



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

December 22, 1989

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

Dear Sir:

Licensee Event Report #89-028-00, Docket #050 373 is being submitted to your office in accordance with 10CFR50.73(a)(2)(iv).

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

GJD/DAC/kg

Enclosure

xc: Nuclear Licensing Administrator
NRC Resident Inspector
NRC Region 111 Administrator
INPO - Records Center

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Handwritten initials/signature

Facility Name (1) LaSalle County Station Unit 1
 Docket Number (2) 0 | 5 | 0 | 0 | 0 | 3 | 7 | 3
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Title (4) Shutdown Cooling Outboard Isolation Valve Automatic Closure Due to Miscommunication Error During Instrument Surveillance

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	0	4	8	9	8	9	---	0	2	8	---	0	0	1	2	2	2	8	9		0 5 0 0 0

OPERATING MODE (9) 5
 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) _____
 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) _____ 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 Don Crowl, Regulatory Assurance, extension 2860
 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	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
A				N					

SUPPLEMENTAL REPORT EXPECTED (14)
 Yes (If yes, complete EXPECTED SUBMISSION DATE) NO
 Expected Submission Date (15) _____

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

On December 4, 1989 with Unit 1 in the Refuel Mode (Operational Condition 5) the 1E12-F008 Residual Heat Removal Shutdown Cooling Suction Header Outboard Isolation Valve automatically isolated during the performance of LaSalle Instrument Surveillance LIS-NB-111, "Unit 1 Reactor High Pressure Shutdown Cooling Isolation Calibration."

The 1E12-F008 valve is normally deenergized or closed to prevent an automatic isolation during the performance of LIS-NB-111, but due to a miscommunication between the Instrument Maintenance Technician requesting the 1E12-F008 valve breaker to be de-energized and the Unit 1 Nuclear Station Operator (NSO, licensed Reactor Operator), the breaker was re-energized prior to completing this surveillance.

This event had no effect on shutdown cooling because decay heat removal was being provided by an alternate method. After the automatic isolation of the 1E12-F008 valve, it was left in the closed position and the surveillance was completed without any further event.

A task force was developed to review this event and similar events to determine what corrective actions will be implemented to minimize recurrence of miscommunication events.

This report is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(iv) due to the actuation of an Engineered Safety Feature system.

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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): 1 Event Date: 12/04/89 Event Time: 0945 Hours

Reactor Mode(s): 5 Mode(s) Name: Refuel Power Level(s): 0%

B. DESCRIPTION OF EVENT

On December 4, 1989 with Unit 1 in Operational Condition 5 (Refuel Mode) the 1E12-F008 Residual Heat Removal (RHR, RH) [BO] Shutdown Cooling Suction Header Outboard Isolation Valve automatically isolated during the performance of LaSalle Instrument Surveillance LIS-NB-111, "Unit 1 Reactor High Pressure Shutdown Cooling Isolation Calibration."

After Shift Engineer (SE, licensed Senior Reactor Operator) approval, the Lead Instrument Maintenance (IM) Technician approached the Shift Control Room Engineer (SCRE, licensed Senior Reactor Operator) for approval to perform LIS-NB-111. After reviewing the Shutdown Cooling system status, the SCRE determined that the only two isolation valves that were open at the time which were affected by this procedure were 1E12-F008 and 1E12-F009, RHR Shutdown Cooling Suction Header Inboard and Outboard isolation valves. The SCRE then discussed with the SE the Shutdown Cooling system status and asked if the 1E12-F008 and 1E12-F009 should be left in the open position or taken to the closed position to perform LIS-NB-111. The SE determined the 1E12-F008 and 1E12-F009 should remain open to maintain the Shutdown Cooling suction header in the filled and vented status. The SCRE then attached a note to the surveillance attachment to de-energize one valve at a time (1E12-F008 or 1E12-F009) when doing this surveillance in order to keep one isolation valve operable in the line while performing the surveillance on the pressure switch which would close the other. (This is allowed by the procedure.)

The lead IM then approached the Unit 1 Nuclear Station Operator (NSO, licensed Reactor Operator) for approval to perform this surveillance and discussed the need to have the 1E12-F008 valve de-energized. At this time the NSO instructed an Operator to open the 1E12-F008 valve motor operator power supply breaker.

The lead IM then proceeded to the 1A RHR Pump Room (which is a high radiation area) at pressure switch 1B33-N018A, and the other IM was positioned in the Main Control Room to instruct the NSO to acknowledge and reset alarms or isolation logic as required by the surveillance procedure.

The lead IM instructed the IM in the Main Control Room to have the NSO de-energize the 1E12-F008 valve breaker. The IM in the 1A RHR Pump Room then connected the deadweight pump in order to proceed with the surveillance.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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B. DESCRIPTION OF EVENT (Continued)

The IM in the Control Room, not knowing the 1E12-F008 valve was already de-energized, requested the NSO to de-energize 1E12-F008 valve. The lead IM had requested that valve 1E12-F008 be de-energized previously. The NSO knowing the 1E12-F008 was previously de-energized interpreted the instruction from the IM as wanting the power supply for the 1E12-F008 valve to be re-energized. The NSO then instructed an Equipment Attendant (EA, non-licensed Operator) to energize 1E12-F008 valve motor power supply breaker. The Operator responded to the Unit 1 NSO by paraphrasing that he was requested to turn on the 1E12-F008 valve breaker and the NSO confirmed his response.

The EA energized the motor operator power supply for the 1E12-F008 valve breaker and returned to the Control Room. When the EA returned to the Control Room, the IM responded to the EA by saying, that he had gotten that breaker pretty quickly. The IM in the Control Room then questioned why the 1E12-F008 valve position indicating lights remained illuminated all the time. The EA who energized the breaker asked the SCRE why the valve lights remain energized and SCRE replied the valve indication has a separate power supply. The EA who energized the 1E12-F008 valve then relayed this information to the IM in the Control Room. The IM in the Control Room did not realize the 1E12-F008 valve was re-energized at this time. The IM in the Control Room now knowing that the 1E12-F008 valve indication has a separate power supply, and believing that the 1E12-F008 valve was de-energized, instructed the IM at the 1B33-N018A pressure switch that the 1E12-F008 was de-energized and testing could continue.

The IM at the pressure switch then pressurized the switch using the deadweight pump. When the switch setpoint pressure was reached the 1E12-F008 valve automatically closed due to a high reactor pressure isolation signal.

C. APPARENT CAUSE OF EVENT

The closure of the 1E12-F008 valve was caused by the motor operator power supply for the valve being re-energized prior to the completion of the calibration for pressure switch 1B33-N018A per LIS-NB-111 contrary to the procedure. The breaker was re-energized due to a miscommunication between the IM in the Control Room and the Unit 1 NSO. The Unit 1 NSO misinterpreted the communication due to the mindset caused by expecting the next request to perform an action on valve 1E12-F008 would be to re-energize the valve (i.e., change its state). The IM had requested the breaker to be de-energized prior to beginning the surveillance (which was performed) thus the Unit 1 NSO believed the next step would be to reset the logic and to re-energize the breaker. An hour had elapsed since the lead IM had requested the Unit 1 NSO to initially de-energize the breaker for the 1E12-F008 valve. Therefore, when the NSO was requested to take an action on valve 1E12-F008, he expected it to be re-energizing the valve.

A contributing factor is that the 1E12-F008 valve has a separate power supply for the valve position indication, therefore the valve motor operator power supply could be de-energized and the valve position indicating lights in the Main Control Room would remain energized. (This is unique to this valve.) This also led to the mindset of the IM performing the surveillance that the breaker was off following another miscommunication between the EA who energized the breaker and the IM in the Control Room. The process computer alarm printer will print valve 1E12-F008 motor power supply breaker status when it changes, but this method is not currently used by the IM personnel to determine valve power supply status.

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C. APPARENT CAUSE OF EVENT (Continued)

Another contributing factor was that the lead IM did not request the NSO to log de-energizing the 1E12-F008 valve breaker as required by the surveillance procedure. Also this instrument surveillance is not consistent with other instrument surveillances which require initialing procedure steps that reposition equipment such as valves or breakers.

An additional contributing factor is that a work practice requiring a warning of the Unit NSO prior to initiating a trip signal has not been established. This may have warned the Unit 1 NSO that a trip signal was going to be initiated with the 1E12-F008 valve energized.

Another contributing factor is that no periodic training has been established to instruct station personnel on the requirements of the LaSalle County Station company Policy Guideline for communication.

D. SAFETY ANALYSIS OF EVENT

This event had no effect on moderator temperature because the RHIR shutdown cooling system was shutdown and the Reactor Water Cleanup system was lined up for maximum heat removal as an alternate method of decay heat removal. The RHIR shutdown cooling high pressure isolation is not required during the Refueling Mode with the vessel head removed. The concern for protecting low pressure equipment during this mode of operation does not exist in this operating condition.

E. CORRECTIVE ACTIONS

The 1E12-F008 valve was left in the closed position and the calibration for pressure switch 1B33-W018A was completed satisfactorily at 1045 hours without any further event.

The individuals involved were counselled on this event.

A communication task force was developed to review the current station communication practice and develop recommendations to improve communication practices. The progress of the communication task force will be tracked by Action Item Record (AIR) number 373-200-89-11801.

The Instrument Maintenance Department will review LIS-NB-111 and similar procedures to determine the need for requiring a signoff when log entries are required or components such as breakers or valves are manipulated. Also review the need to utilize multiple indications when verifying or re-verifying conditions prior to performing a surveillance. AIR number 373-200-89-11802 will track this corrective action.

The Instrument Maintenance Department is developing a work practice to notify the NSO prior to any 1/2 scram or 1/2 isolation signal by issuing a new maintenance memo. By providing the NSO with the warning of an incoming trip signal, the NSO may be able to better evaluate the consequences of receiving the trip signal knowing the status of the plant and provide another mechanism for catching an error. This corrective action is being tracked by previously issued AIR number 374-200-89-04901.

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F. PREVIOUS EVENTS

LER Number	Title
373/84-058-00	Inadvertent Start of VC/VE Emergency Make-up Filter Unit
374/84-027-01	Loss of Reactor Water Cleanup Isolation Leak Detection
373/86-003-00	Missed Surveillance Reactor Water pH Due to Personnel Error
373/86-016-00	Fuel Bundle Loaded Without Proper SRM Instrumentation Due to a Personnel Error
373/87-030-00	Reactor Scram While Shutdown During Surveillance Due to Communication Error
374/89-003-01	Engineered Safety Feature Actuation During Performance of Instrument Maintenance Functional Tests Due to Personnel Error

G. COMPONENT FAILURE DATA

Not applicable.