LICENSEE EVENT REPORT (LER)

Facility Name (1)	Docket Number (2)	Page (3)
LaSalle County Station Unit 1	0 5 0 0 0 3 7 3	1 of 0 4

Title (4) Failure of Reactor Core Isolation Cooling High Reactor Water Level Switch Due to Setpoint Drift Caused By Striped Setpoint Locking Mechanism Screw

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 5 0 0 0
0 2	2 2	8 8	8 8	0 0 1	0 0	0 3	2 1	8 8		0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)			
		20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	1	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
	0 9 6	20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	X Other (Specify in Abstract below and in Text)-Voluntary
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

Name	TELEPHONE NUMBER
	AREA CODE
David M. Lyon, Technical Staff Engineer, extension 576	8 1 5 3 5 7 - 6 7 6 1

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	B N	L I S	I 2 0 4	Y					

SUPPLEMENTAL REPORT EXPECTED (14)		Expected Submission Date (15)	Month	Day	Year
Yes (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On February 22, 1988 at 1945 hours, during the performance of LaSalle Instrument Surveillance LIS-RI-112, "Unit 1 Reactor Vessel High Water Level Reactor Core Isolation Cooling (RCIC) Turbine Trip Calibration," it was discovered that high level instrument 1B21-N101A was out of tolerance past its allowable value specified in Table 3.3.5-1 of Technical Specification 3/4.3.5.

The cause of the drifted setpoint was due to a setpoint locking mechanism screw which had stripped threads. By 1805 hours on February 23, 1988 a Temporary System Change was installed to use an alternate switch within instrument 1B21-N101A to perform the required function. A Work Request was initiated to replace high level instrument 1B21-N101A.

Consequences of this event were minimal since the ability of the RCIC System to perform its design function was never compromised and the High Pressure Core Spray System was operable throughout the event.

This report is being submitted as a voluntary Licensee Event Report because the failure of the level switch administratively made the RCIC System inoperable. This switch failure would not have prevented the RCIC System from performing its required function had it been called upon to do so.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6) Year	Sequential Number	Revision Number	Page (3)
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TEXT

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor

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

A. CONDITION PRIOR TO EVENT

Unit(s): 1 Event Date: 2/22/88 Event Time: 1945 Hours

Reactor Mode(s): 1 Mode(s) Name: Run Power Level(s): 96%

B. DESCRIPTION OF EVENT

On February 22, 1988 at 1745 hours, with Unit 1 in Operational Condition 1 (Run) at 96% power, Instrument Maintenance Department (IMD) personnel began performing LaSalle Instrument Surveillance, LIS-RI-112, "Unit 1 Reactor Vessel High Water Level Reactor Core Isolation Cooling (RCIC) [BN] Turbine Trip Calibration." The purpose of this surveillance is to verify that high reactor vessel level instruments, 1B21-N101A and 1B21-N101B, close within their required tolerances (53.5 to 55.5 inches with a Technical Specification allowable value of 56 inches). The Unit 1 RCIC System was declared inoperable in accordance with Technical Specification 3/4.3.5 and Unit 1 was placed on a 14 day timeclock as required by Technical Specification 3/4.7.3 at this time for the purposes of the surveillance.

At 1945 hours on February 22, 1988, it was discovered that high level instrument, 1B21-N101A, was out of tolerance 2" greater than its allowable value ($\leq$ 56"). During the attempt to adjust the setpoint back into the required tolerance (53.5 to 55.5 inches), it was discovered that a locking screw, which secures the setpoint mechanism into place, had stripped threads.

Instrument Maintenance personnel were not confident at this time that the setpoint would hold, so under the direction of the Operating Shift, the 1B21-N101A instrument was placed in the tripped condition. This action was taken to ensure that automatic RCIC System shutdown capability was maintained had a high reactor vessel level been encountered. Work Request L76147 was initiated to repair instrument 1B21-N101A.

On February 23, 1988 a Temporary System Change (Log #1-224-88) was developed in accordance with LaSalle Administrative Procedure LAP-240-6, "Temporary System Change," to use an alternate switch within instrument 1B21-N101A to maintain the automatic RCIC shutdown capability on high reactor vessel level. At 1600 hours on February 23 the Temporary System Change was approved by station management and the physical work on 1B21-N101A commenced.

TEXT

B. DESCRIPTION OF EVENT (Continued)

By 1805 hours on February 23, 1988, the alternate switch in 1B21-N101A was wired, calibrated to within the required tolerance per LIS-RI-112, and placed back into service. Also, high level switch 1B21-N101B setpoint was verified to be within the required tolerance. At this time the status of the Unit 1 RCIC System was changed from "inoperable" to "degraded" due to the Temporary System Change to 1B21-N101A. After further management review, it was decided to change the status of Unit 1 RCIC from "degraded" to "operable." RCIC was declared operable at 0700 hours on February 24, 1988.

This report is being submitted as a voluntary Licensee Event Report because the failure of the level switch administratively made the RCIC System inoperable. This switch failure would not have prevented the RCIC System from performing its required function.

C. APPARENT CAUSE OF EVENT

The cause of the out of tolerance setpoint for 1B21-N101A was instrument setpoint drift. The cause for this drift was stripped threads on the setpoint mechanism locking screw. The purpose of this locking screw is to hold the switch's setpoint into the required tolerance by locking the setpoint adjusting mechanism at its required position.

D. SAFETY ANALYSIS OF EVENT

Simultaneous closures of high reactor vessel level switches 1B21-N101A and 1B21-N101B cause the RCIC Turbine Steam Admission Valve, 1E51-F045, to close. This is done to protect the RCIC turbine from damage due to carryover. Instruments 1B21-N101A and 1B21-N101B are required to actuate at a reactor vessel water level of 54.5 inches, +/- 1.0 inch (Level 8). The Technical Specification allowable value per Table 3.3.5-1 is 56 inches.

The "as found" setpoint for instrument 1B21-N101A of 58 inches would have caused RCIC valve 1E51-F045 to close at a reactor vessel level 2 inches above the allowable value. The probability of damage to the RCIC turbine was not significantly increased. Instrument 1B21-N101B was operable and would have actuated within its required tolerance throughout the event maintaining automatic initiation capability of the RCIC system.

The RCIC system was declared inoperable from the beginning of surveillance testing on February 22, 1988 until the alternate switch change was completed and the RCIC system declared operable on February 24, 1988. Technical Specification 3/4.5.3, which requires the RCIC system to be declared inoperable if both high reactor water level instruments are not operable, was followed. Technical Specification 3/4.7.3 allows continued plant operation for up to 14 days with the RCIC system inoperable, provided the HPCS system is operable. The HPCS system was maintained operable throughout this event.

Level instrument 1B21-N101A was placed in the tripped condition upon discovery that it had exceeded its allowable setpoint at 1945 hours on February 22, 1988. This ensured the RCIC system would have been able to perform its required function at all times.

TEXT

E. CORRECTIVE ACTIONS

Upon discovery of the drifted setpoint on 1B21-N101A at 1945 hours on February 22, 1988, the instrument was placed in the tripped condition to ensure that automatic RCIC System shutdown capability was maintained, and the RCIC system was declared inoperable.

On February 23, 1988 a Temporary System Change (Log #1-224-88) was developed in accordance with LaSalle Administrative Procedure LAP-240-6, "Temporary System Change," to use an alternate switch within instrument 1B21-N101A to maintain the automatic RCIC shutdown capability on high reactor vessel level. At 1600 hours on February 23 the Temporary System Change was approved by station management and the physical work on 1B21-N101A commenced.

At 1805 hours on February 23, 1988, the status of the Unit 1 RCIC System was changed from "inoperable" to "degraded" due to the Temporary System Change to 1B21-N101A. After further management review, it was decided to change the status of Unit 1 RCIC from "degraded" to "operable". RCIC was declared operable at 0700 hours on February 24, 1988.

Work Request L76147 was initiated on February 22, 1988 to replace level instrument 1B21-N101A. This Work Request is currently open. Action Item Record 373-200-88-01501 will track the replacement of RCIC level instrument 1B21-N101A..

F. PREVIOUS EVENTS

There have been no previous events submitted as Licensee Event Reports.

G. COMPONENT FAILURE DATA

Manufacturer	Nomenclature	Model Number	MFG Part Number
ITT Barton	Level Switch	288A	

Commonwealth Edison
LaSalle County Nuclear Station
Rural Route #1, Box 220
Marseilles, Illinois 61341
Telephone 815/357-6761

March 21, 1988

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

Dear Sir:

Licensee Event Report #88-001-00, Docket #050-373 is being submitted to your office as a Voluntary Report due to an instrument failure administratively making the Reactor Core Isolation Cooling System inoperable.

WRO Amt

G. J. Diederich
for Station Manager
LaSalle County Station

GJD/DML/kg

Enclosure

xc: Nuclear Licensing Administrator
NRC Resident Inspector
NRC Region III Administrator
INPO - Records Center

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