Engineer will evaluate potential improvements to the RWCU flow controller. This investigation will be included in the Station top technical issues report (237-200-91-12001). Also, the Operations Staff will include a precaution in Dresden Operating Procedure (DOP) 1200-3 (RWCU operation with the reactor at pressure) to warn of RWCU system perturbations under low power conditions (237-200-91-12002).

F. PREVIOUS OCCURRENCES:

A previous event involving RWCU valve movement is listed below.

LER/Docket Numbers Title

91-014/0500237 Primary Containment Isolation Valve Closure Due To Reactor Water Cleanup System Isolation.

This event involved unplanned automatic closure of two Primary Containment Group I Isolation valves due to shorting of an indicating light socket at a local control station, while an Operator was changing the bulb. Corrective action included addition of a precaution to the local control station surveillance.

G. COMPONENT FAILURE DATA:

As there was no component failure, this section does not apply.