



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

April 30, 1993

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

Dear Sir:

Licensee Event Report #92-013-01, Docket #050-373 is being submitted to your office in accordance with 10CFR50.73(a)(2)(iv).

G. F. Spedl
Station Manager
LaSalle County Station

GFS/WB/grv

Enclosure

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

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

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

Title (4) 1A Diesel Generator Automatic Start Due To Vessel Level Transient During Valving of Instruments

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	1	1	4	9	2	9	2	0	1	3	0	1	0	4	3	0	5	0	0	0	1	1

OPERATING MODE (9) D

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

20.402(b)	20.405(c)	X	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: William Bellovec, Extension 2673

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
X				N					

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15) _____

Yes (If yes, complete EXPECTED SUBMISSION DATE) x | NO

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

On November 14, 1992 at 0030 hours Unit 1 was defueled for L1R05.

While disconnecting test equipment at the completion of LaSalle Instrument Procedure LIS-IP-01 "Reactor Vessel High Steam Dome Pressure Scram Response Time Test", an automatic start of the 1A Diesel Generator (DG) [EK] occurred.

Control Room Personnel verified that the actuation was invalid and secured 1A DG.

When the Instrument Maintenance (IM) Personnel in the Reactor Building were contacted it was determined that instrument valving had occurred at approximately the same time as the 1A DG automatic start.

Investigation revealed that Rosemount Level Transmitters (1B21-N407B and 1B21-N407D) actuated which started the 1A DG. The cause of the actuation is unknown. The Rosemount Transmitters are extremely sensitive.

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

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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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: 11/14/92 Event Time: 0030 Hours

Reactor Mode(s): D Mode(s) Name: Defueled Power Level(s): 0%

B. DESCRIPTION OF EVENT

On November 14, 1992 at 0030 hours Unit 1 was in day 43 of refuel outage L1R05 and defueled. Instrument Maintenance (IM) Personnel were performing LaSalle Instrument Surveillance LIS-RP-01, "Reactor Vessel High Steam Dome Pressure Scram Response Time Test", when the 1A Diesel Generator (DG) [EK] auto started.

The surveillance data gathering and review had been completed to the point of returning equipment to service on the afternoon shift of 11/13/92. A midnight shift Control Systems Technician (CST) notified the appropriate Operating Shift Personnel of IM's intent to remove surveillance test equipment. This included a recorder in the Control Room and a Druck Pressure Controller at local panel 1H22-P027 in the Reactor Building.

The recorder was removed without incident then the CST and a "B" Instrument Technician ("B" IM) went to the Reactor Building to disconnect the "Druck" at 1H22-P027 which was attached to 1B21-N023BA. 1B21-N023BA is a Static-O-Ring Pressure Switch used to initiate Reactor Protection Logic on High Reactor Steam Dome Pressure. The CST verified there was no pressure on the "Druck" and removed it. He then closed the vent valve, noting that there was water at the vent which indicated the instrument was vented. The vent cap was replaced and the pressure switch was slowly valved in. The IM's then left the area.

At the uncontrolled area access point another "B" IM informed the IM Crew that the Control Room had paged the CST. It was through a following conversation with a Nuclear Station Operator (NSO) that the CST became aware of the 1A DG start. A Reactor Core Isolation Cooling (RCIC)(RI)[BN] initiation signal was also received but plant conditions did not support its operation.

C. APPARENT CAUSE OF EVENT

The cause of this event is unknown. It is known that Rosemount Transmitters are extremely sensitive.

The instruments actuated to initiate the automatic start of 1A DG and RCIC are 1B21-N407B and 1B21-N407D (Reactor Vessel Low Level 1 ECCS Division 2 Initiation and Level 2 RCIC Initiation). Both level transmitters are located on Instrument Rack 1H22-P027 (the same as 1B21-N023BA) and share common variable and reference legs.

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C. APPARENT CAUSE OF EVENT CONTINUED

The above instruments were actuated when SOR Pressure Switch 1B21-N023BA was valved in during restoration from surveillance LIS-RP-01. This valve manipulation caused a sensing line pressure oscillation large enough to actuate the level transmitters (1B21-N407B/D). The switches are Rosemount model 1154, known from previous events to be very sensitive.

D. SAFETY ANALYSIS OF EVENT

The safety significance of this event is minimal since the reactor was defueled at the time and all systems responded as required. The 1A DG started and ran unloaded as designed. RCIC System was already isolated because the Reactor pressure was less than 57 psig.

E. CORRECTIVE ACTIONS

The 1A DG was shut down approximately 14 minutes after it automatically started.

Pressure oscillations, or surges, that occur when instruments are valved in, may result in system actuations. This phenomena is being investigated by Systems Engineering and outstanding Action Item Records (AIR) 374-180-92-06701 and 374-200-92-06501 are tracking this review process. This project may result in a modification to install a time delay of the actuation signal by the specific trip units. This would block the receipt of a short duration pressure spike and thus preventing an actuation.

A special test (LST-92-209) has been performed in which the associated Master Trip Unit, 1B21-N703B, was connected to a chart recorder. Applicable portions of LIS-RP-01 were reperformed and varying instrument valve manipulations were attempted. This was done in an attempt to identify a specific cause for the instrument sensing line pressure spiking and subsequent 1A DG start. This test was performed on December 28, 1992 and several differing instrument valving manipulations were attempted (and documented). Though some of these scenarios produced mild pressure fluctuations, there were no simulated conditions that caused the associated instruments to cycle through their actuation setpoints.

The root cause for this event is unknown.

The scenario was repeated seven times with variations in valving technique applied. Under no circumstance was a level transient created that would cause any of the previously affected instruments to cycle through their actuation setpoints. Therefore the root cause remains undetermined and at this time only theoretical speculation can explain the event. Due to the difficulty of recreation and plant scheduling, no further investigation will be attempted.

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F. PREVIOUS EVENTS

LER Number	Title
374/92-005-00	2A DG, 2B/2C LPCI, RCIC Auto Start Due To Instrument Line Low Water Level Spike
373/92-008-00	RCIC System Initiation With Injection To the Reactor Vessel Due To Pressure Perturbation
374/92-012-00	Reactor Scram Due To a Main Turbine Trip Caused by a Thrust Bearing Wear Detector Signal
374/92-013-00	RCIC System Spurious Initiation During LIS-LC-403 Due To a Pressure Spike

G. COMPONENT FAILURE DATA

None.