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

February 8, 1991

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

Dear Sir:

Licensee Event Report #91-001-00, Docket #050-374 is being submitted to your office in accordance with 10CFR50.73(a)(2)(i).

G. J. Diederich
for Station Manager
LaSalle County Station

GJD/JDB/mk1

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

Title (4)

High Pressure Core Spray Pump Room Fire Rated Barrier Found Degraded During Inspection

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 1	1 0	9 1	9 1	---	0 0 1	---	0 0	0 2	0 8	9 1		0 5 0 0 0

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	___ 20.402(b)	___ 20.405(c)	___ 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)	X 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	TELEPHONE NUMBER
	AREA CODE
James Behn - Technical Staff Engineer, X-2445	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
A	K P			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)

At 0830 hours on January 10, 1991, with Unit 2 in Operational Condition 1 (Run) at 100% power, the station Technical Staff was performing LaSalle Technical Surveillance LTS-1000-42 "Fire Assembly Integrity Inspections" and found 3 open penetrations in a Technical Specification related fire rated wall. A one hour fire watch was initiated in accordance with LaSalle Technical Specification 3.7.6 Action Requirement a. A work request was initiated to seal the penetration and was completed on January 15, 1991. A design basis fire on either side of these penetrations could render the High Pressure Core Spray (HPCS) System inoperative. However, the Emergency Core Cooling System Divisions I and II, and the Reactor Core Isolation Cooling System were available in the event of an emergency. Ionization detectors are provided in these fire zones and annunciate an alarm locally and in the main Control Room. Because the degradation of the fire barrier would not have impaired safe shutdown of Unit 2, the safety significance of this is considered to be minimal.

Since LTS-1000-42 has been performed several times on this wall without detecting these openings, the root cause of this event is attributed to the failure of technical support personnel to perform adequate surveillance inspections. A contributing cause is the location of the openings, being approximately 17 feet off the floor and above ventilation ductwork.

This event is reportable pursuant to the requirements of 10CFR50.73(a)(2)(i) due to a deviation from plant Technical Specifications.

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor

A. CONDITION PRIOR TO EVENT

Unit(s): 2 Event Date: 01/10/91 Event Time: 0830 Hours

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

B. DESCRIPTION OF EVENT

At 0830 hours on January 10, 1991 with Unit 2 operating in the Run Mode at 100% rated core thermal power, while performing LaSalle Technical Specification Surveillance 4.7.6.1.a LTS-1000-42, (Fire Assembly Integrity Inspection), a Technical Staff Engineer discovered three open conduit penetrations on the 687' Elevation of the Diesel Generator Building in Technical Specification related fire rated barriers. One penetration was located in the southwest corner near the ceiling approximately 17 feet off the floor and above a large ventilation duct, between Fire Zones 8C3, Diesel Generator Cooling Water Pump Room and 3K Unit 2 Steam Tunnel. The other two penetrations were located at L.3 and 21.1 approximately 17 feet from the floor and also above a large ventilation duct (both sides) between Fire Zone 8C3 and 5D2 (HPCS Switchgear Room). A one hour fire watch was initiated in accordance with LaSalle Technical Specification 3.7.6 Action Requirement a. fire rated assemblies. Work request (WR) LU4742 was initiated to seal the open penetrations. The Work Request was completed on January 15, 1991 and the fire watch was terminated.

C. APPARENT CAUSE OF EVENT

The penetrations on the south wall of the Diesel Generator Cooling Water Pump Room were required to be sealed to a three hour fire rating as required by Technical Specifications. All conduits which penetrate a fire rated concrete wall, floor and/or ceiling at LaSalle are sealed with grout to achieve a three hour fire rating. A conduit penetration sealed with grout is considered to be part of the fire wall and as such is not given a penetration number.

Several fire barrier integrity inspections performed by the Technical Staff over the years, failed to identify the openings. Therefore, the root cause of this event is attributed to the failure of technical support personnel to perform adequate surveillance inspections. The probable reasons for the failure to identify these three open penetrations are: (1) their hidden location, (2) the lack of identification numbers for such penetrations, and (3) the inaccessibility of fire zone 3K during operation. Fire Zone 3K is a high radiation area during unit operation.

D. SAFETY ANALYSIS OF EVENT

The Diesel Generator Cooling Water Pump Room is identified as Fire Zone 8C3. A fire in this zone could affect only components and cables associated with the Emergency Core Cooling System (ECCS) Division III. Therefore, ECCS Divisions I and II, and the Reactor Core Isolation Cooling System (RCIC), which are independent of this fire zone, would be available to bring the reactor to a shutdown condition in an emergency situation. The south wall of this zone has a 3-hour fire rating with the exception of a non-fire rated watertight door providing access to 5D2. Ionization detectors are provided to annunciate an alarm locally and in the Main Control Room. The average fire loading for this zone, including a transient loading of 55 gallons of lubricating oil, is 42,600 BTU/FT2. This loading is equivalent to a fire severity of 32 minutes.

Fire Zone 5D2, Unit 2 HPCS Switchgear Room, shares a partial common 3-hour fire rated wall with Fire Zone 8C3. The design-basis fire would be contained within this zone; however, it is assumed to render the HPCS System inoperative. The ECCS Divisions I and II, and the RCIC System, which are independent of this fire zone would be available to bring the reactor to a shutdown condition in an emergency situation. Ionization detectors are provided to annunciate an alarm locally and in the Main Control Room. The average fire loading for this zone, including an assumed transient fire load equivalent to 55 gallons of lube oil, is 31,400 BTU/FT. This loading is equivalent to a fire loading of 24 minutes.

Fire Zone 3K, the steam tunnel, shares a partial common 3 hour fire rated wall with Fire Zone 8C3. This zone contains safety-related conduit, electrical equipment, and the main steam and feedwater isolation valves. A design-basis fire is not considered, due to an absence of combustibles. Fire Zone 3K is a high radiation area and during operation of the unit, is inaccessible.

A design-basis fire in either 5D2 or 8C3 could render the HPCS System (ECCS Division III) inoperative. The ECCS Divisions I and II, and the RCIC System would still be available to mitigate the consequences of a design basis event and to bring the unit to a shutdown condition.

Because degradation of the fire barrier would not have impaired safe shutdown of Unit 2, the safety significance of this event is considered to be minimal.

E. CORRECTIVE ACTIONS

The initial corrective actions were to establish an hourly fire watch in accordance with LaSalle Technical Specification Section 3.7.6 Action Requirement a. A permanent fire seal was installed on January 15, 1991 in each of the three open penetrations using grout.

Procedure LTS-1000-42 states that the inspector should ensure that there are no unsealed openings, particularly around grouted conduit and piping. Since there were no visible indications that these holes had ever been sealed, it was concluded that the holes had existed since the barrier was constructed.

A tailgate of this event will be conducted with Technical Staff personnel stressing the importance of complete and accurate inspections. Action Item Record (AIR) 374-200-91-00101 will track this tailgate. LaSalle Administrative Procedure LAP-400-2, Technical Staff Surveillance Qualification Program, will be revised to include this Licensee Event Report as required reading prior to certification for firewall inspector. AIR 374-200-91-00102 will track this procedure revision.

F. PREVIOUS EVENTS

LER Number	Title
373-89-024-00	Unsealed openings in the Control Room

G. COMPONENT FAILURE DATA

There were no component failures in this event. Consequently, no NPRDS search was performed.