

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)  
LaSalle County Station Unit 2

DOCKET NUMBER (2)  
0 5 0 0 0 3 7 4 1 OF 0 4

PAGE 1

TITLE (4)  
Erratic Operation of Reactor Core Isolation Cooling Steam Line Outboard Isolation Valve

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)
02	06	86	86	002	00	03	05	86			0 5 0 0 0

OPERATING MODE (9) 1

POWER LEVEL (10) 1919

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)

20.402(b)	20.405(e)	30.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	30.38(a)(1)	X 30.73(a)(2)(v)	73.71(a)
20.405(a)(1)(ii)	30.38(a)(2)	30.73(a)(2)(vi)	OTHER (Specify in Abstract Below and in Text, NRC Form 365A)
20.405(a)(1)(iii)	30.73(a)(2)(i)	30.73(a)(2)(vii)(A)	
20.405(a)(1)(iv)	30.73(a)(2)(ii)	30.73(a)(2)(vii)(B)	
20.405(a)(1)(v)	30.73(a)(2)(iii)	30.73(a)(2)(viii)	
20.405(a)(1)(vi)	30.73(a)(2)(iv)	30.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME David M. Lyon, Technical Staff Engineer, extension 245

TELEPHONE NUMBER 812 153 1517 + 1617 1611

AREA CODE

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
X	BN	CNT	R	G	0810	Y			

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

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

On February 6, 1986, at 0930 hours, the operation of the Unit 2 Reactor Core Isolation Cooling (RCIC, BN) Steam Line Outboard Isolation Valve (2E51-F008) was erratic. In accordance with Technical Specification 3.6.3, the following valves on the RCIC steam line were taken out-of-service closed:

Valve	Description
2E51-F063	RCIC Steam Line Inboard Isolation Valve
2E51-F076	RCIC Steam Line Warm Up Bypass Isolation Valve

At 0930 hours, on February 6, 1986, the Unit 2 RCIC system was declared inoperable per Technical Specification 3.7.3. At the time Unit 2 was in Mode 1, generating at 99% power. Work Request L55890 was written on February 6, 1986, to inspect limit and torque switch connections on valve 2E51-F008. A loose torque switch connection was found and it was tightened. Unit 2 RCIC was declared operable at 1600 hours on February 8, 1986.

Work Request L56143 was initiated on February 18, 1986, to inspect the control switch close contacts for the 2E51-F008 valve in control panel 2H13-P601. The "close" contacts were found faulty and they were replaced. The valve cycled satisfactorily after L56143 was completed on February 21, 1986, at 1400 hours.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104  
EXPIRES 8/31/95

FACILITY NAME (1):	DOCKET NUMBER (2):	LER NUMBER (5):			PAGE (3):		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		08	0002	00	02	OF	04

TEXT (If more space is required, use additional NRC Form 365A's) (17)

I. EVENT DESCRIPTION

On February 6, 1986, work was in progress to backseat the Unit 2 Reactor Core Isolation Cooling (RCIC, BN) Steam Line Outboard Isolation Valve (2E51-F008) to stop a steam leak around the stem of the valve. Between 0700 and 0800 hours the valve was backseated and the leak stopped. While the valve was being cycled to verify proper timing after backseating, the valve failed to close. The valve was taken off the backseat manually and the valve still failed to close from panel 2H13-P601. The valve was taken to the 50% open position and again the valve failed to close. An attempt was made to open the valve and the valve opened fully. Again, an attempt was made to close the valve and the valve finally closed.

In accordance with Technical Specification 3.6.3, the following valves on the RCIC steam line were taken out-of-service to ensure the line remained isolated.

Valve	Description
2E51-F063	RCIC Steam Line Inboard Isolation Valve
2E51-F076	RCIC Steam Line Warm-Up Bypass Isolation Valve

At 0930 hours on February 6, 1986, the Unit 2 RCIC system was declared inoperable per Technical Specification 3.7.3. LaSalle Unit 2 was in Mode 1, at 99% power.

Work Request L55890 was written on February 6, 1986, to inspect valve 2E51-F008 limit and torque switch connections. Upon inspection, a loose connection was discovered on the torque switch in the closing circuit (Contact 17C). The loose screw on the torque switch was tightened and partial contact of the lug on terminal 16 was tightened down. The valve was cycled several times under full reactor steam pressure. Each time, the valve cycled satisfactorily, i.e., the stroke time was within the limits required by Technical Specification Table 3.6.3-1 (< 20 seconds). The Unit 2 RCIC system was declared operable on February 8, 1986, at 1600 hours.

Subsequently, on February 18, 1986, during a review of the schematic diagram for the 2E12-F008 valve, the root cause of the problem which occurred on February 6, 1986, in which the valve was intermittently not cycling closed properly, was questioned by Maintenance supervisory personnel. It was felt that the loose torque switch contact by itself was not likely to have caused the problems observed.

The Electrical Maintenance Department initiated Work Request L56143 on February 18, 1986, to inspect the control switch close contacts in Control Room panel 2H13-P601. On February 19, 1986, the control switch was cycled 12 times to determine if it could have been the problem. On the first 8 cycles the switch operated properly, however on attempts 9 through 12 it did not. The open and close contact blocks were replaced on the control switch for the 2E51-F008 valve. The valve was cycled satisfactorily after work was completed on February 21, 1986, at 1400 hours.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

II. CAUSE

The cause of the erratic operation of the 2E51-F008 valve was the close contacts in a contact block of the control switch in panel 2H13-P601 that were out of their normal position. The contact pair was part of the valve's closing circuit. Normally, a small spring compresses 2 contact strips against 2 opposite sides of the contact block, i.e., the spring is located between the 2 contact strips. This spring had dislocated, leaving the 2 contact strips loose inside the control block.

The failed contact block was manufactured by General Electric, model number CR29400201.

III. PROBABLE CONSEQUENCES OF THE OCCURRENCE

The operation of the 2E51-F008 valve was erratic because of the loose contact strip in its contact block in the control switch. This situation, as it existed would not have prevented an automatic RCIC steam line isolation, had any isolation signal been present. An RCIC isolation signal would have automatically caused the loose contacts in the control switch to be bypassed, thus causing the 2E51-F008 valve to close.

The action as required by Technical Specification 3.6.3 to isolate the RCIC steam line was conservative since the cause of the erratic valve operation was due to control switch problems rather than valve problems. Also, during the time that RCIC was inoperable, the High Pressure Core Spray System (HPCS, BG) was operable. The 2E51-F008 valve was previously cycled on December 18, 1985, and found to operate properly.

IV. CORRECTIVE ACTIONS

Work Request L55890 was written on February 6, 1986, to inspect limit and torque switch connections on the 2E51-F008 valve. A loose connection was found and this situation was corrected the same day.

Work Request L56143 was initiated on February 18, 1986, to inspect the 2E51-F008 close contacts on the control switch. The open and close contact blocks on the control switch were replaced and the Work Request was completed February 21, 1986.

The Electrical Maintenance Department personnel involved were counseled on the timeliness of review of work done to ensure that the root cause is promptly discovered and corrected.

V. PREVIOUS OCCURRENCES

None.

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

## IV. NAME AND TELEPHONE NUMBER OF PREPARER

David M. Lyon, Technical Staff Engineer, 815/357-6761, extension 245.



**Commonwealth Edison**

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Rural Route #1 Box 240  
Marseilles, Illinois 61341  
815-357-8661

March 5, 1986

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

Dear Sir:

Reportable Occurrence Report #86-002-00, Docket #050-374 is being submitted to your office in accordance with 10CFR 50.73.

*for* *R. D. Bishop*  
G. J. Diederich  
Station Manager  
LaSalle County Station

GJD/DRR/kg

Enclosure

xc: NRC, Regional Director  
INPO-Records Center  
File/NRC

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*11*