

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Dresden Nuclear Power Station										DOCKET NUMBER (2) 0 5 0 0 0 2 3 7				PAGE (3) 1 OF 0 2			
TITLE (4) Failure of M02-1402-25A to Operate																	
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	2	2	1	8	4	8	4	0	0	3	N/A			0 5 0 0 0			
0	2	2	1	8	4	8	4	0	0	3	N/A			0 5 0 0 0			
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)															
N		20.402(b)				20.405(e)				50.73(a)(2)(iv)				73.71(b)			
POWER LEVEL (10)		0 9 8				20.405(a)(1)(ii)				50.73(a)(2)(v)				73.71(e)			
		20.405(a)(1)(iii)				50.73(a)(2)(vi)				50.73(a)(2)(vii)(A)				OTHER (Specify in Abstract below and in Text, NRC Form 365A)			
		20.405(a)(1)(iv)				50.73(a)(2)(viii)(B)				50.73(a)(2)(ix)							
		20.405(a)(1)(v)				50.73(a)(2)(x)											
LICENSEE CONTACT FOR THIS LER (12)																	
NAME Lawrence Coyle (X526)										TELEPHONE NUMBER 8 1 5 9 4 2 - 1 2 9 2 1 0							
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																	
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE		
X	B	M	V	L 2 0 0	Y												
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)							
X YES (If yes, complete EXPECTED SUBMISSION DATE)										0 5 0 1 8 4							

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

During normal operation, Core Spray Valve M02-1402-25A failed to operate from the control room. Safety significance was minimal since the redundant Core Spray 'B' loop was operable to provide core cooling.

The exact cause of the event is under investigation. The gear housing of the valve was found cracked. A possible contributing factor to this event is the valve control circuitry which can allow the valve disc to repeatedly attempt to close after already being closed. This creates a hammering effect on the valve and operator. Work requests have been written to modify the circuitry to prevent this hammering effect. A review of other safety related motor operated valves has been made to ensure that a similar valve control circuitry problem does not exist elsewhere. Also a section of the gear housing and the outer bearing race are being sent to the Operational Analysis Department for metallurgical analysis. A supplemental report will be submitted to provide results of the analysis and our additional investigation. The housing and bearing race were replaced.

Finally as interim corrective action until the valve control circuitry is modified, Caution Cards were put on the 1402-25A and B valves for both Units 2 and 3. These Caution Cards will warn the operator not to hold onto the control switch when closing these valves in order to limit any hammering effect.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1) Dresden Nuclear Power Station	DOCKET NUMBER (2) 0 5 0 0 0 2 3 7 8 4	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 4	— 0 0 3	— 0 0	0 2	OF 0 2

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

During normal operation, while DOS 1400-2, Core Spray Valve Operability Test was in progress, Core Spray Valve M02-1402-25A failed to operate from the control room. A GSEP unusual event was declared due to the Unit 2/3 diesel generator out of service for an inspection. A normal unit shutdown per procedure DGP 2-1 was initiated. Safety significance was minimal since the redundant Core Spray 'B' loop was operable and capable of providing core cooling.

Investigation of the valve breaker revealed the thermals tripped. Investigation of the valve itself revealed a cracked bearing race and gear housing. The exact cause of the failure is under investigation. A possible contributing factor to this event is the valve control circuitry which can allow the valve to repeatedly attempt to close after already being closed. This creates a hammering effect on the valve and operator. Work requests (WR 33853 and 34302) have been written to modify the existing circuitry to prevent this effect. A review of other safety related motor operated valves has been made to ensure that the valve control circuitry problem does not exist elsewhere. It has been decided that this occurrence was a potentially significant event. Therefore, per company policy, a task force was formed to further investigate this occurrence, and any other related problems with motor operated valves. Also, a section of the gear housing and the outer bearing race are being sent to the Operational Analysis Department for metallurgical analysis. A supplemental report will be submitted to provide results of the analysis and the task force investigation. The gear housing and bearing were replaced and the valve was returned to service.

Finally as interim corrective action until the valve control circuitry is modified, Caution Cards were put on the 1402-25A and B valves for both Units 2 and 3. These Caution Cards will warn the operator not to hold onto the control switch when closing these valves in order to limit any hammering effect.



Commonwealth Edison

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

March 19, 1984

DJS Ltr. #84-259

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

Licensee Event Report #84-003-0, Docket #050-237 is being submitted
as required by Technical Specification 6.6, NUREG 1022 and
10 CFR 50.73 (a)(2)(i).

D. J. Scott Jr.
Station Superintendent
Dresden Nuclear Power Station

DJS'jmt

Enclosure

cc: J.G. Keppler, Regional Administrator, Region III
File/NRC
File/Numerical

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DEVIATION REPORT

Commonwealth Edison

DVR NO. 12 2 84 19
STA UNIT YEAR NO.

PART 1 TITLE OF DEVIATION Failure of M02-1402-25A to Operate		OCCURRED 2-21-84 2055 DATE TIME	
SYSTEM AFFECTED 1400 Core Spray	PLANT STATUS AT TIME OF EVENT MODE Run, POWER(%) 98	D33699 WORK REQUEST NO.	TESTING <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

DESCRIPTION OF EVENT
While performing DOS 1400-2, core spray valve M02-1401-25A failed to operate from the Control Room. Investigation of the valve breaker revealed that the breaker thermals were tripped. Thermals were manually reset and valve cycled satisfactorily. Work Request was written to determine the cause for the thermals tripping. GSEP unusual event declared due to TS.3.5.F.1. and orderly shutdown initiated.

POTENTIALLY SIGNIFICANT EVENT PER NSD DIRECTIVE A-07		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
10CFR50.72 NRC RED PHONE NOTIFICATION MADE	<input checked="" type="checkbox"/> 1 HOUR 2117 <input type="checkbox"/> 4 HOUR TIME	<input type="checkbox"/> NO
		RESPONSIBLE SUPERVISOR Korchynsky DATE 2-21-84

PART 2 OPERATING ENGINEER'S COMMENTS
In accordance with Technical Specification LCO action statement, a normal unit shutdown per procedure DGP 2-1 was initiated. The Unit 2/3 diesel generator was out-of-service for an annual inspection and the failed core spray valve was identified during valve op surveillances which were required due to this diesel outage. The M0-2-1402-25A valve was repaired, and declared operable, prior to the completion of the Unit 2 shutdown.

<input type="checkbox"/> NON REPORTABLE EVENT <input checked="" type="checkbox"/> 30 DAY REPORTABLE/ 10CFR 50.73(a)(2)(i) <input type="checkbox"/> 5 DAY REPORT PER 10CFR21 <input type="checkbox"/> ANNUAL/SPECIAL REPORT REQUIRED PER A.I.R. # L.E.R. # 84-003-0	NOTIFICATION N/A		
	REGION III		
	TELECOPY	Dennis P. Calle	2-24-84 1211
		NSD	DATE TIME
	<input type="checkbox"/> CECO CORPORATE NOTIFICATION MADE IF ABOVE NOTIFICATION IS PER 10CFR21		
	TELEPHONE	N/A	
	CECO CORPORATE OFFICER	DATE	TIME

PRELIMINARY REPORT COMPLETED AND REVIEWED	John M. Almer OPERATING ENGINEER	2/23/84 DATE
INVESTIGATION REPORT & RESOLUTION ACCEPTED BY STATION REVIEW	<i>J. Brunner</i> 3/21/84	<i>John M. Almer</i> 3/31/84
RESOLUTION APPROVED AND AUTHORIZED FOR DISTRIBUTION	<i>E.M. Pagan Jr</i> STATION SUPERINTENDENT	3/21/84 DATE