



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

January 16, 1991

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

Dear Sir:

Licensee Event Report #90-013-00, Docket #050-374 is being submitted to your office in accordance with 10CFR50.73(a)(2)(iv).

G.J. Diederich  
Station Manager  
LaSalle County Station

GJD/SLF/pav

Enclosure

cc: 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) LaSalle County Station Unit 2  
 Docket Number (2) 0 | 5 | 0 | 0 | 0 | 3 | 7 | 4  
 Page (3) 1 | of | 0 | 5  
 Title (4) Main Steam Isolation Valve Initiation Signal During Surveillance Test Due To Personal 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)
1   2	1   7	9   0	9   0	0   1   3	0   0	0   1	1   6	9   1		0   5   0   0   0   1   1

OPERATING MODE (9) 3  
 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)

POWER LEVEL (10) 0   0   0	<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"/> 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"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

Name	TELEPHONE NUMBER
Steven L. Frazier, Instrument Maintenance Surv. Coord., Extension 2546	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				No					

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 December 17, 1990, at 1316 hours, Unit 2 was in hot shutdown with the Main Steam Isolation Valves (MSIV's) closed. Technicians from the Instrument Maintenance Department were performing LaSalle Instrument Surveillance LIS-MS-406 "Unit 2 Condenser Low Vacuum MSIV Isolation Functional Test". While in this mode the MSIV isolation signals are bypassed by means of a key switch. In this event, the functional test of the switch and associated alarms was satisfactorily completed on the initial channel and it was returned to bypass, however, the MSIV half isolation received from the test was not reset before the second channel was removed from bypass, and a full isolation signal occurred. The event occurred as a result of personnel error where the Instrument Maintenance Technician did not follow the steps of the instrument surveillance procedure in sequential order.

The isolation signal was immediately reset and the surveillance for that channel completed satisfactorily.

All Instrument Maintenance Department personnel were informed of this event and were tailgated on the performance of procedures.

This event is being reported to the NRC pursuant to the requirements of 10CFR50.73(a)(2)(iv) due to actuating an Engineering Safety Feature system signal.

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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: 12/17/90 Event Time: 1316 Hours

Reactor Mode(s): 3 Mode(s) Name: Hot Shutdown Power Level(s): 0%

B. DESCRIPTION OF EVENT

On December 17, 1990, at approximately 1316 hours, with Unit 2 in hot shutdown, technicians from the Instrument Maintenance Department were performing LaSalle Instrument Surveillance LIS-MS-406 "Unit 2 Condenser Low Vacuum Main Steam Isolation Valve (MSIV) Isolation Functional Test".

The MSIV's were closed. There was no main condenser vacuum.

The major occurrence of this event was the full initiation signal of the Main Steam Line Isolation logic.

The lead technician, a Control Systems Technician (CST) had successfully completed the functional test of the 2B21-N056A pressure (vacuum) switch and had returned the switch to service. The CST was in contact, via sound powered headphones, with his assistant, a B Level Instrument Maintenance Technician (B-IM), in the control room.

The CST informed the B-IM that the switch had been returned to service, and he should proceed with step F.3.j. through F.3.n. of LIS-MS-406. Step F.3.j. reads: "Request the Operator to PLACE the "Cond Low Vac Trip Bypas S24A" keylock switch on panel 2H13-P609, to the "BYPASS" position."

When the B-IM requested that this be done, the Unit 2 Nuclear Station Operator (NSO, licensed Reactor Operator), asked if the MSIV half isolation logic should be reset. The B-IM conferred with his CST and told the NSO "not yet". (The logic of the Main Steam Isolation signal could not be reset until the S24A bypass switch was returned to the bypass position because of the low condenser vacuum.)

The Unit 2 NSO then asked the "Fourth" NSO (extra licensed Reactor Operator not assigned a specific Control Room position) to assist the B-IM. The B-IM and the "Fourth" NSO then proceeded to back panel 2H13-P609.

The B-IM carried only the sign-off portion of the procedure (Attachment "B"), which he was using to track the progress of the procedure, with him to the back panel. The NSO then performed step F.3.j. and placed the keylock switch into bypass.

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

B. DESCRIPTION OF EVENT (Continued)

The next step in the procedure, F.3.k., states: "HAVE Operator RESET valve isolation logic by momentarily DEPRESSING 2B21-532 and 2B21-533 (Reset pushbuttons for inboard and outboard isolation logic) on panel 2H13-P601." The B-IM had only the Attachment "B" portion of the procedure with him and there is no mention of resetting the isolation logic, or a sign off blank to record that the logic was reset.

The following step (F.3.l) instructs the B-IM to verify that two alarms, the "DIV 1 MAIN CNDSR VAC LO" (B201), and the "CHAN A1/A2 MSIV ISOL TRIP" (F504), are extinguished. Step F.3.l. continues to inform the B-IM to verify the "SOL. A" and "SOL. B" lights are illuminated unless the MSIV's are closed, then enter N/A.

On Attachment "B" the step following the operator action of returning the 2B21-S24A keylock switch to the bypass position, was a sign off for verification of the resetting of the aforementioned alarms. The B-IM did not return to the front panels to verify these alarms were reset, because he felt with the MSIV's already closed these alarms would automatically reset with the return of the keylock switch to the bypass condition, and he would verify them after they were done at the back panel.

The next step in the body of the procedure, F.3.m. reads: "REQUEST the Operator to use key #40 to PLACE the "Cond Low Vac Trip BypS S24B" keylock switch on panel 2H13-P611 to the "NORM" position." This step is preceded by this note: "The next step will initiate alarms windows and give a 1/2 MSIV Isolation signal." This note is not present on the attachment. The B-IM showed the copy of the attachment to the NSO and asked him to place channel "B" into "NORM". The "Fourth" NSO placed the switch for channel "B" into "NORM".

With this action, the isolation logic was completed, and a full MSIV isolation signal occurred.

No movement of the MSIV's occurred because they were already closed due to plant conditions.

The procedure was halted, and an investigation into the event commenced. This event is being reported to the NRC pursuant to the requirements of 10CFR50.73(a)(2)(iv) due to actuating an Engineered Safety Feature system signal.

C. APPARENT CAUSE OF EVENT

This event involved personnel errors by the B-IM (I & C technician).

The B-IM was instructed to perform a series of procedural steps by his lead technician. The B-IM did not take the procedure with him as he left the Unit 2 control room front panel area. Therefore he did not have all the instructions and notes in his possession as he continued to perform the surveillance.

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C. APPARENT CAUSE OF EVENT (Continued)

There was also a personnel error (violation of procedure) in the B-IM's failure to follow the steps in the procedure in sequential order. If the attachment had been followed explicitly, the alarms would not have been reset and the technician would have been required to reset the 1/2 isolation prior to continuation.

Also, there was cognitive error in that the B-IM thought that the return of the S24A bypass switch to the "bypass" condition would automatically reset all of the alarms mentioned in the Attachment "B" portion of the procedure.

D. SAFETY ANALYSIS OF EVENT

The safety consequences of this event were minimal because the MSIV's were already closed due to plant conditions.

There was no system failure, all systems performed per design. The isolation signal was processed per design. There was no MSIV movement.

The safety consequences of this event had it occurred under more severe conditions would be minimal. The S24 bypass switches are not operated while the unit is in power operation, they are used to bypass the trip signal when the unit is below a pre-set power level.

E. CORRECTIVE ACTIONS

The isolation signal was immediately reset at 1319 hours and the surveillance for that channel completed satisfactorily.

The Instrument Maintenance technicians involved were counselled on the event stressing the importance of following a procedure as written in sequential order. They were told no variation is allowed without supervisory approval. The technicians were also reminded to take the body of the procedure with them, and follow it, as they perform a task.

The lead technician was informed that there should be more frequent communication between himself and his assistant especially when involved in complex or confusing steps in a procedure. He was told to have the B-IM report to him after various intermediate steps had been completed, not after an entire evolution.

All Instrument Maintenance Department personnel were informed of this event and were tailgated on the performance of procedures. General Information Notice (GIN) 90-101 tailgated Station Personnel on LaSalle Administrative Procedure LAP-100-40 "Procedure Use and Adherence Expectations" to provide guidance to all station and contractor personnel on the use of station procedures.

Long term corrective actions to prevent usage of attachments only, is to incorporate the attachments into the body of the procedure. Action Item Record 373-200-90-07602 will track this action.

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F. PREVIOUS EVENTS

LER Number Title

373/86-005-00 Engineered Safety Feature Actuation from Loss of Division 1 DC Caused by Personnel Error

373/86-011-00 Personnel Error Primary Containment Isolation

374/89-014-00 Primary Containment Isolation System Group 4 Isolation During Ground Isolation

G. COMPONENT FAILURE DATA

None.