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

July 22, 1992

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

Dear Sir:

Licensee Event Report #92-008-00, Docket #050-373 is being submitted to your office in accordance with 10CFR50.73(a)(2)(v).

for G. J. Diederich
Station Manager
LaSalle County Station

GJD/MT/mkl

Enclosure

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

IE22

LICENSEE EVENT REPORT (LER)

Form Rev 2.0

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

Title (4)

Reactor Core Isolation Cooling System Initiation And Vessel Injection Due To Pressure Pertubation

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 6	2 2	9 2	9 2		0 0 8	0 0	0 7	2 2	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)			
	1	___ 20.402(b)	___ 20.405(c)	___ 50.73(a)(2)(iv)	___ 73.71(b)
POWER LEVEL (10)	0 7 7	___ 20.405(a)(1)(i)	___ 50.36(c)(1)	X 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	TELEPHONE NUMBER
	AREA CODE
Michael Tennyson, Technical Staff Extension 2421	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
X	B D	R T N	G 1 9 0	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 June 22, 1992, at 0524 hours, while Unit 1 was in Operational Condition 1 (run), at 77% power, the Reactor Core Isolation Cooling (RCIC) [BN] System initiated resulting in vessel injection for approximately twenty (20) seconds.

The RCIC System initiation occurred while Instrument Maintenance Technicians were performing LaSalle Instrument Surveillance, LIS-LC-303, "Unit 1 MSIV Leakage Control Inboard Reactor Vessel Pressure Functional Test". The RCIC system was shutdown by the Operations Department and two more RCIC initiations occurred during the next 2 minutes, before the transient ended.

The RCIC initiations occurred during return to service of the Pressure Transmitter PT-1E32-N050. A pressure transient "spiked" the adjoining rack 1H22-P026 (Reactor Pressure and Level Panel), which caused the low water level 2 signal that initiated the RCIC system.

At the time of this incident the High Pressure Core Spray (HPCS) System, and the other Emergency Core Cooling Systems (ECCS) were fully operable.

Operating verified that the RCIC initiation was inadvertent, the RCIC system was shutdown. The system was immediately shutdown following each of the other two initiations.

ABSTRACT CONTINUED

Long Term corrective actions to prevent another spurious RCIC initiation includes tailgate for Instrument Maintenance personnel, a revision of LIS-LC-303/403, and Transfer the duties for performance of LIS-LC-303/403 to Control System Technicians (CST).

This event is reported to the Nuclear Regulatory Commission as a Licensee Event Report in accordance with 10CFR50.73(a)(2)(v) due to RCIC being declared inoperable (loss of a safety system function).

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: 06/22/92 Event Time: 0524 Hours

Reactor Mode(s): 1 Mode(s) Name: Run Power Level(s): 77%

B. DESCRIPTION OF EVENT

On June 22, 1992, at 0524 hours, while Unit 1 was in Operational Condition 1 (Run), at 77% power, the Reactor Core Isolation Cooling (RCIC) [BN] System initiated resulting in vessel injection for approximately twenty (20) seconds. The RCIC System initiation occurred while Instrument Maintenance Technicians were performing LaSalle Instrument Surveillance, "LIS-LC-303, Unit 1 MSIV Leakage Control Inboard Reactor Vessel Pressure Functional Test".

Prior to the performance of the surveillance, the Instrument Maintenance Technicians along with a Quality Control Inspector removed and replaced a vent connection for Pressure Transmitter PT-1E32-N050 per LaSalle work requests L15962 and L15963.

LIS-LC-303 is a functional test that is performed monthly for Pressure Transmitters PT-1E32-N050 and PT-1E32-N060. Following replacement of a vent connection; PT-1E32-N050 was tested satisfactorily. The Technicians were in the process of returning Pressure Transmitter PT-1E32-N050 to service when a control room alarm for water level 3 (12.5"), a channel B2 auto scram, and a low water level 2 (-50") occurred, and the RCIC System initiated at 0524 hours on June 22, 1992.

The Instrument Maintenance Technicians did not have communication with the Unit 1 Control Room and there were no indications at the instrument rack of any problems with the unit. The Nuclear Station Operator (NSO) in the control room acknowledged the RCIC Running alarm and verified proper water level. RCIC was secured, however RCIC injected into the vessel for approximately 20 seconds.

Operating Department contacted the Instrument Maintenance Supervisor. While the NSO was reviewing the LaSalle Operating Abnormal LOA-1H13-P601-D406, "RCIC Running" for the proper operator actions following system shutdown, a second low water level 2 RCIC initation occurred at 0525 hours. Again the initation was reset and the system was secured. Fifty-five seconds later a third level 2 alarm and another RCIC initation occurred. In both cases the system was shutdown by reset of the initiation and closure of the RCIC Steam Admission Valve 1E51-F045.

The Instrument Maintenance Technicians were contacted and made aware of the situation. Following discussions between Operating Department and Instrument Maintenance Department, pressure transmitter PT-1E32-N060 was functionally tested with no more initations from the RCIC system.

B. DESCRIPTION OF EVENT (CONTINUED)

This event is reported to the Nuclear Regulatory Commission as a Licensee Event Report in accordance with 10CFR50.73(a)(2)(v) due to RCIC being declared inoperable (loss of safety system function).

C. APPARENT CAUSE OF EVENT

The RCIC initiations occurred during return to service of the Pressure Transmitter PT-1E32-N050. A pressure transient "spiked" the adjoining rack 1H22-P026 (Reactor Pressure and Level Panel), which caused the low water level 2 signal that initiated the RCIC system.

Due to the previous RCIC initiation and subsequent vessel injection on July 24, 1991, a revision to the surveillance was submitted by an Instrument Maintenance Supervisor. This procedure revision advising the Technicians about "pressure spikes" during the performance of LIS-LC-303/403 was not completed.

Two more level 2 signals and two more RCIC initiations followed. The cause of the last two initiations are not known. However a contributing factor to all three initiations could be the condition of the stop valve at PT-1E32-N050. The stop valve at PT-1E32-N050 is challenged monthly during performance of LIS-LC-303.

Less than a year ago the stop valve at the pressure transmitter caused a RCIC initiation and 12 second injection. Action Item Record (AIR) was initiated for stop valve replacement and possible causes for any stop valve leakage. This AIR is not closed and the investigations are ongoing. The valve replacement is scheduled for the next refuel outage presently scheduled for September 1992.

Investigations performed on June 22, 1992 found that there was a packing leak at the stop valve for PT-1E32-N050. It is possible that this leak could have contributed to the initiations while returning the valve to service. A small leak in a closed system could create a pressure drop of unknown magnitude, especially with the small volume between the transmitter, stop valve, and vent valve. The initiations and system shutdowns occurred in approximately one and a half minutes.

D. SAFETY ANALYSIS OF EVENT

The consequences of this event were minimal, the RCIC system ran for a total of 28 seconds during the first initiation. The RCIC Injection Inboard and Outboard Testable Check Valves 1E51-F066 and 1E51-F065 were opened for 20 seconds. The estimated injection time was 20 seconds, and because the RCIC Minimum Flow Valve 1E51-F019 was Out of Service closed, the total estimated flow was into the vessel was 200 gallons.

There is a four minute time delay after a RCIC initiation before a trip of the Main Turbine and Turbine Driven Feedwater Pumps occurs. The time delay provides the Nuclear Station Operator the time necessary to verify proper vessel level. The RCIC system was shutdown after it was determined that the initiation was inadvertent and vessel level was correct.

No adverse effects were noted during and following the injection to balance of plant sytems.

At the time of this incident the High Pressure Core Spray (HPCS) System, and the other Emergency Core Cooling System (ECCS) were fully operable.

E. CORRECTIVE ACTIONS

Operating verified that the RCIC initation was inadvertent and the RCIC system was shutdown. The system was immediately shutdown following each of the subsequent initiations.

The Instrument Maintenance Technician involved with the performance of the surveillance was contacted, and instructed on the use of special care in dealing with these instruments.

Pressure Transmitter PT-1E32-N060 was later functionally tested, and no problems were encountered.

Long Term corrective actions to prevent another spurious RCIC initation includes the following:

a. Tailgate Instrument Maintenance personnel that have the potential for being involved in the type of testing in this event. (AIR 373-180-92-00802)

b. Evaluate the stop valve at PT-1E32-N050 for installation of an anti-surge valve, to assist in preventing RCIC initations. (AIR 373-180-92-00801)

c. Complete the revision of LIS-LC-303/403 to include the written communications involving the possibility of pressure spikes while the surveillance is being performed. (AIR 373-180-92-00802)

d. Identify all similar surveillances which deal with the potential to cause a RCIC or other system initiation and add the written communications necessary to warn the Technicians. (AIR 373-180-92-00802)

e. Transfer the duties for performance of LIS-LC-303/403 to Control System Technicians (CST). (AIR 373-180-92-00802)

F. PREVIOUS EVENTS

LER Number	Title
DVR 1-1-91-0083	Reactor Core Isolation Cooling System Initiation With Injection To The Reactor Vessel Due To A Pressure Perturbation In Instrument Sensing Line

G. COMPONENT FAILURE DATA

None