NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO 3150-0104
EXPIRES 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
LaSalle County Station Unit 2	0 5 0 0 0 3 7 4	1 OF 0 3

TITLE (4)
Reactor Water Cleanup High Differential Flow Isolations

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 6	1 1	8 4	8 4	0 2 9	0 0	0 7	0 5	8 4	N/A	0 5 0 0 0
									N/A	0 5 0 0 0

OPERATING MODE (9)	2	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.406(c)	X 50.73(a)(2)(iv)	73.71(b)
		20.406(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.406(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.406(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Charles K. Sprunger, Extension 779	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	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X	J M	F I S	R 3 6 9	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 June 11, 1984, at 0857 hours with Unit 2 at 0% power in Mode 2, an isolation of Reactor Water Cleanup (RWCU) occurred due to High Differential Flow on Division 1. At the time of this isolation the reactor pressure decreased when pressure equalization was being performed across the Main Steam Isolation Valves (MSIV's).

On June 11, 1984, at 1930 hours with Unit 2 at 1% power in Mode 2, an isolation of RWCU occurred due to High Differential Flow on Division 1. At the time of this isolation no major system changes had been performed for about 90 minutes.

These isolations were the result of the density differences between the influents to and the effluents from the RWCU system. In both cases the RWCU system's isolation valves closed as required and placed the plant in a safe condition.

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I. EVENT DESCRIPTION

On June 11, 1984, at 0857 hours, the Unit 2 Reactor Water Cleanup (CE) System High Differential Flow (JM) Division 1 alarm came up. The Licensed Operator (NSO) acknowledged the alarm and noted that isolation valve 2G33-F004 closed as required. The NSO sent an Operator to the Reactor Water Cleanup (RWCU) areas in the plant to check for any leaks. No leaks were found. The NSO notified the Shift Engineer of the event. NRC notification was then made.

When it became apparent there were no leaks, the isolation was cleared and a RWCU Filter Demineralizer was placed on line.

On the same day at 1930 hours the Unit 2 Reactor Water Cleanup System High Differential Division 1 alarm came up again. The NSO acknowledged the alarm and noted that isolation valve 2G33-F004 closed as required. The NSO sent an Operator to the RWCU areas in the plant to check for any leaks. No leaks were found. The NSO notified the Shift Control Room Engineer (SCRE) of the event. NRC notification was then made.

At 1945 hours when it was apparent there were no leaks, the isolation was cleared and the "A" RWCU Filter Demineralizer was placed on line.

II. CAUSE

At the time of the first isolation on June 11, 1984, Unit 2 was subcritical at 0% power with reactor pressure at 100 psig. The Unit startup was under way and the Main Steam Isolation Valves (SB, MSIV's) were closed. The Main Steam Line Drain Valves (SB) were being opened to equalize the pressure across the MSIV's.

At the time of the second isolation on June 11, 1984, Unit 2 was at about 1% power with reactor pressure at 830 psig. The MSIV's were now open (since 1115 hours) and the Motor Driven Reactor Feedwater Pump (SK, MDRFP) had been started two hours earlier at 1735 hours. The Unit NSO had been adjusting the reactor feedwater flow to maintain the correct vessel level.

These activities that occurred prior to the isolations caused the reactor pressure to deviate from its normal steady [illegible] experienced during a Unit startup. An abrupt change in pressure [illegible] a RWCU High Differential Flow isolation due to the design characteristics of the differential flow leak detection scheme. This logic involves three flow loops. One "sees" input to the system and two "see" outlets from the system. Due to differences in water temperature in various points in the system each flow loop is calibrated for a different temperature (density) of water. All these calibrations are based on reactor water being at rated conditions under steady state conditions.

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

II. CAUSE (Continued)

To allow for transients a 45 second time delay is built into the differential flow isolation trip. However, at other than rated conditions, such as those mentioned above, actuations of this trip logic have occurred due to the instruments "seeing" other than design conditions.

III. PROBABLE CONSEQUENCES OF THE OCCURRENCES

In both instances the RWCU system shut down and placed the plant in a safe condition. The loss of the RWCU system did not unduly affect the operation of the Unit.

IV. CORRECTIVE ACTIONS

Applicable procedures are being reviewed for possible revision to alert the Operators that this can occur during plant conditions other than rated conditions and to give guidance on actions which can be taken to reduce the likelihood of isolations of RWCU occurring on differential flow. (AIR 01-84-67091 and AIR 01-84-131)

V. PREVIOUS OCCURRENCES

Previous events of this type have occurred on Unit 1 (LER 50-373/84-030-00) and on Unit 2 (LER 50-374/84-023-00).

VI. NAME AND PHONE NUMBER OF PREPARER

Charles K. Sprunger, 815/357-6761, extension 779.

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

July 5, 1984

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

Dear Sir:

Reportable Occurrence Report #84-029-00, Docket #050-374 is being submitted to your office in accordance with 10 CFR 50.73.

G. J. Diederich
Superintendent
LaSalle County Station

GJD/MLD/kg

Enclosure

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

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