



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

February 21, 1990

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Dear Sir:

Licensee Event Report #90-001-00, Docket #050-373 is being submitted to your office in accordance with 10CFR50.73(a)(2)(iv).

WRo
for G. J. Diederich
Station Manager
LaSalle County Station

GJD/CTK/kg

Enclosure

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

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1)

Docket Number (2)

Page (3)

LaSalle County Station Unit 1

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Title (4)

Reactor Water Cleanup Isolation Due to Broken Thermocouple Lead During Surveillance Testing

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	2	2	9	0	9	0	0	2	2	1	9	0	0	5	0	0	0	0	0	0

OPERATING MODE (9)

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

POWER LEVEL (10)	0	9	7	<input type="checkbox"/>	20.402(b)	<input type="checkbox"/>	20.405(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	<input type="checkbox"/>	73.71(b)
				<input type="checkbox"/>	20.405(a)(1)(i)	<input type="checkbox"/>	50.36(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	<input type="checkbox"/>	73.71(c)
				<input type="checkbox"/>	20.405(a)(1)(ii)	<input type="checkbox"/>	50.36(c)(2)	<input type="checkbox"/>	50.73(a)(2)(vii)	<input type="checkbox"/>	Other (Specify in Abstract below and in Text)
				<input type="checkbox"/>	20.405(a)(1)(iii)	<input type="checkbox"/>	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)	<input type="checkbox"/>	
				<input type="checkbox"/>	20.405(a)(1)(iv)	<input type="checkbox"/>	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)	<input type="checkbox"/>	
				<input type="checkbox"/>	20.405(a)(1)(v)	<input type="checkbox"/>	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(x)	<input type="checkbox"/>	

LICENSEE CONTACT FOR THIS LER (12)

Name	TELEPHONE NUMBER	
Todd Kollross, Technical Staff, extension 2772	AREA CODE	3 5 7 - 6 7 6 1
	8 1 5	

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPROS
B	E			N					

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15)

Yes (If yes, complete EXPECTED SUBMISSION DATE) NO

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

On January 22, 1990 at 2058 hours, with Unit 1 in the Operation Condition 1 (Run) mode at 97% power, the Reactor Water Cleanup (RWCU) System received a Division 1 Leakage Detection (LD) Ambient Temperature High Isolation Signal causing the RWCU Outboard Isolation Valve to automatically close followed by automatic trips of the A and C RWCU pumps. This event occurred during a Main Steam (MS) [SB] Tunnel High Area Vent Differential Temperature Isolation Functional Test. During this test, as an Instrument Maintenance Technician was attempting to gain access to the Main Steam Tunnel Differential Temperature Switch thermocouple input leads, a field thermocouple input lead broke at the adjacent RWCU Heat Exchanger Room "A" Ambient Temperature Switch. At that moment, the RWCU System received a Division I LD Ambient Temperature High Isolation Signal, which caused a RWCU Suction Line Outboard Isolation. The technician immediately relanded the loose lead.

The RWCU isolation was reset and the RWCU System was restarted at 2200 hours on January 22, 1990. The root cause of this event has been determined to be a problem involving the method of terminating the temperature sensor leads at the Riley switches.

This event is reportable to the requirements of 10CFR50.73(a)(2)(iv) due to the actuation of an Engineering Safety Feature system.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor

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

A. CONDITION PRIOR TO EVENT

Unit(s): 1 Event Date: 1/22/90 Event Time: 2058 Hours
 Reactor Mode(s): 1 Mode(s) Name: Run Power Level(s): 97%

B. DESCRIPTION OF EVENT

On January 22, 1990 at 2010 hours with Unit 1 in the Run Mode at 97% power, Instrument Maintenance (IM) technicians began performing LaSalle Instrument Surveillance LIS-MS-305, "Unit 1 Main Steam Tunnel High Area Vent Differential Temperature Main Steam Isolation Valve (MSIV) Isolation Functional Test." At 2058 hours, the IM technician began moving wires from Unit 1 Division 1 Reactor Water Cleanup (RWCU) [CE] Heat Exchanger Room "A" Ambient Temperature Switch, 1E31-N615A, to gain access to the lead wires for the Main Steam (MS) [SB] Isolation Differential Temperature Switch, 1E31-N601G. During this process, a field thermocouple input lead broke off of the terminal associated with temperature switch 1E31-N615A. The technician, realizing what had happened, immediately relanded the disconnected lead and notified the Control Room Nuclear Station Operator (NSO, licensed Reactor Operator). At that time, the RWCU System had received a Division 1 Leakage Detection (LD) [CE] Ambient Temperature High Isolation Signal, and the RWCU Outboard Isolation Valve, 1G33-F004, automatically closed isolating RWCU. This was followed by an automatic trip of the A and C RWCU pumps due to low suction line flow. All equipment involved operated as designed under the given circumstances.

The RWCU isolation was reset and the RWCU System was restarted at 2200 hours on January 22, 1990.

This event is reportable pursuant to the requirements of 10CFR50.73(a)(2)(iv) due to the actuation of an Engineered Safety Feature System.

C. APPARENT CAUSE OF EVENT

The cause of the RWCU Outboard Valve Isolation event was due to a thermocouple input lead which broke off Temperature Switch 1E31-N615A during LIS-MS-305. These leads have to be moved slightly in order for surveillance testing of their related instruments and tend to break at the switch due to the brittleness of the thermocouple wire.

The root cause of this event has been determined to be a problem involving the method of terminating the temperature sensor leads at the Riley switches.

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D. SAFETY ANALYSIS OF EVENT

The RMCU Suction Line Outboard Isolation and subsequent shutdown of the RMCU System had no impact on the safe operation of Unit 1. TS-1E31-M615A tripped and caused a RMCU Suction Line Outboard Isolation as designed. The RMCU System was shutdown due to the isolation from January 22, 1990 at 2058 hours to 2200 hours. During that time, reactor coolant conductivity remained well below the 1.0 micromho per centimeter square allowable limit as specified in Technical Specification 3.4.4.

E. CORRECTIVE ACTIONS

On January 22, 1990, a thermocouple input lead from Temperature Switch 1E31-M601G broke during LIS-MS-305. The technician, realizing what had happened, immediately reconnected the lead wire. By 2200 hours, the RMCU isolation was reset and the RMCU System was restarted.

An investigation is in progress to determine a suitable method of terminating the temperature sensor leads to minimize the occurrence of lead failure at the Riley switches. Action Item Record 374-200-88-02601 is tracking this investigation.

F. PREVIOUS EVENTS

None.

G. COMPONENT FAILURE DATA

Manufacturer	Nomenclature	Model Number	MFG Part Number
Riley	Temperature Switch	Temp-matic 861	N/A