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 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 8	3 0	8 4	8 4	- 0 6 1	- 0 0	0 9	2 0 8 4		NA	0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)					
POWER LEVEL (10)	0 1 5	20.402(b)	20.405(c)	X	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 in Abstract below and in Text, NRC Form 366A)	
		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
JoAnn M. Shields, extension 330	AREA CODE 8 1 5 3 5 7 - 1 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	C E	Z 1 9 1 9	Z 1 9 1 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 August 30, 1984, during Unit 2 Reactor Start-up, several Reactor Water Cleanup differential flow isolations occurred. After each isolation, inspection of the system areas revealed no actual leaks. Three isolations resulted from density differences seen by the flow instruments, two from lifted relief valves, and one from placing a filter on line. Investigations into the early lifting of relief valves, possible pump pressure transients causing overpressurization, and the replacement of isolation valves are being conducted. Safe plant conditions were maintained at all times.

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

I. EVENT DESCRIPTION

On August 30, 1984, at 0030, the Reactor Water Cleanup System (CE, RWCU) isolated on high differential flow (JM). Unit 2 was in Startup Mode, at 15% power. At the time of the event, vessel level was being controlled by RWCU blowdown to the condenser. After the isolation, the system area was inspected for leaks, and none were found. The system was then restarted. A second isolation on high differential flow occurred at 0515. The system was again being used to control vessel level through condenser blowdown. Investigation of the system areas revealed no leaks. At 0905, the reactor mode switch was changed from Startup to Run. At 1100, another RWCU isolation occurred while blowing down to the condenser. Again, no actual leaks were present. When the system was restarted at 1110, the RWCU Regenerative Heat Exchanger Shell Side Relief valve, 2G33-F340B, lifted, venting system flow to the Reactor Building Equipment Drain Tank (WD). This loss of flow caused a differential flow isolation. After the system isolated, the relief valve reset. Visual inspection of the area found no further leakage. The "B" heat exchanger string was then valved out. Two RWCU pumps were started, and at 1355 the "B" filter was placed on line. The "A" filter was then precoated, and as it was being placed on line, the system isolated at 1410 on differential flow. No actual leaks were found. The system was restarted at 1415, and the system again isolated on differential flow. Again, no leaks were present. At 1740, one RWCU pump was started with the filters in bypass. At 1745 a second pump was started. At 2110 the "B" RWCU filter was placed on line. No further difficulties were encountered with the system.

II. CAUSE

The RWCU flow loops are designed for operation at rated pressures and temperatures. As a result, the various flow loops are calibrated at the appropriate water density expected during steady state operation. In Startup Mode, however, the water will not be at rated conditions, causing the instruments to read conservatively. The first three isolations, at 0030, 0515 and 1100, were obtained while RWCU was controlling vessel level by blowdown to the condenser.

The 1110 isolation resulted from an open relief valve. It is speculated that a pressure surge resulting from the startup of a RWCU pump may be sufficient to lift the relief.

The 1410 isolation occurred while placing a filter on line. It is speculated that valves leaking past their seats may be providing drain paths for system flow, contributing to system differential flow.

No real cause was found for the 1415 isolation. It is speculated that another pressure surge may have lifted a relief valve, and reset upon the isolation.

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

III. PROBABLE CONSEQUENCES OF THE OCCURRENCE

The events were of minimal significance as the system operated according to design. Safe plant conditions were maintained at all times.

IV. CORRECTIVE ACTIONS

An investigation into relief valves lifting at less than design pressure is being conducted.

An investigation into pump pressure transients is being conducted.

An investigation into replacement isolation valves is being conducted.

These investigations are being tracked by AIR 1-84-67065.

VI. PREVIOUS OCCURRENCES

Previous reports of reliefs lifting at less than design pressure are detailed in reports 374/84-13-00 and 374/84-023-00.

Previous reports of isolations resulting from blowdown operations are detailed in reports 373/84-030-00, 84-033-00, 84-040-00, 374/84-029-00, 84-041-00, 84-044-00 and 84-054-00.

VI. NAME AND TELEPHONE NUMBER OF PREPARER

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September 20, 1984

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

Dear Sir:

Reportable Occurrence Report #84-061-00, Docket #050-374 is being submitted to your office in accordance with 10CFR 50.73.

G. J. Diederich 9/24/84
G. J. Diederich
Superintendent
LaSalle County Station

GJD/MLD/kg

Enclosure

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

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