



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

January 24, 1992

CWS LTR #92-042

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

Licensee Event Report 92-001 , Docket 050249 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2)(iv).

*L. E. Gerner 1/24/92*

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

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(ZDVR/455)

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PDR ADOCK 05000249  
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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) <b>Dresden Nuclear Power Station, Unit 3</b>	Docket Number (2) <b>0   0   5   0   0   2   4   9</b>	Page (3) <b>1   of   0   4</b>
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Title (4) **Primary Containment Isolation Valve Closure Due To Shutdown Cooling System Spurious 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   1	0   2	9   2	9   2	0   0   1	0   0	0   1	2   4	9   2	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   0   0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<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)
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**LICENSEE CONTACT FOR THIS LER (12)**

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

**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

**SUPPLEMENTAL REPORT EXPECTED (14)**

<input type="checkbox"/> Yes (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO
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Expected Submission Date (15) \_\_\_\_\_

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

On January 2, 1992, at 1854 hours, with Unit 3 shut down for a refuel outage and the Shutdown Cooling (SDC) system in operation to cool the reactor water, an unplanned SDC system isolation occurred, causing automatic closure of the SDC system Primary Containment Isolation Motor Operated Valves (MOVs). There were no indications as to the cause of the isolation. The system was promptly reset/restarted. A work request was initiated to verify the calibration of the SDC suction temperature instrument loop. During completion of this work on January 13, 1992, further difficulty occurred in resetting an SDC isolation due to unrelated causes (refer to LER 92-2/050249). Isolation of the SDC system had minimal safety significance because the SDC system was promptly restored to normal operation and the reactor water temperature was maintained well below the 212 degree F limit required for primary containment integrity. A previous spurious Dresden Unit 2 SDC isolation was reported by LER 91-36/050237.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Form Rev 2.0

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				Page (3)			
		Year	Sequential Number	Revision Number					
Dresden Nuclear Power Station	0   0   5   0   0   2   4   9	9   2	-   0   0   1	-   0   0	0   2	OF	0   4		

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 Shutdown Cooling [BO] System Spurious Isolation

A. CONDITIONS PRIOR TO EVENT:

Unit: 3                                      Event Date: January 2, 1992                                      Event Time: 1854 Hours  
 Reactor Mode: N                                      Mode Name: Shutdown                                      Power Level: 0%  
 Reactor Coolant System (RCS) Pressure: 0 psig

B. DESCRIPTION OF EVENT:

On January 2, 1992, at 1854 hours, with Unit 3 in cold shutdown for a refuel outage, a Shutdown Cooling (SDC) system isolation occurred as a result of an unidentified spurious signal. This resulted in closure of Primary Containment Isolation Motor Operated Valves (MOVs) 1001-1A and 1B, 1001-2A, and 1001-5A and 5B. No Main Control Panel [IB] alarms indicating the cause of the isolation were received. An investigation of work in progress and normal plant activities could not determine the cause of the isolation. Temperature indications for the Reactor Recirculation [AD] loops (from which SDC takes suction) and other reactor water temperature indications remained normal. The SDC system was reset/restarted at 1925 hours on January 2, 1992. Work Request (WR) 05767 was initiated for the Instrument Maintenance Department (IMD) to perform a further investigation.

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 (ESF), including the Reactor Protection System (RPS) [JE], must be reported.

The root cause of this event could not be specifically determined. A review of work in progress and normal plant activities at the time of the isolation did not indicate any tasks in progress that could have interfered with the temperature monitoring circuit. A review of chart recorder 3-260-11, which is part of the SDC suction temperature instrument loop, did not indicate any temperature spikes at the time of the event. On January 13, 1992, the IMD performed a calibration check of the SDC system suction high temperature instrument loop per WR 05767. The loop was found to be properly calibrated. However, when Operators attempted to start the SDC system following the completion of WR 05767, the isolation valves would not open due to unrelated causes involving damage to an isolation logic relay during (refer to LER 92-2/050249).

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Form Rev 2.0

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			Page (3)		
		Year	Sequential Number	Revision Number			
Dresden Nuclear Power Station	0   0   5   0   0   2   4   9	9   2	-   0   0   1	-   0   0	0   3	OF	0   4

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

A maintenance history review indicated that temperature spiking has occurred in the past due to difficulty with the connections at the temperature element and at the primary containment penetration. However, this phenomenon is normally indicated by a rapid spurious increase in temperature on the Reactor Recirculation system temperature recorder, 3-260-11. The terminations at the temperature element were changed in December, 1989. Since then, there has been a marked decrease in temperature spiking events.

D. SAFETY ANALYSIS OF EVENT:

The primary purpose of the SDC system is to remove decay heat from the reactor coolant system during reactor shutdown. As designed, the system isolates as a result of the following conditions:

1. A high temperature condition on Recirculation loop "A" or "B" via recirculation loop temperature thermocouples (system protection trip only, not driven by ESF logic).
2. Low reactor water level condition (Primary Containment Group III isolation logic).

The purpose of the first condition is to protect the system pumps and other system components from extreme temperatures. The purpose of the second condition is to provide a means of ensuring primary containment integrity for conditions where abnormal reactor inventory leakage from the SDC system were to occur. Isolation of the system, when serving the purpose of maintaining coolant temperature, would result in increasing reactor water temperature; however, at no time did reactor water temperature approach 212 degrees F (at which point establishment of primary containment integrity is required). Control Room personnel were fully aware of reactor water temperature. The Operations Department was able to realign the SDC system promptly after the isolation, minimizing the reactor water temperature increase. Therefore, the safety significance of this event was minimal.

E. CORRECTIVE ACTIONS:

The immediate corrective action consisted of promptly returning the SDC system to operation. Operations personnel recognized the isolation to be spurious in nature. As described above, the IMD subsequently verified the calibration of the SDC system suction temperature instrument loop and found it to be properly calibrated.

F. PREVIOUS OCCURENCES:

A previous Dresden Unit 2 SDC isolation is referenced below.

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		Year	Sequential Number	Revision Number			
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LER/Docket Numbers    Title

91-36/050237    Primary Containment Isolation Valve Closure Due To Shutdown Cooling System Spurious Isolation

During normal Unit 2 shutdown conditions, a spurious isolation of the SDC system on high pump suction temperature occurred. The system was promptly returned to normal. The cause of the system isolation was an unidentified spurious signal.

G. COMPONENT FAILURE DATA:

Since no component failure occurred this section is not applicable.