

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) LaSalle County Station Unit 1	DOCKET NUMBER (2) 0 5   0 0   0 3   7 8	PAGE (3) 1 OF 0 3
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TITLE (4)  
Reactor Water Clean-Up High Differential Flow Isolation

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	3 1	8 4	8 4	0 3 0	0	0 0	0 6	1 8	8 4		0 5 0 0 0
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THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)

OPERATING MODE (9) 3  POWER LEVEL (10) 0 0 1 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(c)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
	<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
	<input type="checkbox"/> 20.406(a)(1)(ix)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
	<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Charles K. Sprunger, extension 779	TELEPHONE NUMBER AREA CODE: 8 1 1 5 3 1 5 1 7 + 1 6 1 7 1 6 1 1
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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
X	C	E	Z 1 9 1 9 9	Z 1 9 1 9 9	N				

SUPPLEMENTAL REPORT EXPECTED (14)

YES (or, complete EXPECTED SUBMISSION DATE)  NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

On May 31, 1984, at 1825 hours with Unit 1 at 0% power and reactor pressure at 750 psig an isolation of Reactor Water Cleanup (CE, RWCU) occurred due to High Differential Flow on Divisions 1 and 2. At the time of this isolation the Turbine Driven Reactor Feedwater Pump flow was being reduced and the Main Steam Bypass Valves were being adjusted to control pressure.

On June 1, 1984, at 1733 hours with Unit 1 at 0% power and reactor pressure at 250 psig an isolation of RWCU occurred due to High Differential Flow on Division 1. At the time of this isolation the "C" Reactor Water Cleanup Filter Demin was being placed in service and the blowdown flow to the condenser was being adjusted.

These two 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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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (If more space is required, use additional NRC Form 306A (1/77))

I. EVENT DESCRIPTION

On May 31, 1984, at 1825 hours the Unit 1 Reactor Water Cleanup (CE) System High Differential Flow (JM) alarm came up. The Licensed Operator (NSO) acknowledged the alarm and noted that isolation valves 1G33-F001 and 1G33-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 the "C" RWCU Filter Demin was placed on line and the system was restarted. No further problems occurred with RWCU System that day.

On June 1, 1984, at 1733 hours the Unit 1 Reactor Water Cleanup System High Differential Flow alarm came up again. The NSO acknowledged the alarm and noted that outboard isolation valve 1G33-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 SCRE of the event. NRC notification was then made.

At 1830 hours the "C" RWCU Filter Demin was placed on line and the system was restarted. No further problems occurred with the RWCU System that day.

II. CAUSE

At the time of the isolation on May 31, 1984, Unit 1 was at 0% power with reactor pressure at 750 psig. The Turbine Driven Reactor Feedwater Pump (SK) flow was being reduced and the Main Steam Bypass Valves (JJ) were being adjusted to control pressure.

At the time of the isolation on June 1, 1984, Unit 1 was at 0% power with reactor pressure at 250 psig. The "C" RWCU Filter Demin was being placed in service and the blowdown flow to the condenser was being adjusted.

The cause of these occurrences was 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 the differences in water temperature in various points of 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.

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.

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TEXT (If more space is required, use additional NRC Form 388A's (17))

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)

V. PREVIOUS OCCURRENCES

None.

VI. NAME AND PHONE NUMBER OF THE PREPARER

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



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

June 18, 1984

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

Dear Sir:

Reportable Occurrence Report #84-030-00, Docket #050-373 is being submitted to your office in accordance with 10 CFR 50.73.

*G. J. Diederich 6/21/84*  
G. J. Diederich  
Superintendent  
LaSalle County Station

GJD/MLD/kg

Enclosure

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

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