

## LICENSEE EVENT REPORT (LER)

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

TITLE (4)

Reactor Water Cleanup Differential Flow Isolation When Rx Vessel Head Vent Opened

| 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              | 3   | 0    | 1              | 8                 | 5               | 8               | 5   | 0    | 0                             | 0 | 0                |
| 0              | 3   | 0    | 1              | 8                 | 5               | 0               | 0   | 0    | 0                             | 0 | 0                |

| OPERATING MODE (9) |       | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11) |  |                  |  |   |  |                      |  |  |  |
|--------------------|-------|--|--|------------------|--|---|--|----------------------|--|--|--|
| 3                  |       | 20.402(b)  |  | 20.406(c)        |  | X |  | 50.73(a)(2)(iv)      |  | 73.71(b)   |  |
| POWER LEVEL (10)   | 0 0 0 | 20.406(a)(1)(i)  |  | 20.406(c)(1)     |  |   |  | 50.73(a)(2)(v)       |  | 73.71(c)   |  |
|                    |       | 20.406(a)(1)(ii)   |  | 20.406(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)(ix)      |  |  |  |

| LICENSEE CONTACT FOR THIS LER (12) |                                  | TELEPHONE NUMBER |                           |
|------------------------------------|----------------------------------|------------------|---------------------------|
| NAME                               | John B. Reis, Jr., extension 463 | AREA CODE        | 8 1 1 5 3 5 1 7 1 6 7 6 1 |

| 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  | J M    | Z 9 9 9   | Z 9 9 9      | N                 |       |        |           |              |                   |
|  |        |           |              |                   |       |        |           |              |                   |
|  |        |           |              |                   |       |        |           |              |                   |

| SUPPLEMENTAL REPORT EXPECTED (14)  |  | EXPECTED SUBMISSION DATE (15) |  | MONTH | DAY | YEAR |
|--|--|-------------------------------|--|-------|-----|------|
| <input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) | <input checked="" type="checkbox"/> NO |                               |  |       |     |      |

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

On March 1, 1985, at 0404 hours with the unit approaching Cold Shutdown, the Unit 2 Reactor Water Cleanup system (RWCU) isolated on high differential flow. There were no flowpath changes or equipment rotations in progress at the time of the trip. Approximately 3 minutes prior to the isolation, the Rx Head Vents to the Gland Seal Leakoff Reservoir were opened per LGP-2-1, Step F.64. The primary reason for the RWCU differential flow isolation may be the pressure transient created by opening the Rx Vessel Head Vent Valves. These pressure transients are "seen" as differential flow transients by the RWCU flow monitoring loop, resulting in large differential flow indications.

Following the isolation, the RWCU system was inspected for leakage, with none being found. Upon confirmation of satisfactory system status, the high differential flow isolation signal was reset. At approximately 0429 the same day the Unit 2 RWCU system was satisfactorily restarted.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104  
EXPIRES 8/31/85

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| LaSalle County Station Unit 2 | 0 5 0 0 0 3 7 4   | 8 5            | - 0 0 9           | - 0 0           | 0 2      | OF | 0 4 |

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

I. EVENT DESCRIPTION

On 3/1/85 at 0404 hours, the Unit 2 Reactor Water Cleanup system (CE, RWCU) isolated on High Differential Flow (JM). At the time of the event, the unit was in Hot Shutdown (Mode 3), with RHR Shutdown Cooling in operation and the reactor about to enter a Cold Shutdown condition (Mode 4). Reactor water temperature was approximately 208°F, and there was little main steam or feedwater flow. At the time of the incident, the RWCU inlet flow was approximately 150 gpm. There was no RWCU flow to the main condenser, with all of the flow returning to the vessel via the feedwater inlets. RHR blowdown was used to balance the CRD flow and maintain proper vessel level. The system lineup was 1 pump, 1 filter demineralizer, and 1 Hx string in operation. No equipment rotations were in progress. Approximately 3 minutes prior to the isolation, the Reactor Head Vents to the Gland Seal Leakoff Reservoir were opened (valves 2B21-F001 and 2B21-F002) per LGP-2-1, Step F.64. Upon actuation, the isolation valves 2G33-F001 and 2G33-F004 closed as required.

Following isolation, the RWCU system was inspected for leakage, with none being found. Upon confirmation of satisfactory system status, the high differential flow isolation signal was reset. At approximately 0429 the same day the Unit 2 RWCU system was satisfactorily restarted. At 0525 the same day, the "A" filter demin was satisfactorily placed on line.

II. CAUSE

Upon discussion with Operating and a review of the computer point history, the differential flow due to conservative calibration errors and volumetric changes was small, on the order of 11.1 gpm, reducing the initial trip value of 69.5 gpm to an effective trip value of 58.4 gpm. These concerns have very little impact on the RWCU differential flow monitoring system during Cold Shutdown conditions, i.e., conditions near and below 200°F. The volumetric considerations have their most significant impact during Startup, Hot Shutdown, and Normal operating conditions.

The primary reason for the RWCU differential flow isolation may be the pressure transient created by opening the Reactor Vessel Head Vent Valves, 2B21-F001 and 2B21-F002. These pressure transients are "seen" as differential flow transients by the RWCU flow monitoring loops, resulting in large differential flow indications. The exact same incident occurred for Unit 2 on September 7, 1984, and is discussed in LER 374/84-064.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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| LaSalle County Station Unit 2 | 05000374          | 85             | 009               | 00              | 03       | OF | 04 |

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

III. PROBABLE CONSEQUENCES OF THE OCCURRENCE

The isolation occurred in accordance with system design. With the Reactor Water Cleanup system isolated, plant operations may continue (in either the Run, Startup/ Hot Standby or Hot Shutdown Modes) as long as chemistry specifications are not exceeded.

Since 25 minutes after the isolation the system was restarted and 26 minutes after the isolation the unit went into Cold Shutdown, safe and satisfactory plant conditions were maintained at all times. Prior to resetting the isolations and restarting a pump, the RWCU system was checked for external leakage, with none being found.

IV. CORRECTIVE ACTIONS

1. An investigation of the RWCU areas revealed no actual (external) leaks were present.
2. The system was promptly restarted with no difficulties.
3. General Electric, the system vendor, and one of the RWCU cognizant CECO Engineers are presently investigating the design basis for the isolation setpoint, and the accuracy of the flow loops. Refer to AIR 01-84-67137.
4. AIR 01-84-67106 is currently outstanding to review the present calibrations associated with the flow instrumentation. Modification Numbers M-1-1-85-025 and M-1-2-85-032 along with Work Requests L46614 and L46615 have been generated to resolve.
5. In order to allow non-leakage RWCU perturbations to settle out without creating a system isolation, AIR 01-85-67029 has been generated to determine if an increase in the pre-trip differential flow timer length is acceptable.

V. PREVIOUS OCCURRENCES

Previous non-leakage RWCU differential flow isolations have occurred on Unit 1 and Unit 2 as described in the following LER's:

|            |             |            |
|------------|-------------|------------|
| 373/84-030 | 374/84-029  | 374/84-079 |
| 373/84-033 | 374/84-041  | 374/84-089 |
| 373/84-040 | 374/84-044  | 374/84-093 |
| 373/84-055 | 374/84-054  |            |
| 373/84-082 | 374/84-057  |            |
| 373/85-003 | *374/84-064 |            |
| 373/85-012 | 374/84-073  |            |

\* See discussion of Section II, CAUSE.

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

## VI. NAME AND TELEPHONE NUMBER OF PREPARER

John B. Reis, 815/357-6761, extension 463.



**Commonwealth Edison**  
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March 8, 1985

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

Dear Sir:

Reportable Occurrence Report #85-009-00, Docket #050-374 is being submitted to your office in accordance with 10CFR 50.73.

*R. D. Bishop*  
for G. J. Diederich  
Superintendent  
LaSalle County Station

GJD/MLD/kg

Enclosure

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

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