

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) <b>Dresden Nuclear Power Station, Unit 3</b>	DOCKET NUMBER (2) <b>05000249</b>	PAGE (3) <b>1 of 4</b>
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TITLE (4)  
**Torus Cooling Outboard Test Valve Would Not Close Resulting In Inoperable Low Pressure Coolant Injection System Due to Faulty Breaker Auxiliary Contact Switches**

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 NAME	DOCKET NUMBER
12	01	97	97	013	00	12	19	97	N/A	
									N/A	

OPERATING MODE (9) <b>1</b>	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more) (11)				
POWER LEVEL (10) <b>099</b>	20.2201(b)	20.2203(a)(2)(v)	50.73(a)(2)(i)	50.73(a)(2)(viii)	
	20.2203(a)(2)(i)	20.2203(a)(3)(i)	50.73(a)(2)(ii)	50.73(a)(2)(x)	
	20.405(a)(1)(ii)	20.2203(a)(3)(ii)	50.73(a)(2)(iii)	73.71	
	20.2203(a)(2)(ii)	20.2203(a)(4)	50.73(a)(2)(iv)		OTHER
	20.2203(a)(2)(iii)	50.36(c)(1)	X 50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 388A
	20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME <b>P. Garrett, Plant Engineering</b>	TELEPHONE NUMBER (Include Area Code) <b>(815) 942-2920 Ext. 2713</b>
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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
X	BO	CNTR	G080	Y					

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X	YES		NO		06	19	98
(If yes, complete EXPECTED SUBMISSION DATE.)							

ABSTRACT (Limit to 1400 spaces, i. e., approximately 15 single-spaced typewritten lines) (16)

On December 1, 1997, at approximately 1215, during performance of Dresden Operating Surveillance (DOS) 1500-10, LPCI System Pump Operability Test With Torus Available and In-Service Test Program, the Torus Cooling Outboard Test valve, 3-1501-38B, could not be closed via its control switches. With the 3-1501-38B valve, and the Torus Cooling Inboard Test valve 3-1501-20B open, a flow path existed which could have diverted flow from the Reactor Vessel if initiation of the LPCI system, in response to a Design Basis accident, was required. Since the 3-1501-38B valve was inoperable, the LPCI system had to rely on the 3-1501-20B valve to isolate the flow path. However, the 3-1501-20B valve stroke time exceeds the design basis requirement to isolate the flow path (36 seconds) by 5 seconds. The immediate cause of this event is equipment failure. Faulty auxiliary contacts on the valve breaker resulted in the valve not being able to close. Corrective actions included replacement of the faulty auxiliary contact switches, and the faulty auxiliary contacts will be sent to Com Ed's central testing facility for analysis. Following the analysis, a supplemental LER will be provided with the identified root cause and any additional corrective actions. The safety significance of this event was minimal. No previous occurrences were identified.

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TEXT (If more space is required, use additional copies of NRC Form 356A) (17)

**C. CAUSE OF EVENT:**

The immediate cause of this event is equipment failure, NRC cause code X. Faulty auxiliary contacts on the valve breaker resulted in the valve not being able to close. Further analysis of the faulty auxiliary contacts will be performed and a supplemental report will be provided with the root cause.

**D. SAFETY ANALYSIS**

In the LPCI system's standby line-up, the isolation valves, 3-1501-38B and 3-1501-20B, are normally closed. When the valves are opened for performance of the quarterly surveillance test, an automatic interlock closes the valves upon an LPCI system initiation, and is to isolate this flow path within 36 seconds. This is necessary to ensure that LPCI flow is not diverted from vessel injection. With these valves in the closed position, the 3-1501-38B valve condition would have no affect on the ability of the LPCI system to perform its safety injection function.

In addition to the injection function, the LPCI system is to provide suppression pool cooling. The system utilizes the line associated with the 3-1501-38B valve to return the cooled water to the suppression pool. This function of the system is secondary compared to the injection function, which keeps the fuel covered in the event of a LOCA. After the LOCA has occurred and the vessel level has been restored, LPCI flow to the vessel is throttled back to the quantity required to keep the fuel covered. Following throttling back the flow, suppression pool cooling would be valved in. If the loop in question would have been put into service, the system would have been able to perform its function. The 3-1501-38B valve would have been able to open and allow cooled suppression pool water to return to the suppression pool, based on the valve opening for the quarterly surveillance test. During the course of adjusting the flow through this line, the inability to close the 3-1501-38B would have been discovered. This would have minimal impact on the ability of the system to provide suppression pool cooling. The valve still would have established a flow path. If the flow path was determined not to be needed, the downstream series valve 3-1501-20B could be utilized to shut down flow through the line.

At the time the condition with the 3-1501-38B was discovered, the system was in a flow test line-up, being tested. If there was an LPCI initiation signal present, the design of the system contains various interlocks that would close the 3-1501-38B and 3-1501-20B valves. If the 3-1501-38B valve would not close, either manually from the control room or on a LPCI initiation signal, the LPCI system would not respond as evaluated in the UFSAR. It would not be able to perform its design function for the period of time it took the 3-1501-20B valve to close in excess of 36 seconds, approximately 5 seconds. Full LPCI injection flow would be directed to the vessel after the 3-1501-20B valve had gone full closed. This event however, is bounded by the analysis contained in Section 6.2.1.3.2.2 of the UFSAR. This analysis postulates a failure of the LPCI loop select logic resulting in all LPCI flow injecting to the drywell. The resulting long term containment response for this event shows that containment integrity is still maintained. Based on the above and the fact that all other Emergency Core Cooling Systems required by Technical Specification 3.5.A.2.b were operable through out this event, the safety significance is minimal.

**E. CORRECTIVE ACTIONS:**

The faulty auxiliary contacts were replaced and the valve was cycled. (Complete)

An industry operating experience search was performed and identified no similar failures of auxiliary contacts during the past 3 years. (Complete)

The faulty auxiliary contacts will be sent to Com Ed's central testing facility for analysis. Following the analysis, a supplemental LER will be provided with the identified root cause and any additional corrective actions. (2491809701301)

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

**F. PREVIOUS OCCURRENCES:**

None.

**G. COMPONENT FAILURE DATA:**

<u>Manufacturer</u>	<u>Nomenclature</u>	<u>Model Number</u>	<u>Mfg Part Number</u>
General Electric	Auxiliary Contact		CR105X