

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1):															DOCKET NUMBER (2):										PAGE (3)													
LaSalle County Nuclear Station/Unit 2															0 6 0 0 0 3 7 4										1 OF 0 3													
TITLE (4):																																						
HPCS-CY Return Line Rupture																																						
EVENT DATE IS:			LER NUMBER IS:						REPORT DATE (7):						OTHER FACILITIES INVOLVED (8):																							
MONTH	DAY	YEAR	YEAR		SEQUENTIAL NUMBER		REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES										DOCKET NUMBER (5):																	
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0	5	2	7	8	5	6	5	0	2	7	0	0	0	6	2	6	8	5											0 6 0 0 0									
OPERATING MODE (6):			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5 (Check one or more of the following) (11):																																			
4			20 402(a)						20 406(a)						20 73(a)(2)(i)(A)						73.71(a)																	
POWER LEVEL (10):			20 406(a)(1)(i)(I)						20 36(a)(1)						20 73(a)(2)(i)(B)						73.71(a)																	
01010			20 406(a)(1)(i)(II)						20 36(a)(2)						20 73(a)(2)(i)(B)						X OTHER (Specify in Abstract Below and in Text: NRC Form 306A)																	
			20 406(a)(1)(i)(III)						20 73(a)(2)(ii)						20 73(a)(2)(iv)(A)						Voluntary																	
			20 406(a)(1)(i)(IV)						20 73(a)(2)(iv)(B)						20 73(a)(2)(iv)(B)																							
			20 406(a)(1)(i)(V)						20 73(a)(2)(iv)(B)						20 73(a)(2)(iv)(B)																							
LICENSEE CONTACT FOR THIS LER (12):																																						
NAME															TELEPHONE NUMBER																							
Harold T. Vinyard, extension 323															AREA CODE: 811 15 36 171-1617 6 11																							
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13):																																						
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC																
X	BK	P13P1	Z1919 P	Y																																		
SUPPLEMENTAL REPORT EXPECTED (14):															EXPECTED SUBMISSION DATE (15):																							
X YES (If yes, complete EXPECTED SUBMISSION DATE:)															MONTH DAY YEAR																							
NO															1 2 0 1 8 5																							

On May 27, 1985, at approximately 0030 hours, with Unit 2 in Cold Shutdown at 0% power, the High Pressure Core Spray underground return line to the Cycled Condensate storage tank ruptured expelling approximately 200,000 gallons of CY water into the soil which surfaced near the Off Gas Filter Building. The line was immediately isolated. Sample results of the water revealed low but detectable contamination levels. These levels were, however, within release limits. An aggressive test program has located and isolated all underground piping with a potential for leakage. The failures identified to date are limited to underground Schedule 10 stainless steel piping. The failure mode has not yet been identified.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (5)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
LaSalle County Station Unit 2	0 5 0 0 0 3 7 4	8 5	- 0 2 7	- 0 0	0 2	OF	0 3

TEXT (if more space is required, use additional NRC Form 365A's) (17)

I. EVENT DESCRIPTION

On May 27, 1985, at approximately 0030 hours, a Security Guard observed water bubbling out of the ground near the Off Gas Filter Building and reported this fact to the Operating Shift Supervisor. A review of the operations in progress revealed the Unit 2 High Pressure Core Spray (HPCS, BG) pump had been running for several hours recirculating Cycled Condensate storage tank (CY, KA) water as part of an operation to increase the water quality of the tank. The pump was immediately secured and water flow out of the ground decreased significantly. The High Pressure Core Spray return line to the Cycled Condensate storage tank was immediately isolated and taken out of service to prevent further leakage. Sample results of the ground water revealed low contamination levels but within 10CFR20 release limits. A gamma spectrum analysis of the surface water indicated that it was essentially identical to CY water. At the time of this event Unit 2 was in Cold Shutdown at 0% power.

A monitoring program was immediately established to sample the water runoff into the cooling lake. Samples were taken every 4 hours for the 32 hour time period following the event. Radionuclide concentration in these samples decreased to an insignificant level within a short time period following the event. Cooling pond blowdown to the Illinois River was secured until samples of the blowdown were taken and analyzed for gamma emitters. No detectable concentrations were found.

II. CAUSE

After further testing, the High Pressure Core Spray return line to the Cycled Condensate storage tank was confirmed as the source of the leakage. This return line runs 24' below the ground from the Reactor Building to the CY tank and is constructed of Class D, Schedule 10-A140 Type 304 stainless steel. The actual mode of failure is unknown at this time. This report will be supplemented once all tests are complete and the failure mode is determined.

III. PROBABLE CONSEQUENCES OF THE OCCURRENCE

Using a water balance method over the time span of the pump run, a conservative upper limit on the size of the leak was established at 500 gpm, which corresponds to a volumetric water loss of approximately 200,000 gallons.

The High Pressure Core Spray system can supply water to the reactor vessel from either the Cycled Condensate storage tank or the Suppression Pool (NH) in the event of a loss of coolant accident. While the High Pressure Core Spray system is in the Normal/Standby Mode, its suction path is from the Cycled Condensate storage tank. The system will automatically transfer suction to the Suppression Pool when tank level is low or a high water level condition exists in the Suppression Pool. Since High Pressure Core Spray suction piping from the CY tank is of the same piping design as the return line, it has also

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LaSalle County Station Unit 2	05000374	85	027	00	93	OF	03

TEXT (If more space is required, use additional NRC Form 366A's) (17)

III. PROBABLE CONSEQUENCES OF THE OCCURRENCE (Continued)

been isolated until the failure mode for the return line can be determined. The isolation of both the CY tank suction and return lines has no impact on the ability of the High Pressure Core Spray system to perform its design function. Suppression Pool chemistry will be closely monitored while the CY suction path is unavailable and surveillance requirements for ASME/Technical Specification related activities will be satisfied using the Suppression Pool as a suction source.

IV. CORRECTIVE ACTION

The High Pressure Core Spray return line to the Cycled Condensate storage tank was isolated immediately after the event. A test program for both Units 1 and 2 was developed to test all HPCS-CY underground piping for leaks. A pressure test on the Unit 1 HPCS-CY return line produced evidence of a similar leak, although of considerably less magnitude (30 gpm). This line has also been isolated. An investigation of all underground piping indicates that failures to date are limited to underground Schedule 10 stainless steel piping, which includes all HPCS-CY underground piping. The strategy regarding long-term replacement of these lines is still under discussion. (AIR 374-200-85-00113)

A core drilling/sample well program has also been developed to both determine the scope of underground contamination and monitor for any evidence of further contamination.

V. PREVIOUS OCCURRENCES

None.

VI. NAME AND TELEPHONE NUMBER OF PREPARER

Harold T. Vinyard, 815/357-6761, extension 323.



Commonwealth Edison
LaSalle County Nuclear Station
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Marseilles, Illinois 61341
Telephone 815/357-6761

June 26, 1985

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Dear Sir:

Reportable Occurrence Report #85-027-00, Docket #050-374 is being submitted to your office in accordance with 10CFR 50.73.

for R.D. Biele
G. J. Diederich
Station Manager
LaSalle County Station

GJD/DRR/kg

Enclosure

xc: NRC, Regional Director
INPO-Records Center
File/NRC

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