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

April 17, 1991

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

Dear Sir:

Licensee Event Report #91-002-00, Docket #050-374 is being submitted to your office in accordance with 10CFR50.73(a)(2)(iv).

W R. Smith

for G. J. Diederich
Station Manager
LaSalle County Station

GJD/JDS/mkl

Enclosure

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

IE22 1/1

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)

Division 1 Reactor Building Ventilation Isolation

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	1 8	9 1	9 1	---	0 0 2	--- 0 0	0 4	1 7	9 1		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)	X 50.73(a)(2)(iv)	___ 73.71(b)
POWER LEVEL (10)	1 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 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
Joseph Sparacino, Technical Staff Engineer, 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				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 18, 1991, at approximately 2044 hours with Unit 1 defueled, and Unit 2 running at 100 percent power, a Division 1, Group 4 Primary Containment Isolation occurred. This caused the Unit 2 Reactor Building Ventilation (VR) Outboard Dampers 2VR05YB and 2VR04YA to close and the VR fans to trip off. It also caused the Standby Gas Treatment System on both Units to auto start.

The apparent cause of this event is uncertain, but at the time of the event the Instrument Maintenance Department was performing LaSalle Instrument Surveillance LIS-VR-102, "Unit 1 Reactor Building Fuel Pool Exhaust Radiation Monitor Calibration" on the "A" channel. Due to this surveillance on the Fuel Pool Exhaust Process Radiation Monitor, there was a one-half isolation signal being given by the "A" channel and a signal from the "B" channel is all that would have to be received to cause the Group 4 Isolation. There were no indications of an isolation signal being received by the "B" channel, and it was tested satisfactorily when the calibration was performed.

The Instrument Maintenance Department looked for loose connections and found none. The surveillance on the "A" channel was reperformed, and tested satisfactorily, and the isolation problem did not reoccur.

This event is reportable pursuant to the requirements of 10CFR50.73(a)(2)(iv) due to the actuation of an Engineered Safety Feature System.

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): 1/2 Event Date: 03/18/91 Event Time: 2044 Hours

Reactor Mode(s): Defueled/1 Mode(s) Name: Defueled/Run Power Level(s): 0%/100%

B. DESCRIPTION OF EVENT

On March 18, 1991, at approximately 2044 hours with Unit 1 Defueled and Unit 2 in Operational Condition 1 (Run) at 100 percent power, a Division 1, Group 4 Primary Containment (PC) [JM] Isolation Occurred. This isolation caused Unit 2 Reactor Building Ventilation (VR) [VA] Outboard Dampers 2VR05YB and 2VR04YA to close and the VR fans to trip off. It also caused the Standby Gas Treatment System (VG) [BH] on both Units to auto start. At 2056 hours, the Group 4 Isolation was reset and the Unit 2 VR was restarted. The Unit 2 VG System was left running to obtain the necessary chemistry samples.

At 2020 hours on March 18, 1991, an Instrument Maintenance (IM) crew commenced work on LaSalle Instrument Surveillance LIS-VR-102 "Unit 1 Reactor Building Fuel Pool Exhaust Radiation Monitor Calibration". The calibration was being performed in accordance with the procedure. Channel "A" was being tested, RIY-1D18-K615A located at the 1H13-P635 panel, it was satisfactorily checked for proper operation through step F.9. There is a note in the procedure just prior to step F.10 which states: "The following step will initiate the "Div. 1 Fuel Pool Rad Mon Downscale" alarm window on panel 1H13-P601, and illuminate white "low" lamp, DS1, on the front of the Indicator and Trip Unit. Step F.10 which requires the Mode Switch, S1, to be placed to the "zero" position was performed, however, the alarm mentioned in the preceding note did not initiate. The indication did not decrease enough to activate the Low alarm. The "A" IM slid the 1D18-K615A trip unit out of its slot part way to determine where the adjustment to the setpoint was located. The "A" IM then returned to Step F.3 in the procedure to reperform the preceding steps and verify that all the High alarms had responded as required. He brought over a ladder to set the unit on for adjustment as required, but before he could remove the unit from the panel, he was told by Operating to stop performing the surveillance because the Group 4 isolation had occurred and the VG trains had been initiated.

Upon looking at the alarm typers, it was seen that there were alarms that were associated with the calibration procedure, but the alarms had been cleared approximately five minutes before the VG trains had been initiated. At the time of the Group 4 Isolation, the alarm typers did not reveal any "Hi Rad" or "Hi-Hi Rad" alarms, or any other indications which could have contributed to the isolation. There were no radios in the vicinity of the back panels and there were no other distractions in the area during the procedure.

This event is reportable pursuant to the requirements of 10CFR50.73(a)(2)(iv) due to the actuation of an Engineered Safety Feature System.

C. APPARENT CAUSE OF EVENT

In order to create the Group 4 Isolation, both the "A" and "B" channels would have to give a trip signal. Since channel "A" was already in the tripped condition due to the Mode Switch being out of the "operate" position, all that was needed to cause this isolation would be for the "B" channel to experience a tripped condition signal. A check of the alarm typers showed that there were no alarm indications for channel "B". On March 21, 1991, the "B" channel was also calibrated and checked per the surveillance, and nothing unusual was found. It is not likely that the "B" channel could have experienced a quick spike that went undetected because the Hathaway alarm typer can read the information points once every millisecond, and the trip unit has a lock-in device that locks in the alarm indication until the unit is reset. Another explanation to the event is that the Mode Switch on the "B" channel was accidentally moved out of the "operate" position, but this would have been picked up by the Hathaway alarm typer. The IM was interviewed whether or not he was sure he was at the right instrument or not. The IM assured the IM Foreman that he was on the correct instrument. Since the event could not be duplicated, a root cause could not be determined.

D. SAFETY ANALYSIS OF EVENT

The safety consequences of this event were minimal due to the fact that when the Fuel Pool Exhaust PRM's experienced a trip signal, for whatever reason, the initiation of the Group 4 Primary Containment Isolation and the auto start of the Standby Gas Treatment System were the correct safety responses according to the design of the plant.

E. CORRECTIVE ACTIONS

To correct this problem the Instrument Maintenance Department tried to simulate the same conditions that had led up to the isolation and then checked for loose connections. None were found, and this action did not produce any results that were similar to the isolation. The surveillance was then started again and adjustments were made to correct the problem that occurred at step F.10 and the "A" channel was completed satisfactorily. The "B" channel monitor was also calibrated per LIS-VR-102 and completed satisfactorily with no unusual findings.

F. PREVIOUS EVENTS

The following previous events are ESF events which have occurred due to a spurious spike or pulse from some unknown orgin.

LER Number	Title
373/90-004-00	Automatic Start Of Control Room Emergency Make-Up Ventilation Train Due To Blown Fuses On The Control Room Radiation Monitor.
373/91-001-00	Reactor Building Ventilation System Isolation Damper Closing Due To Relay Failure
374/89-011-01	Spurious Reactor Protection System Actuation Due To Unknown Cause.
374/90-001-00	Reactor Scram During Instrument Surveillance Testing Caused By Spurious Spike On Average Power Range Monitor

G. COMPONENT FAILURE DATA

There are no component failure.