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

June 14, 1989

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

Dear Sir:

Licensee Event Report #89-017-00, Docket #050-373 is being submitted to your office in accordance with 10CFR50.73(a)(2)(v).

WRO

G. J. Diederich
for Station Manager
LaSalle County Station

GJD/PSS/kg

Enclosure

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

IE22
1/1

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)

Failure of 0 Diesel Generator Cooling Water Pump Breaker Due to Internal Pitted Contacts

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)
									LaSalle Unit 2	0 5 0 0 0 3 7 4
0 5	1 5	8 9	8 9	0 1 7	0 0	0 6	1 4	8 9		0 5 0 0 0

OPERATING MODE (9)		POWER LEVEL (10)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)			
	1		0 9 0	___ 20.402(b)	___ 20.405(c)	___ 50.73(a)(2)(iv)	___ 73.71(b)
				___ 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
Paul Sampson, Technical Staff Engineer, extension 2704	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	E K	7 2	G 0 8 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 May 15, 1989 at approximately 1803 hours, with LaSalle Units 1 and 2 in Operational Condition 1 (Run) at 90% and 100% power respectively, the Operating Department started the Unit 1 "A" Residual Heat Removal (RHR) pump in accordance with LaSalle Operating Procedure LOP-RH-13, "Suppression Pool Cooling Operation," but the "0" Diesel Generator (DG) cooling water pump, 0DG01P, did not auto start as expected.

The apparent cause of the Unit 1 "0" DG cooling water pump breaker failing to close was pitted contacts internal to the breaker. These contacts are in the series with the closing coil of the breaker. The pitting was not severe, but was noted as a potential for an isolated failure. No other problems with this breaker could be found.

The Unit 1 breaker auto closed within a few minutes after the failure. If it would not have closed, the Unit 2 breaker for the "0" DG cooling water pump was available to supply power to the pump. All requirements of Technical Specifications 3.8.1.1 and 3.5.1 were followed during this event.

Work Request L89765 was written to the Electrical Maintenance Department to troubleshoot the breaker failure. The pitted internal breaker contacts were cleaned and burnished. After the contacts were cleaned and burnished, the breaker was re-installed in its compartment and tested satisfactorily. The "0" DG and "A" RHR were returned to service on May 16, 1989 at 0400 hours.

This event is being reported in accordance with 10CFR50.73(a)(2)(v) due to loss of a safety function needed to remove residual heat.

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: 05/15/89 Event Time: 1803 Hours

Reactor Mode(s): 1/1 Mode(s) Name: Run/Run Power Level(s): 90%/100%

B. DESCRIPTION OF EVENT

On May 15, 1989 at approximately 1803 hours, with LaSalle Units 1 and 2 in Operational Condition 1 at 90% and 100% power respectively, the Operating Department started the Unit 1 "A" Residual Heat Removal (RHR) [BO] pump, 1E12-C002A, in accordance with LaSalle Operating Procedure LOP-RH-13 "Suppression Pool Cooling Operation," but the "0" Diesel Generator (DG) [EK] cooling water pump, ODG01P, did not auto start as expected. The "0" DG cooling water pump is designed to auto start when the "A" RHR, Low Pressure Core Spray (LPCS) [BM], or Reactor Core Isolation Cooling (RCIC) [BN] pumps start. The purpose of which, is to supply cooling water to their area room coolers. The Control Room light indication received for the "0" DG cooling water pump indicated that the breaker received a close signal, but never closed. An Equipment Operator (EO) was immediately dispatched to the cooling water pump breaker. While there, the Licensed Reactor Operator (NSO) repositioned the breaker control switch to stop and then to normal after start. Within approximately 30 seconds after the NSO repositioned the breaker handswitch, with the breaker auto close signal from the "A" RHR pump still present, the "0" DG cooling water pump breaker closed and the pump started. The "0" DG (LPCS), "A" RHR, and RCIC were declared inoperable for both units. The Unit 1 "A" RHR system and the "0" DG cooling water pump was shutdown at 1837 hours on May 15, 1989. At approximately 2000 hours on May 15, 1989, the Unit 2 LPCS pump was started and the Unit 2 "0" DG cooling water pump breaker auto closed as designed. The "0" DG cooling water pump is common to both units and has a power feed breaker for each unit. At this time the Unit 2 LPCS, "A" RHR, and RCIC systems were declared operable, and the Technical Staff and Electrical Maintenance Departments immediately began troubleshooting under Work Request L89765.

The Unit 1 "0" DG cooling water pump breaker was removed from its compartment and placed in a test stand, where it was cycled several times successfully. A visual inspection revealed no gross pitting of the 52X and 52Y internal breaker contacts, however some tracking was noticed on various 52X contacts. The breaker was then transported to the Electrical Maintenance shop for further inspection. The results of the inspection revealed that several 52X contacts exhibited some pitting upon disassembly. This pitting was not severe, but was noted as a potential for an isolated failure of the breaker since the contacts in question are in series with the breaker closing coil. Applicable portions of LaSalle Electrical Surveillance LES-GM-105, "Inspection of Low Voltage AIR Circuit Breakers," was performed to clean and burnish the pitted 52X contacts. The breaker was then reinstalled in its compartment. The

B. DESCRIPTION OF EVENT (Continued)

breaker was verified to close from a LPCS and "A" RHR area cooler fan start, and from the Control Room handswitch while racked to the test position. The breaker was also racked to the connect position and the pump started successfully by starting the Unit 1 "A" RHR pump and the LPCS pump in full flow test. The "0" DG, "A" RHR, LPCS, and RCIC systems for Unit 1 were declared operable at approximately 0400 hours on May 16, 1989. These systems were inoperable for approximately 10 hours.

This event is being reported in accordance with 10CFR50.73(a)(2)(v) due to loss of a safety function needed to remove residual heat.

C. APPARENT CAUSE OF EVENT

The apparent cause of the Unit 1 "0" DG cooling water pump breaker failing to close was pitted contacts internal to the breaker. These contacts are in series with the closing coil of the breaker. The pitting was not severe, but was noted as a potential for an isolated failure. No other problems with this breaker could be found.

D. SAFETY ANALYSIS OF EVENT

The Unit 1 breaker auto closed within a few seconds after the failure. If it would not have closed, the Unit 2 breaker for the "0" DG cooling water pump was available to supply power to the pump. All Emergency Core Cooling Systems (ECCS) were operable before and after this event. All offsite power sources were operable before and after this event. The requirements of Technical Specifications 3.8.1.1 and 3.5.1 were followed during this event. This event is not considered to have been worse under other conditions.

E. CORRECTIVE ACTIONS

Work Request L89765 was written to the Electrical Maintenance Department to troubleshoot the breaker failure. The pitted internal breaker contacts were cleaned and burnished per applicable portions of LES-GM-105. After the contacts were cleaned, the breaker was reassembled and then reinstalled in its compartment. Continuity of all the breaker contacts was verified. The breaker was verified to close on a LPCS and "A" RHR area cooler fan start, and from the Control Room handswitch while racked to the test position. These area cooler fans auto start when the LPCS and/or "A" RHR pumps start. The breaker was also racked to the connect position and the pump started successfully by starting the Unit 1 "A" RHR pump and the LPCS pump in full flow test. The "0" DG, and the Unit 1 LPCS, "A" RHR, and RCIC systems were declared operable at approximately 0400 hours on May 16, 1989 after being inoperable for approximately 10 hours.

E. CORRECTIVE ACTIONS (Continued)

LES-GM-105 is a preventative maintenance procedure for this type of breaker, and is performed on a 3 year frequency. The pitted 52X contacts on the "0" DG cooling water pump breaker had been cleaned and burnished in accordance with LES-DG-105 only 1 year prior to the failure. LES-GM-105 requires that these contacts be cleaned and burnished. In addition, there have been no other documented failures directly relate to a failure of these contacts. Action Item Record (AIR) 373-200-89-04701 has been written to investigate and determine if any changes to LES-GM-105 is required, including the 3 year frequency.

F. PREVIOUS EVENTS

LER Number	Title
373/88-018-00	0 DG Cooling Water Pump Breaker Would Not Latch in the Closed Position

G. COMPONENT FAILURE DATA

Manufacturer	Nomenclature	Model Number	MFG Part Number
General Electric	Circuit Breaker	AK-2A-25	