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LaSalle Generating Station  
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February 10, 1995

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

Licensee Event Report #95-001-00, Docket #050-374 is being  
submitted to your office in accordance with 10CFR50.73(a)(2)(iv).

A handwritten signature in dark ink, appearing to read "D. J. Ray", is written over the typed name.

D. J. Ray  
Station Manager  
LaSalle County Station

DJR/WFB/lja

Enclosure

cc: NRC Region III Administrator  
NRC Senior Resident Inspector  
INPO - Records Center  
IDNS Resident Inspector  
IDNS Senior Reactor Analyst  
Nuclear Licensing Administrator

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A Unicom Company

*Handwritten initials "JK22" and a vertical line.*

LICENSEE EVENT REPORT (LER)															Form Rev 3.0									
Facility Name (1) LaSalle County Station Unit 2										Docket Number (2) 0 5 0 0 0 3 7 4					1 of 0 5									
Title (4) Division 1 Emergency Core Cooling System/Reactor Core Isolation Cooling Initiation Due To Personnel Error																								
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	1	2	9	5	9	5	---	0	0	1	---	0	0	0	2	1	0	9	5				
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)																					
POWER LEVEL (10) 1 0 0			20.402(b)			20.405(c)			<input checked="" type="checkbox"/>			50.73(a)(2)(iv)			73.71(b)									
			20.405(a)(1)(i)			50.36(c)(1)						50.73(a)(2)(v)			73.71(c)									
			20.405(a)(1)(ii)			50.36(c)(2)						50.73(a)(2)(vii)			<input type="checkbox"/> Other (Specify in Abstract below and in Text)									
			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 William F. Bejlovec, Instrument Maintenance Staff, Extension 2673										TELEPHONE NUMBER AREA CODE 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	MANUFAC-TURER		REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER		REPORTABLE TO NPRDS													
A					N																			
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 January 12, 1995, with Unit 2 in Operational Condition 1 (Run) at 100% power, a Division 1 Emergency Core Cooling System (ECCS) and Reactor Core Isolation Cooling (RCIC, RI) low level initiation occurred resulting in RCIC initiation and injection, and automatic start of the "A" Residual Heat Removal (RHR) and Low Pressure Core Spray (LPCS) pumps. The Common Diesel Generator (DG) also automatically started from the spurious ECCS initiation signal. The initiation occurred while Instrument Maintenance (IM) Technicians were performing LIS-NB-214, "Unit 2 Reactor High Pressure ADS and Safety/Relief Pressure Switch Refuel Calibration".

The cause of this event was a sensing line/reference leg pressure perturbation created when the incorrect test vent valve was opened to atmosphere by the IM Technician.

The Reactor Operators verified that reactor water level was normal, then secured the RCIC, LPCS, "A" RHR Systems, and the Common Diesel Generator and returned them to normal standby operation.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION															Form Rev 3.0	
FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)														
		Year	///	Sequential Number	///	Revision Number										
LaSalle County Station Unit 2	0   5   0   0   0   3   7   4	9	5	-	0	0	1	-	0	0	0	2	OF	0   5		
TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]																

# 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): 2 Event Date: 1/12/95 Event Time: 1347 Hours  
 Reactor Mode(s): 1 Modes(s) Name: Run Power Level(s): 100%

## B. DESCRIPTION OF EVENT

On January 12, 1995, with Unit 2 in Operational Condition 1 (Run) at 100% power, a Division 1 Emergency Core Cooling System (ECCS) and Reactor Core Isolation Cooling (RCIC, RI) [BN] low level initiation occurred resulting in RCIC initiation and injection, automatic start of the "A" Residual Heat Removal (RHR, RH) [BI] and Low Pressure Core Spray (LPCS, LP) [BM] Pumps, and automatic start of the Common Diesel Generator (DG). The initiation occurred while Instrument Maintenance (IM) Technicians were performing surveillance LIS-NB-214, "Unit 2 Reactor High Pressure ADS and Safety/Relief Pressure Switch Refuel Calibration". The Reactor Operators verified that reactor water level was normal, then secured the RCIC, LPCS and "A" RHR Systems and returned them to normal standby operation. The initiation logic for these instruments is a two out of two logic.

LIS-NB-214 is a calibration test that is performed on a refuel cycle frequency. This surveillance test verifies the accuracy of setpoints for the actuation of Automatic Depressurization System (ADS) and Safety/Relief Valves.

The IM Technician was in the process of testing the 2B21-N039V pressure switch. The IM Technician had closed the instrument stop valve for pressure switch 2B21-N039V as directed by the procedure. The procedure then directs the technician to crack open the test tap cap and slowly open the instrument vent valve. The technician mistakenly proceeded to the test cap and vent valve for neighboring pressure switch 2B21-N039L. As the vent valve for 2B21-N039L was opened, the technician recognized pressurized water emitting from the vent line. Realizing this to be an abnormal condition, the technician immediately closed the vent valve. The IM Technician in the Control Room, in constant communication via sound-powered headsets, notified the field IM Technician that RCIC had initiated. The field IM Technician established direct communications with Operations in the Control Room where it was determined to leave pressure switch 2B21-N039V isolated. The field IM Technician then reported to the Control Room for a debrief of the event.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION														Form Rev 3.0								
FACILITY NAME (1)	DOCKET NUMBER (2)								LER NUMBER (6)													
									Year	/// ///	Sequential Number	/// ///	Revision Number									
	LaSalle County Station Unit 2	0	5	0	0	0	3	7	4	9	5	-	0	0			1	-	0	0	0	3

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

B. DESCRIPTION OF EVENT (Continued)

The sensing line/reference leg associated with the vent valve that had been mistakenly opened is also common to several other sensitive reactor pressure and level transmitters and switches at the 2H22-P026 instrument rack. Venting pressure switch 2B21-N039L line to the sensing line caused a pressure perturbation in the common sensing line/reference leg, resulting in a low reactor vessel water level initiation signal for Division 1 ECCS and RCIC.

As a result of the Division 1 initiation signal, RCIC initiated and injected into the reactor, and an automatic start of both the "A" Residual Heat Removal (RHR) and Low Pressure Core Spray (LPCS) pumps occurred. RCIC operated for approximately 17 seconds (actual water injection was approximately 4 seconds). The Control Room Operator verified that the ECCS and RCIC initiation signals were not justified by verifying that Reactor water level was normal and secured RCIC. The RCIC injection did not result in any changes in reactor vessel water level or reactor power. The LPCS and "A" RHR pumps were then secured. Neither injected water into the reactor vessel because actual reactor vessel pressure was greater than the injection valve low pressure permissive. The Common Diesel Generator (DG), which also automatically started from the spurious ECCS initiation signal, was unloaded at 1430 hours, and secured at 1435 hours.

The "A" RHR, LPCS, and RCIC Systems were returned to standby status. After discussion with the IM Technician, the surveillance was suspended pending further review.

This event is reported to the Nuclear Regulatory Commission as a Licensee Event Report in accordance with 10CFR50.73(a)(2)(iv), due to an automatic actuation of an Engineered Safety Feature.

C. APPARENT CAUSE OF EVENT

A sensing line/reference leg pressure perturbation was created when the incorrect test vent valve was opened to atmosphere due to personnel error. The root cause is inadequate man-machine interface. The primary failure mode was spatial misorientation of performing the task on a wrong component because of similarities with other components. Also, instrument stop and vent valves for these instruments are not labeled. This sensing line is also common to several other reactor pressure and level transmitters and switches.

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									Year	/// /// ///	Sequential Number	/// /// ///	Revision Number									
LaSalle County Station Unit 2	0	5	0	0	0	3	7	4	9	5	-	0	0	1	-	0	0	0	4	OF	0	5
TEXT      Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]																						

#### D. SAFETY ANALYSIS OF EVENT

The consequences of this event were minimal. Actual reactor water level remained normal throughout the occurrence. The RCIC injection did not cause any reactor vessel water level changes or any increases in reactor power. The "A" RHR and LPCS Pumps did not inject water into the reactor vessel because reactor vessel pressure was greater than the injection valve low pressure permissives. The Common Diesel Generator (DG) [EK] started as designed and was available to provide emergency power.

During this event, all Emergency Core Systems (ECCS) remained fully operable.

#### E. CORRECTIVE ACTIONS

Immediate corrective actions consisted of the verification that reactor water level was normal. RCIC, LPCS, "A" RHR, and the Common DG were then secured and returned to normal standby operation.

Interim instructions were given to the IM Department requiring a two-person identification/verification prior to manipulating any instrument valves affecting any Nuclear Steam Supply Safety (NSSS) System. This interim action will remain in place until the instrument valves are appropriately labelled and/or color coded. Presently the paint to be used to color code these valves is being analyzed for chemical compatibility with stainless steel.

The individuals involved in this event were interviewed. Self-checking was stressed to them and the IM Department. To help with the self-checking issue at a Station level, a Root Cause Analyst reviewed this event and has held communication sessions with the individual work groups.

Long Term corrective actions to prevent spurious ECCS and RCIC initiations include the following:

1. A design change to incorporate a time delay initiation relay on Unit 2 RCIC was implemented on January 26, 1995. This design change had previously been implemented on Unit 1. This action is intended to eliminate RCIC initiations from short duration spurious signals.
2. The installation of surge volumes, in-line snubbers, or relay time delays is being investigated as a means to eliminate RCIC initiations from short duration spurious signals.
3. Instrument rack layout is being evaluated, from a human performance aspect, to determine if alterations are needed.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION															Form Rev 1.0							
FACILITY NAME (1)	DOCKET NUMBER (2)								LER NUMBER (6)													
									Year	/// /// ///	Sequential Number	/// /// ///	Revision Number									
LaSalle County Station Unit 2	0	5	0	0	0	3	7	4	9	5	-	0	0	1	-	0	0	0	5	OF	0	5
TEXT      Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]																						

F. PREVIOUS EVENTS

<u>LER Number</u>	<u>Title</u>
373/92-008-00	Spurious Instrument Spike Resulting in a RCIC Injection and Half-Scram
374/92-013-00	Reactor Core Isolation Cooling System Spurious Initiation During Testing Due to a Pressure Spike
373/93-001-00	Instrument Spike with Resulting Division II LPCI Pump Start and 1A DG Start Due to Personnel Error
374/94-010-00	Emergency Core Cooling System (ECCS) and Reactor Core Isolation Cooling (RCIC) Initiation Due to Pressure Switch Isolation Valve Leaking

G. COMPONENT FAILURE DATA

None.