



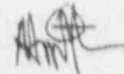
Commonwealth Edison
LaSalle County Nuclear Station
Rural Route #1, Box 220
Marseilles, Illinois 61341
Telephone 815/357-6761

April 30, 1991

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

Dear Sir:

Licensee Event Report #91-004-00, Docket #050-373 is being
submitted to your office in accordance with
10CFR50.73(a)(2)(iv).

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

GJD/TWW/mkl

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 | 1 | of | 0 | 4
 Title (4)

Partial Group II Primary Containment Isolation Due To Blown Fuses

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

OPERATING
MODE (9)

D

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

POWER LEVEL (10)	0	0	0	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
				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 Terry W. Wiemholt, Technical Staff Engineer, Extension 2701
 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	MANUFAC- TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC- TURER	REPORTABLE TO NPRDS
X	J	M	F	U					

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 April 01, 1991 at approximately 1416 hours with Unit 1 defueled at 0 percent power, the "B" Reactor Recirculation (RR) Hydraulic Power Unit (HPU) inboard isolation valves 1B33-F338B, 1B33-F340B, 1B33-F342B, and 1B33-F344B closed. The only related work in progress at the time was the installation of banana jacks by the Instrument Maintenance Department in accordance with work request L94823.

Upon investigation it was determined that fuse 1B21H-FU1B in panel 1PA14J had blown causing several isolation relays to de-energize, resulting in the partial Primary Containment Isolation System (PC) Group II and X isolation signal which caused the valves to close. All of the other Group II and X valves and actuators were already closed, out-of-service, or powered from another fuse. The cause of the blown fuse could not be identified. It is believed that current surges during the lifting and relanding of an energized relay's power lead may have weakened the fuse such that it blew some short time later with only normal current flow.

The fuse was replaced. The isolation logic was reset.

The Instrument Maintenance Department practice of installing banana jacks on energized circuits was halted. The work instructions were rewritten to de-energize the circuit prior to installing banana jacks to minimize the possibility of causing an actuation.

Engineering calculations were performed which verified that the type and size of fuse installed were correct to provide both reliable circuit operation and circuit protection.

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

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Form Rev 2.0

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				Page (3)			
		Year	///	Sequential Number	///	Revision Number			
LaSalle County Station Unit 1	0 5 0 0 0 3 7 3	9 1	-	0 0 4	-	0 0	0 2	OF	0 4
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: 04/01/91 Event Time: 1416 Hours

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

B. DESCRIPTION OF EVENT

On April 01, 1991 at approximately 1416 hours with Unit 1 defueled at 0 percent power, the "B" Reactor Recirculation (RR) [AD] Hydraulic Power Unit (HPJ) inboard isolation valves 1B33-F338B, 1B33-F340B, 1B33-F342B, and 1B33-F344B closed.

The only related work in progress at the time was the installation of banana jacks by the Instrument Maintenance Department in accordance with work request L94823. Per Step 16 of the work instructions, the Instrument Mechanics (IM) were in the process of installing a banana jack on terminal point M3 of relay 1B21H-K66X8 in panel 1PA14J. This work was subsequently halted.

Upon investigation it was determined that fuse 1B21H-FU1B in panel 1PA14J had blown causing several isolation relays to de-energize, resulting in the partial Primary Containment Isolation System (PC) [JM] Group II and X Isolation signal which caused the valves to close.

Only the "B" Reactor Recirculation Hydraulic Power Unit inboard isolation valves 1B33-F338B, 1B33-F340B, 1B33-F342B, and 1B33-F344B closed, because all of the other Group II and Group X valves and actuations were already closed, out of service, or powered from another fuse.

The fuse was replaced. The isolation logic was reset.

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

C. APPARENT CAUSE OF EVENT

This event was caused by the blowing of fuse 1B21H-FU1B.

The cause of the blown fuse could not be identified. Originally, it was suspected that the fuse blew due to some error that the IM's made such as grounding or shorting the circuit with a jumper or a test lead on an ohmmeter. However, all related test leads, jumpers, terminal points and adjacent ground

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Form Rev 2.0

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				Page (3)	
		Year	///	Sequential Number	///	Revision Number	
LaSalle County Station Unit 1	0 5 0 0 0 3 7 3	9 1	-	0 0 4	-	0 0	0 3 OF 0 4

TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

C. APPARENT CAUSE OF EVENT CONTINUED

points in the 1PA14J panel were inspected for burn marks or pitting with no indication found. In addition, all personnel present at the time (two IM's and a Quality Control Inspector), reported that they had heard no relays de-energize (this fuse de-energizes ten small Agastat relays in that same panel) and had observed no arcing during the performance of Step 16. The IM's did indicate that during the installation of a banana jack on terminal B1 of relay 1B21H-K66X8 per the previous Step 15, the relay chattered repeatedly as its power lead was lifted and relanded. These repeated surges of current may have weakened the fuse such that it blew some short time later with only normal current flow.

D. SAFETY ANALYSIS OF EVENT

The power supplies for the PC system are arranged so that loss of one power supply cannot prevent automatic isolation when required. The PC system actuated as designed.

The consequences of this event were minimal since the system which isolated (RR) is not a safety related system and was not required to be operating with Unit 1 defueled. The PC System itself was not required to be operable in the existing defueled plant condition.

This type of work (adding banana jacks to PC System terminal points) is not normally done with the Unit in Operational Condition 1 (Run), 2 (Startup), or 3 (Hot Shutdown). Had this event occurred in one of these conditions all of the inboard isolation valves for Group X and some of the inboard valves for Group II would have closed and Division II Post-LOCA H2-2 monitor would have initiated. These actuations, by themselves, would not have caused a scram or placed the Unit in an unsafe condition. However, loss of these and other systems would have required immediate response by the operators to prevent a subsequent unit scram.

E. CORRECTIVE ACTIONS

The fuse was replaced and the isolation logic reset. The "B" RR HPU inboard isolation valves 1B33-F338B, 1B33-340B, 1B33-F342B, and 1B33-F344B were reopened.

The Instrument Maintenance Department practice of installing banana jacks on energized circuits was halted. The work instructions were rewritten to de-energize the circuit prior to installing banana jacks to minimize the possibility of causing an actuation.

Engineering calculations were performed which verified that the type and size of fuse installed were correct to provide both reliable circuit operation and circuit protection.

F. PREVIOUS EVENTS

LER Number	Title
373/83-083/03L-0	Standby Gas Treatment Wide Range Gas Monitor Low Flow Due To Blown Fuse.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Form Rev 2.0

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						Page (3)	
		Year	///	Sequential Number	///	Revision Number			
LaSalle County Station Unit 1	0 5 0 0 0 3 7 3	9 1	-	0 0 4	-	0 0	0 4	OF	0 4

TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

F. PREVIOUS EVENTS CONTINUED

LER Number	Title
373/90-004-00	Auto Start Of 'B' Control Room Ventilation Emergency Make-Up Train Due To Blown Fuses On The Control Room Radiation Monitor.
374/84-004-00	Division Two Isolation.
374/85-018-00	Shutdown Cooling Isolation On Blown Fuse.
374/87-008-00	Reactor Scram Signal While Defueled Due To Surveillance Procedure Inadequacy.

G. COMPONENT FAILURE DATA

Manufacturer	Nomenclature	Model Number	MFG Part Number
Buss	Fuse	NON	10 Amp.