



Commonwealth Edison

Dresden Nuclear Power Station

R.R. #1

Morris, Illinois 60450

Telephone 815/942-2920

September 6, 1991

EDE LTR #91-548

U.S. Nuclear Regulatory Commission  
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Washington, D.C. 20555

Licensee Event Report #91-027-0, 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/302)

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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 10 10 10 2 13 17 Page (3) 1 of 0 3

Title (4) Inadvertent Closure of Core Spray Minimum Flow Valve 2-1402-38A

Due to Procedural Deficiency

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 8	1 13	9 11	9 11	0 2 17	0 0	0 9	0 16	9 11	N/A		
									N/A		

OPERATING MODE (9) N

POWER LEVEL (10) 0 9 2

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 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
<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"/> in Abstract
<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"/> below and in
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> Text)

LICENSEE CONTACT FOR THIS LER (12)

Name Ronald R. Skoglund, Technical Staff System Engineer Ext. 2543 TELEPHONE NUMBER 8 1 5 9 4 2 1 - 2 19 12 10

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)

Yes (If yes, complete EXPECTED SUBMISSION DATE)  NO Expected Submission Date (15) \_\_\_\_\_

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

At 1745 hours on August 13, 1991, with Unit 2 at 92% power, the Instrument Maintenance Department (IMD) was completing Dresden Instrument Surveillance (DIS) 1400-6, Core Spray Flow Transmitter (FT) 1461A(B) Calibration and Maintenance Inspection, when an inadvertent closure of the Core Spray minimum flow valve 2-1402-38A occurred. The valve was reopened manually by a Control Room Operator using the valve control switch in the Control Room. Further investigation showed that the 2-1402-38A valve closed when the 2-1461-A flow transmitter was valved back in. DIS 1400-6 states specifically to slowly open the differential pressure (dP) cell instrument isolation valves when the transmitter is valved back into the system. FT 2-1461-A has a common sensing line with FT 2-1464-A, which is the flow transmitter that causes movement of the Core Spray Minimum flow valve; however, a caution statement was not provided in the procedure to explain that operating the transmitter isolation valves too quickly, a change in common sensing line pressure could simulate flow greater than 750 gpm, the flow rate at which the 2-1402-38A valve automatically closes. As a result of this event, DIS 1400-6 will be changed to heighten awareness of this potential problem. This event had no safety significance because the valve was immediately repositioned and operability of the 2B Core Spray Subsystem and the Low Pressure Coolant Injection System were unaffected. Review of System records indicates no adverse trend of events of this type while performing Core Spray FT Calibration.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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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:

Inadvertent Closure of Core Spray [BM] Minimum Flow Valve 2-1402-38A Due to Procedural Deficiency

A. CONDITIONS PRIOR TO EVENT:

Unit: 2	Event Date: August 13, 1991	Event Time: 1745 Hours
Reactor Mode: N	Mode Name: Run	Power Level: 92%
Reactor Coolant System (RCS) Pressure: 979.7 psig		

B. DESCRIPTION OF EVENT:

At 1745 hours on August 13, 1991, with Unit 2 at 92% power while the Instrument Maintenance Department (IMD) was performing Dresden Instrument Surveillance (DIS) 1400-6, Core Spray Flow Transmitter FT 1461A(B) Maintenance Inspection and Calibration, 2A Core Spray pump minimum flow valve 2-1402-38A inadvertently closed. The valve was manually reopened from the Control Room using the valve control switch. Further investigation showed that the 2-1402-38A valve closed when the 2-1461-A flow transmitter was valved back into the system. DIS 1400-6 specifically stated to slowly open the differential pressure (dP) cell instrument isolation valves when the transmitter is valved back in. FT 2-1461-A has a common sensing line with FT 2-1464-A, which is the flow transmitter that causes movement of the Core Spray Minimum flow valve; however, a caution statement was not provided in the procedure to explain that operating the transmitter isolation valves too quickly, a change in common sensing line pressure could simulate flow greater than 750 gpm, the flow rate at which the 2-1402-38A automatically closes.

Since the the minimum flow valve is part of an Emergency Core Cooling System (ECCS) and the valve actuated inadvertently, an Emergency Notification System (ENS) notification was completed at 2059 hours.

C. APPARENT CAUSE OF EVENT:

This report is submitted in accordance with 10 CFR 50.73(a)(2)(iv), which requires the reporting of any unplanned Engineered Safety Feature (ESF) actuation, due to the unplanned movement of the 2-1402-38A Core Spray minimum flow valve.

The apparent cause of this event has been found to be procedural deficiency. The inadvertent closure of the Core Spray minimum flow valve 2-1402-38A occurred during the performance of DIS 1400-6. After successful calibration of flow transmitter 2-1461-A, IMD personnel are to slowly open the transmitter low and high pressure dP cell instrument isolation valves; however, the procedure did not clearly caution against the potential consequences of opening the isolation valves too quickly. In doing so, a Core Spray flow rate above 750 gpm can be simulated, causing the Core Spray minimum flow valve to close inadvertently.

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

D. SAFETY ANALYSIS OF EVENT:

The Core Spray minimum flow valve is normally open and permits sufficient bypass flow to the suppression chamber to prevent the 2A Core Spray pump from overheating during extended operation under low flow conditions. The 2-1402-38A valve closes automatically during Core Spray initiation when the 2A Core Spray pump flow exceeds the minimum flow requirement of 750 gpm. In this case, the valve was able to be reopened immediately. In addition, the 2B Core Spray Subsystem and Low Pressure Coolant Injection [B0] System were operable. For these reasons, this event had no safety significance.

E. CORRECTIVE ACTIONS:

1. The IMD will incorporate the following items into DIS 1400-6 prior to its next performance:
  - a. Add an appropriate caution to warn personnel performing the calibration that the minimum flow valve may actuate if the isolation valves for the transmitters are opened too quickly because FT 1461A/B had a common sensing line with FT 1464A/B (237-200-91-14201); and,
  - b. Add an additional limitation to inform the Shift Supervisor prior to performing the surveillance that an actuation of the minimum flow valve may occur when the transmitter is valved back into the system (237-200-91-14202).
2. The Master Instrument Mechanic will review this event at an upcoming IMD tailgate meeting to emphasize the need for caution when performing this evolution (237-20-91-14203).

F. PREVIOUS OCCURENCES:

Unplanned closure of the Core Spray minimum flow valves during performance of DIS 1400-6 has not been an adverse trend.

G. COMPONENT FAILURE DATA:

There was no component failure identified with this event; therefore, this section is not applicable.