



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

April 10, 1992

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

Dear Sir:

Licensee Event Report #92-002-00, Docket #050-373 is being submitted to your office in accordance with 10CFR50.73(a)(2)(iv).

G. J. Diederich
Station Manager
LaSalle County Station

GJD/MKG/mkl

Enclosure

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

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PDR ADDCX 05000373
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Handwritten note: 1022-1

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 | 3
 Title (4)

System Electrical Perturbation Due To Motor Design Problem

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

OPERATING MODE (9) 1

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

POWER LEVEL (10) 1 0 0	20.405(a)(1)(i)	20.405(c)	X	50.73(a)(2)(iv)	73.71(b)
	20.405(a)(1)(ii)	50.36(c)(1)		50.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(iii)	50.36(c)(2)		50.73(a)(2)(vii)	Other (Specify in Abstract below and in Text)
	20.405(a)(1)(iv)	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	
	20.405(a)(1)(v)	50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)	
		50.73(a)(2)(iii)		50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

Name: Michael K. Gronek, Technical Staff Engineer Ext. 2447

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
B	S M	M O	A 1 B 0	No					

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15) X | NO

[Yes (If yes, complete EXPECTED SUBMISSION DATE)]

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

At approximately 0120 hours on 3/11/92, with Unit 1 in operational condition at 100% power, the 1D Heater Drain Pump Motor tripped on neutral overcurrent. The motor was checked and the results were satisfactory. At approximately 0419 hours, a restart of the 1D Heater Drain Pump was performed. The attempted pump start resulted in an immediate pump trip. The pump trip caused a voltage perturbation and the Outboard Reactor Water Cleanup (RWCU) Valve 1G33-F004 isolated. In addition, the voltage spike alarmed the Control Room Ventilation (VC) Radiation Monitors, tripped the VC Compressor, and annunciated a Fire Panel Trouble Alarm.

The cause of this event was the occurrence of an electrical fault during the attempted start of the 1D Heater Drain Pump. The root cause of the electrical fault was due to a Heater Drain Pump Motor design problem.

The consequences of this event were minimal. Unit operation was unaffected with the exception of the RWCU isolation. The 1G33-F004 valve isolated as required and was un-isolated within one hour upon determining the cause of the isolation. Reactor water conductivity was not affected by the short term loss of RWCU and the isolation did not pose a system or equipment problem because the RWCU pump tripped.

The motor was repaired and the mounting hardware for the upper and lower shroud was modified per recommendations made by the manufacturer. The balance of the motors will be modified as they become available.

This event is reportable pursuant 10CFR50.73(a)(2)(iv) any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF).

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 2	-	0 0 2	-	0 0	0 2 OF 0 3			
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: 3/11/92 Event Time: 0421 Hours

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

B. DESCRIPTION OF EVENT

On 3/11/92 with Unit 1 in Operational Condition 1 (Run) at 100% power at approximately 0120 hours, the 1D Heater Drain Pump Motor (HD) [SM] tripped on neutral overcurrent. Electricians performed a megger check of the motor and the results were satisfactory. At approximately 0419 hours, operations attempted a restart of the 1D Heater Drain Pump. The attempted pump start resulted in an immediate pump trip and a voltage perturbation which caused the Outboard Reactor Water Cleanup (RWCU, RT) [CE] Valve 1G33-F004 to isolate. In addition, the voltage spike alarmed the Control Room Ventilation (VC) [VI] Radiation Monitors, tripped the VC Compressor, and annunciated the Fire Panel Trouble Alarm.

C. APPARENT CAUSE OF EVENT

The cause of this event was the occurrence of an electrical fault during the attempted start of the 1D Heater Drain Pump. Prior to being cleared, the fault resulted in an electrical perturbation which affected several circuits. This perturbation momentarily deenergized leak detection logic resulting in the RWCU Primary Containment Outboard Valve 1G33-F004 isolating. It also spiked and alarmed the Control Room Ventilation Radiation Monitors, however, no Emergency Makeup Train auto-start resulted since this logic did not seal in prior to clearing the fault. The clearing time of the fault was reviewed and found to be consistent with the breaker manufacturer trip curves.

The root cause of the electrical fault was due to a Heater Drain Pump Motor design problem. Due to normal running vibration, the mounting hardware which supports the fan shroud failed and allowed the shroud to come in contact with the rotating fan and stator coils. This condition caused an overcurrent condition due to a phase to phase and phase to ground fault.

D. SAFETY ANALYSIS OF EVENT

The consequences of this event were minimal. The electrical fault was cleared within the time frame expected. Unit operation was unaffected with the exception of the RWCU isolation. The 1G33-F004 valve isolated as required and was un-isolated within one hour upon determining the cause of the isolation. Reactor water conductivity was not affected by the short term loss of RWCU and the isolation did not pose a system or component concern because the RWCU pump tripped as required.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		Year	///	Sequential Number	///	Revision Number			
LaSalle County Station Unit 1	0 5 0 0 0 3 7 3	9 2	-	0 0 2	-	0 0	0 3	OF	0 3

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

E. CORRECTIVE ACTIONS

The motor was repaired and the mounting hardware for the upper and lower shroud was modified per recommendations made by the manufacturer.

The balance of the remaining motors will be modified as they become available. AIR 373-180-92-01801 will track the completion of this work.

F. PREVIOUS EVENTS

None.

G. COMPONENT FAILURE DATA

Manufacturer	Nomenclature	Model Number	MFG Part Number
Allis-Chalmers	Motor	ANVW	2-0519-46220