

LICENSEE EVENT REPORT (LER)

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

TITLE (4):

RHR S/D Cooling High Suction Flow Isolation Switch Inoperable

EVENT DATE (5): MONTH 0 DAY 6 YEAR 2 8 5
LER NUMBER (6): SEQUENTIAL NUMBER 0 3 1 REVISION NUMBER 0 0
REPORT DATE (7): MONTH 0 DAY 7 YEAR 1 7 8 5
OTHER FACILITIES INVOLVED (8): FACILITY NAMES DOCKET NUMBERS
0 5 0 0 0 0 0 0OPERATING MODE (9): 4
POWER LEVEL (10): 0
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 6 (Check one or more of the following) (11):
20.402(a) 20.408(a) 20.73(a)(2)(iv) 73.71(b)
20.73(a)(2)(v) 73.71(a)
20.73(a)(2)(vi) 73.71(a)
20.73(a)(2)(vii)(A) 73.71(a)
20.73(a)(2)(vii)(B) 73.71(a)
20.73(a)(2)(viii) 73.71(a)LICENSEE CONTACT FOR THIS LER (12): NAME Mark Vilchuck x447
TELEPHONE NUMBER AREA CODE 8 1 5 3 5 7 - 6 7 6 1COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13):
CAUSE SYSTEM COMPONENT MANUFACTURER REPORTABLE TO NRC
B J M Z Z Z Z Z Z Z Z NSUPPLEMENTAL REPORT EXPECTED (14): YES (If you complete EXPECTED SUBMISSION DATE) X NO
EXPECTED SUBMISSION DATE (15): MONTH DAY YEAR

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

On June 22, 1985 @ 1435 hours with Unit 2 in Condition 4, dP switches 2E31-N012AA & AB were found piped opposite to system design. Problem was originally noticed on 6/18/85 during testing on the EFCV & wiring was assumed to be the problem. Subsequent walkdowns on these lines, sensing lines 2RH09 AB, AC, AD, BB, BC, BD, in response to previous piping errors did not identify this problem. Walkdown on 6/22/85 by I.M. foreman correctly identified error in routing. A work request was initiated to correct problem. Unit 2 was in Cold S/D at this time and RHR suction high flow isolation was not required operable. Also, the other division high flow switch was available for operation if required. Investigation into the cause revealed the design drawings issued to the field were correct but when these were incorporated into production drawings the tubing from the valve manifold to the instrument was drawn incorrectly. Testing per the modification was not sufficient to catch this error and walkdowns on these lines failed to do the same due to confusion in tracing the lines through penetrations and misleading rack tag information.

Available flow switches will be functionally tested for correct installation. Additional walkdown will be performed in which valve tag information will be marked up on the applicable P&ID. Additional long term actions such as modification and Q.C. procedural controls will also be implemented. Also, a modification acceptance testing checklist will be used by the SNED Engineer during the modification approval process.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
LaSalle County Station Unit 2	05000374	85	031	00	02	OF	04

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

I. DESCRIPTION OF EVENT

On June 22, 1985, at 1435 hours, with Unit 2 in Condition 4, Cold Shutdown, differential pressure switches 2E31-N012AA and 2E31-N012AB (JM) were found to be piped opposite to system design. These RHR suction (BO) high flow isolation switches share the same high and low instrument lines. The "A" switch provides the isolation signal while the "B" switch provides an alarm signal to the digital computer.

The problem was originally noticed on 6/18/85 during testing of the Excess Flow Check Valves (EFCV) on instrument lines for instruments 2E31-N012AA/AB per procedure LIS-NB-215. During performance of this test it was noted that indication for the wrong EFCV came up while pressing up these lines. It was believed that wiring was the problem and work request L49648 was written to correct the position indication on these EFCV's. On June 20, 1985, in response to the Confirmatory Action Letter for the piping reversal on instruments 2B21-N037AA and AB, these lines were walked down by Technical Staff and no discrepancies identified. On June 22, 1985, an Instrument Maintenance Foreman correctly identified the piping error by walking the instrument back to the root valve. It was found that instrument sensing lines 2RH09AC, AD, and BC, BD were reversed. This was later confirmed by performing a functional check by locally mounting a differential pressure gauge across the instrument taps and running the system, thereby verifying high and low instrument lines. Work Request L49768 was initiated to correct the piping from the instrument to the 5-valve manifold. NRC notification was made on June 22, 1985, at 1655 hours for an event found while the reactor is shutdown in accordance with 10CFR50.72.

II. PROBABLE CONSEQUENCES OF THE OCCURRENCE

Unit 2 was in cold shutdown at the time of this occurrence, and per technical specification 3.3.2, RHR Suction High Flow Isolation was not required operable. Had it been required, the system would have isolated on High Suction Flow since the other division High Flow Switch was operable at this time. Also, as it was installed in the field, the 2E31-N012AB switch would have provided indication of a high flow condition and a manual isolation could have been performed. The safety impact of this occurrence was minimal.

III. CAUSE

The subsequent investigation into the cause of the piping reversal revealed that the design drawings issued to the field in modification 1-2-84-136 were correct. However, when the two sets of contractor production drawings, 2828RH034 and RH037, were drawn up, one was shown incorrectly routed from the 5-valve manifold to the instrument. Post modification testing required by the modification required calibration of the newly installed instruments which was not sufficient to verify correct instrument line routing.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO 3150-0104

EXPIRES 8/31/85

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

III. CAUSE (Continued)

The inability to identify this piping error in the walkdowns was due to confusion in tracing these lines through penetrations and the mislabeling at the instrument stop valve tags where the instrument lines branched from the top of the panel to the local stands.

IV. CORRECTIVE ACTION

Work Request L49768 was initiated to correct the piping from the 5-valve manifolds to these instruments. No immediate action was necessary on these switches since they are not required operable in plant Condition 4.

Additionally, prior to startup, flow switch instrument lines will be functionally tested on Unit 2 per LST 85-89 on those instruments where flow can be sensed. This will also be performed on Unit 1 under LST 85-88 during the next shutdown of sufficient length. A supplemental walkdown has been performed on those instruments initially walked down using the applicable piping and instrument drawings to place the "As Built" information on them. This information consists of: 1) Root Valve EPN and Tag Information. 2) Instrument High and Low Side. 3) Rack instrument stop valve tag information. 4) Approximate wall and floor penetration locations. A similar walkdown will be completed on Unit 1.

In addition, the following long term actions are being taken:

Station procedure LTP 800-15, "Guidelines for Quality Control Hold Points", has been revised to require verification by field inspection that safety related modifications are installed in accordance with approved drawings and specifications.

Contractor Quality Control Programs are being reviewed to assure that adequate controls exist in the areas of updating field drawings, QC coverage during installation and conduct of adequate construction tests (AIR 374-121-85-00008).

Additional controls are being placed on changes to modification packages involving contractor drawings. The controls will require cognizant personnel to list all contractor and production drawings in addition to Architect Engineer Drawings (AIR 374-200-85-0088,89). Station procedure LAP 1300-2, "Plant Modifications", is being revised to clarify when walkdowns of modifications should be performed prior to declaring the modification operable, (AIR 374-200-85-0091). Methods of assigning post maintenance/modification test requirements are being reviewed and revised as necessary, (AIR 373-123-85-0002,3). Additionally, a modification acceptance testing checklist has been incorporated into SNED procedure Q.6 to document review of the modification with respect to acceptance testing during the modification approval process.

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APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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		85	031	00	04	OF	04

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

V. PREVIOUS OCCURRENCES

LER 85-029-00 piping reversal on reactor vessel low level initiation differential pressure switches 2B21-N037AA & AB. LER 85-037-00 reversed wiring of Unit 1, Division II ECCS differential pressure switches.

VI. NAME AND TELEPHONE OF PREPARER

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July 17, 1985

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

Dear Sir:

Reportable Occurrence Report #85-031-00, Docket #050-374 is being submitted to your office in accordance with 10CFR 50.73.

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

GJD/DRR/sga

Enclosure

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

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