Commonwealth Edison
LaSalle County Nuclear Station
2601 N. 21st. Rd.
Marseilles, Illinois 61341
Telephone 815/357-6761

April 21, 1992

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

Dear Sir:

Licensee Event Report #92-005-00, Docket #050-374 is being submitted to your office in accordance with 10CFR50.73(a)(2)(iv).

for G. J. Diederich
Station Manager
LaSalle County Station

GJD/JM/mkl

Enclosure

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

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

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

Title (4)

"2A" Diesel Generator, "2B/2C" LPCI, and RCIC Auto-Start Due To Instrument Line Low Water Level Spike

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 3	2 2	9 2	9 2	--- 0 0 5	--- 0 0	0 4	2 1	9 2		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)					
	4	___ 20.402(b)	___ 20.405(c)	X 50.73(a)(2)(iv)	___ 73.71(b)		
POWER LEVEL (10)	0 0 0	___ 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		
		___ 20.405(a)(1)(iii)	___ 50.73(a)(2)(i)	___ 50.73(a)(2)(viii)(A)	in Abstract		
		___ 20.405(a)(1)(iv)	___ 50.73(a)(2)(ii)	___ 50.73(a)(2)(viii)(B)	below and in		
		___ 20.405(a)(1)(v)	___ 50.73(a)(2)(iii)	___ 50.73(a)(2)(x)	Text)		

LICENSEE CONTACT FOR THIS LER (12)

Name	TELEPHONE NUMBER AREA CODE
Jeanne Muellner, Technical Staff Engineer, Extension 2814	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
D	E K			N					
D	B N			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 March 22, 199[illegible] at 1806 hours, Unit 1 was operating at 100% power and Unit 2 was in cold shutdown following refuel. At this time, during performance of the modification M01-2-89-021 test, the "2A" Diesel Generator (DG) auto started, and the Residual Heat Removal (RHR) "2B" Low Pressure Cooling Injection (LPCI), "2C" LPCI, and Reactor Core Isolation Cooling (RCIC) Systems received initiation signals. No injections into the vessel occurred. This event is reportable pursuant to the requirements of 10CFR50.73(a)(2)(iv) due to actuation of an Engineered Safety Feature.

The modification test was performed during LOP-NB-01, "Reactor Vessel Leak Test". An Instrument Maintenance Department (IMD) Foreman and Control Systems Technician (CST), and a Quality Control (QC) Inspector assembled at instrument rack 2H22-P027 to begin the modification test. The test listed removed level and pressure switches whose abandoned instrument lines were to be checked for leaks during LOP-NB-01 when vessel pressure was 1020 psig or greater. The reactor vessel pressure at this time was 1058 psig.

The IMD personnel discussed the test, and the possibility of generating a spike in the instrument line due to the high differential pressure across the rack valves. Due to time constraints, the IMD Foreman decided to proceed with the test. The IMD Foreman slowly opened the rack valves of the variable leg for removed level indicating switch 2B21-N036C. No leaks were observed by QC, and the valves were reclosed. Additional discussion concerning instrument line spikes was held between the IMD personnel. The IMD Foreman then performed the same actions for the reference leg. Continued on attached page.

ABSTRACT CONTINUED

Approximately five minutes later, the IMD foreman was paged and informed by the Main Control Room that the "2A" DG had auto started, and "2B" and "2C" RHR had initiated. The RCIC system had also initiated.

The safety consequences of this event were minimal. The auto start of the "2A" DG and the initiation of "2B" LPCI, "2C" LPCI, and RCIC occurred appropriately due to the erroneous low water level signals generated when the 2H22-P027 rack valves to the removed 2B21-N036C switch were opened.

LaSalle Technical Staff Procedure LTP-800-9, "Guidelines for Development of Tests for Modifications", will be revised to address instrument rack valve manipulation.

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: 3/22/92 Event Time: 1806 Hours

Reactor Mode(s): 4 Mode(s) Name: Cold Shutdown Power Level(s): 0%

B. DESCRIPTION OF EVENT

On March 22, 1992 at 1806 hours, Unit 1 was operating at 100% power and Unit 2 was in cold shutdown following refuel. At this time, during performance of the modification M01-2-89-021 test, the "2A" Diesel Generator (DG) [EK] auto started, and the Residual Heat Removal (RHR, RH) [BO] "2B" Low Pressure Cooling Injection (LPCI, LP) [BM] "2C" LPCI, and Reactor Core Isolation Cooling (RCIC, RI) [BN] Systems received initiation signals. No injections into the vessel occurred.

Modification M01-2-89-021 revised the Anticipated Transient Without Scram - Recirculation Pump Trip (ATWS-RPT) logic. The modification removed Yarway level indicating switches and S-O-R pressure switches from the 2H22-P026 and 2H22-P027 instrument racks. The piping to these removed switches was capped and abandoned. The modification test checked these abandoned instrument lines for leaks during LOP-NB-01, "Reactor Vessel Leakage Test", when vessel pressure was 1020 psig or greater. This test was to be performed by the Instrument Maintenance Department (IMD) and witnessed by Quality Control (QC).

During performance of LOP-NB-01, the Shift Engineer asked the IMD to assist QC with the test for modification M01-2-89-021. An IMD Foreman and an IMD Control System Technician (CST) met the QC Inspector at instrument rack 2H22-P027.

The IMD Personnel and the QC Inspector discussed the modification test. The IMD Personnel believed that the test could cause a spike in the instrument line due to the differential pressure of 1058 psig across the rack valves. The CST was uncomfortable with performing the modification test and suggested that it be re-written or that the piping to be tested be pressurized through the vent fitting to reactor pressure. Due to time constraints involving the vessel leak test, it was decided by the IMD Foreman to proceed with the test.

At rack 2H22-P027, the IMD foreman slowly valved in the variable leg for removed Yarway level switch 2B21-N036C. No leaks were observed, and the variable leg valves were closed. There was some discussion between the IMD Personnel concerning generation of an instrument line spike due to the reference leg. The IMD Foreman then very slowly valved in the reference leg. No leaks were observed, and the reference leg valves were closed.

B. DESCRIPTION OF EVENT (CONTINUED)

After about five minutes, the IMD Foreman received a page to contact the Control Room from which he was informed that the "2A" DG had started and "B" and "C" RHR had initiated. Valving in the abandoned lines for removed instrument 2B21-N036C on the 2H22-P027 rack while a pressure difference of 1058 psig existed across the rack valves had caused a spike in the instrument line. The RHR "2B" and "2C" LPCI initiations were immediately reset and restored to stand-by condition. RCIC had also received an initiation signal, but the system was out-of-service. RCIC valves 2E51-F010 (RCIC Suction from Condensate Water Supply) auto opened, allowing water to flow into the barometric condenser. Because the RCIC condensate pump was out-of-service, approximately 15 gallons of water backed up into and out of the barometric condenser vacuum pump onto the floor. At 1815 on 3/22/92, the "2A" DG was shutdown. No injections into the vessel occurred.

C. APPARENT CAUSE OF EVENT

The apparent cause of the spike in the instrument line was a procedure deficiency. The modification M01-2-89-021 test procedure did not contain any precaution or prerequisite pertaining to either: 1) opening the rack root valves and the high and low pressure isolation valves prior to performance of LOP-NB-01 when the vessel was de-pressurized, or 2) backfilling the abandoned lines through the vent valve when the vessel was at the test pressure. A precaution or prerequisite of this type would have eliminated opening the rack valves unless one of these two conditions was met. Although the IMD and QC personnel performing the test were faced with a time constraint, a prerequisite or precaution of this type would have brought a definite end to the test if the prerequisite or precaution action was not attained.

D. SAFETY ANALYSIS OF EVENT

The safety consequences of this event are minimal. No systems were rendered inoperable due to this event. This event inadvertently verified operability of several reactor vessel low water level logics. The auto start of the "2A" DG and the initiation of "2B" LPCI, "2C" LPCI, and RCIC occurred appropriately due to the erroneous low water level signals generated when the 2H22-P027 rack valves to the removed 2B21-N036C switch were opened.

Piping line 2NB10B, which feeds the abandoned instrument line for removed Yarway level indicating switch 2B21-N036C also feeds level transmitters 2B21-N407B/D, which supply trip units 2B21-N707B/D and 2B21-N710B/D. Trip units 2B21-N710B/D initiated RCIC at reactor vessel Level 2 (low-low). Trip units 2B21-N707B/D initiated the RHR "2B" and "2C" LPCI logic, bypassed the Automatic Depressurization System (ADS) drywell pressure timers, and automatically started the "2A" DG via energization of the 2E12-K7/K8/K98B relays at Level 1 (low-low-low). Main Control Room alarms associated with these actuations annunciated appropriately.

In addition to level transmitters 2B21-N407B/D, rack 2H22-P027 transmitter 2B21-N405B, which feeds trip unit 2B21-N708B, actuated a confirmed level 3 (low) annunciator.

D. SAFETY ANALYSIS OF EVENT (CONTINUED)

Due to the opening of valve 2E51-F046 upon RCIC initiation and to the out-of-service status of the barometric condenser condensate pump, an alarm was also received for the high level in the barometric condenser.

When the low level spike subsided, Level 8 (high) alarms were also generated in Feedwater (FW) and RCIC logic. On rack 2H22-P027, differential pressure transmitter 2C34-N004B actuated a high level alarm in feedwater logic. On rack 2H22-P026, level transmitter 2B21-N405A, which feeds trip unit 2B21-N705A, actuated a high level alarm from RCIC logic. These high level alarms are independent of the actions associated with the modification test, and are attributed appropriately to vessel level at the tim the modification test was performed.

E. CORRECTIVE ACTIONS

LaSalle Technical Staff Procedure LTP-800-9, "Guidelines for Development of Tests for Modifications", will be revised to include statements concerning proper instrument rack valve manipulation to avoid generating a spike in the instrument line. Actions, such as backfilling, to ensure a minimal differential pressure across rack valves will be stated. Consultation with the IMD to ensure proper valve manipulation will also be suggested. Action Item Record (AIR) 374-180-92-03401 will track completion of procedure revisions.

Master IM discussed this event with the IM Foreman to heighten his awareness concerning the possible consequences resulting from testing evolutions.

F. PREVIOUS EVENTS

None.

G. COMPONENT FAILURE DATA

None.