LICENSEE EVENT REPORT (LER)

Facility Name (1)	Docket Number (2)	Page (3)
LaSalle County Station Unit 1	0 5 0 0 0 3 7 3	1 of 0 5

Title (4) Reactor Core Isolation Cooling Isolation Due to Inadvertent Draining of Instrument Line

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 0 0 0
0 4	0 1	8 7	8 7	0 1 6	0 0	0 5	0 1	8 7		0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)			
1		20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	0 5 6	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)
		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
David M. Lyon, Technical Staff Engineer, extension 245	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
A	B N			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)

At 0015 hours on April 1, 1987, a Division I Reactor Core Isolation Cooling (RCIC) High Steam Flow Isolation Signal was received. This event occurred after the Instrument Maintenance Department had performed the Unit 1 RCIC Steam Line High Flow Isolation Response Time Test. At the time of the event the RCIC system was inoperable, because of a water leg pump failure and Unit 1 was operating at 56% power.

The cause of this event was an inadvertent partial draining of a high flow differential pressure switch instrument line by an Instrument Maintenance technician, coupled with a packing leak on a vent valve for the instrument.

The instrument line was backfilled with clean condensate and the instrument was returned to service by 1445 hours on April 1, 1987.

This event is reportable pursuant to 10CFR50.73(a)(2)(iv) due to the actuation of an Engineered Safety Feature system.

IE22
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TEXT

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

A. CONDITION PRIOR TO EVENT

Unit(s): 1 Event Date: April 1, 1987 Event Time: 0015 hours

Reactor Mode(s): 1 Mode(s) Name: Run Power Level(s): 56%

B. DESCRIPTION OF EVENT

AT 1600 hours on March 30, 1987, LaSalle Instrument Surveillance LIS-RI-110, Unit 1 Reactor Core Isolatin Cooling (RCIC, RI) [BN] Steam Line High Flow Isolation Response Time Test, was started on differential pressure switches (PDS) 1E31-N013AA and 1E31-N013AB. These switches initiate the following in the event of an RCIC steam line or instrument line break outside of the containment:

- auto closure of the RCIC Steam Line Outboard Isolation Valve (1E51-F008),
- Control Room alarms "RCIC Channel A Steam Line Differential Pressure High" and "RCIC Division 1 Isolating Signal," and
- a RCIC turbine trip.

LIS-RI-110 was in progress periodically between 1600 hours on March 30, and 2225 hours on March 31. During this time period, the RCIC system was out of service due to an inoperable water leg pump.

Between the hours of 1545 and 2225 on March 31, while testing PDS 1E31-N013AB, the Instrument Maintenance (IM) technician inadvertently partially drained the high side instrument line of the switch, which is also the low side instrument line of PDS 1E31-N013AA. (Note: The high side of 1E31-N013AA is piped to the low side of 1E31-N013AB. See Figure 1.) The amount of water drained from the instrument line was insufficient to cause PDS 1E31-N013AA or PDS 1E31-N013AB to trip on high differential pressure (166.4 inches water column increasing). The surveillance (LIS-RI-110) was completed at 2225 hours, and the IM technician notified Operating (shift) personnel and IM supervision of this fact. However, the IM technician failed to notify anyone that water had been drained from the instrument line. The IM technician thought the line would refill via the condensing chamber.

TEXT

B. DESCRIPTION OF EVENT (Continued)

Due to a packing leak on the low side vent valve for PDS 1E31-N013AA, the instrument line drained further after the surveillance was completed. At 0015 hours on April 1, PDS 1E31-N013AA tripped on high differential pressure causing an RCIC Division 1 isolation signal. No movement of the RCIC Steam Line Outboard Isolation Valve (1E51-F008) occurred because the valve was already in the isolated position (closed). At the time of this event, Unit 1 was in Operational Condition 1 (Run) at 56% power.

At 0205 hours on April 1, an IM technician began performing LIS-RI-101, Unit 1 RCIC Steam Line High Flow Isolation Calibration, to investigate the isolation and verify the calibration of PDS 1E31-N013AA. During this calibration, it was discovered that the low side instrument line of PDS 1E31-N013AA was not sufficiently backfilled. At this time, an attempt was made to backfill the instrument line with a deadweight test pump and fix the packing leak. At 0845 hours, LIS-RI-101 was completed and it was thought that the low side instrument line of PDS 1E31-N013AA was sufficiently filled and the packing leak was fixed. The IM Department notified the Operating Department that the isolation may reoccur and that the low side instrument line of PDS 1E31-N013AA would be checked later in the day.

At 1135 hours on April 1, PDS 1E31-N013AA tripped on high differential pressure causing another RCIC Division I isolation signal. Upon investigation, it was discovered that the previous filling of the instrument line using the deadweight test pump was insufficient and that the packing leak on the low side vent valve for PDS 1E31-N013AA still existed. At 1400 hours, LIS-RI-101 was performed to backfill the low instrument leg of PDS 1E31-N013AA using a Clean Condensate (MC) [KC] drop. By 1445 hours (April 1), filling of the instrument line was completed and the packing leak on the low side vent valve of PDS 1E31-N013AA was successfully repaired. No further problems have been experienced since this time.

C. APPARENT CAUSE OF EVENT

The apparent cause of this event was twofold; inattention to detail on the part of the IM technician coupled with the packing leak on the low side vent valve for PDS 1E31-N013AA.

The technician inadvertently partially drained the low side instrument line of PDS 1E31-N013AA and failed to realize the significance of the event. The technician also failed to communicate the draining of the instrument line with supervision. After discussions with the technician, the details of the valve lineup prior to draining the instrument line are still unknown. Since this event, the technician has resigned (April 10).

The packing leak results from no generic problem, but rather from just normal usage of the valve.

TEXT

D. SAFETY ANALYSIS OF EVENT

The safety consequences of this event were minimal since the RCIC system was inoperable (since 2028 hours on March 28, 1987) due to the failure of the RCIC Water Leg Pump. The High Pressure Core Spray (HP) [BG] system was operable in compliance with Action Statement "b" of Technical Specification 3/4.7.3. In addition, the automatic Depressurization System (AD) [SB] was operable during the course of this event.

Also, during this event the RCIC Outboard Isolation Valve (1E51-F008) was already closed, as part of the prerequisites for surveillance procedure LIS-RI-110. With the low side instrument line of PDS 1E31-N013AA insufficiently filled, the instrument is closer to its trip setpoint. In addition, with PDS 1E31-N013AA in the tripped condition, the isolation signal would have prevented the opening of valve 1E51-F008, had an attempt been made.

E. CORRECTIVE ACTIONS

The following corrective actions were taken.

1. The instrument line was backfilled and the packing leak was fixed.

2. The IM Department investigated the circumstances surrounding this event with the technician involved.

3. The IM Department will train on this event, with emphasis placed on:

   a) the consequences of instrument line draining and the effect on switch operation,

   b) the use of appropriate backfilling methods to ensure proper backfill of instrument lines, and

   c) the importance of communicating with supervisory personnel when instrument line draining is suspected.

This training will be tracked by Action Item Record 373-200-87-03200.

F. PREVIOUS EVENTS

None.

G. COMPONENT FAILURE DATA

None.

TEXT

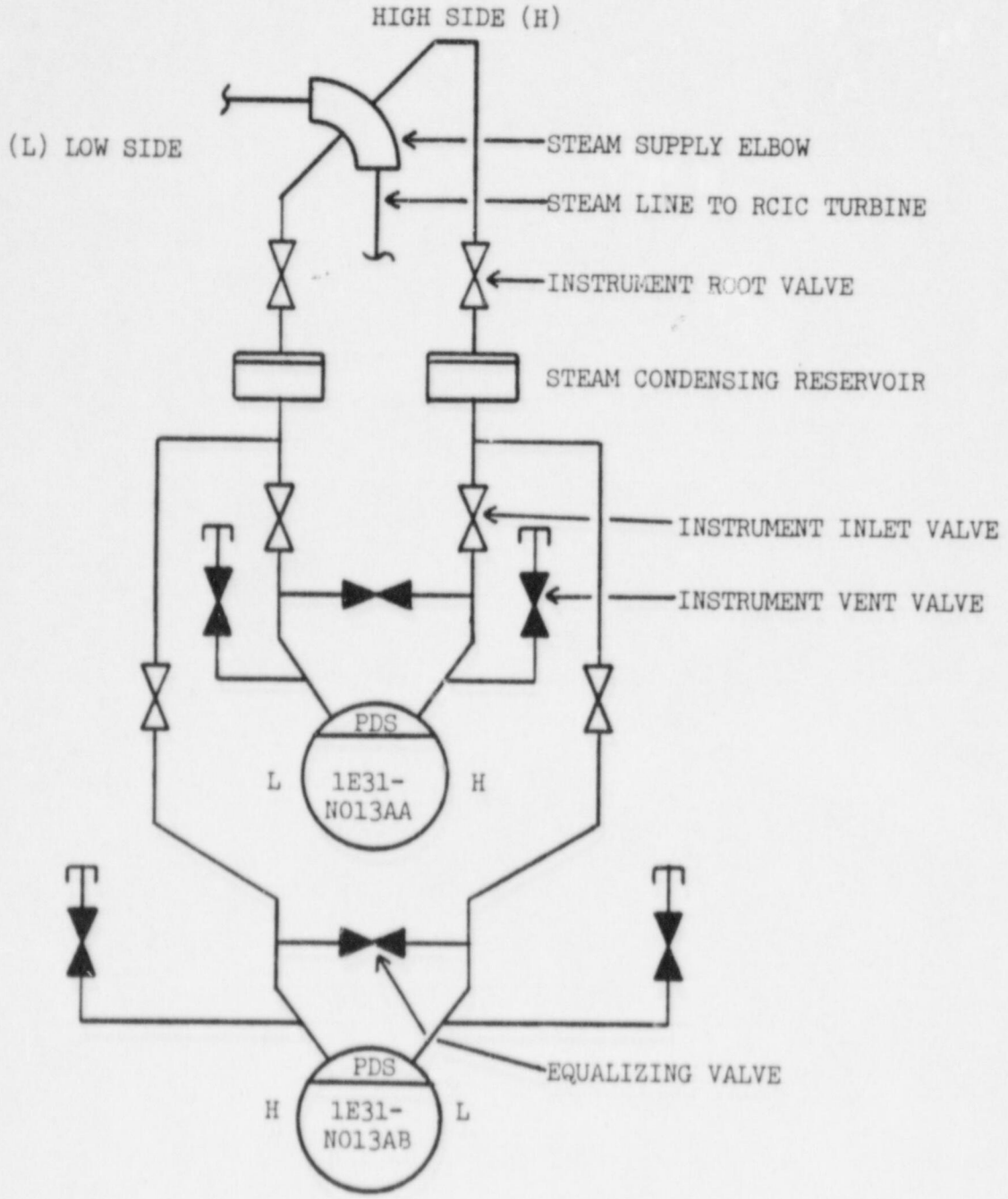

FIGURE 1

RCIC STEAM HI-FLOW DIVISION I ISOLATION

INSTRUMENT LINEUP

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

May 1, 1987

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

Dear Sir:

Licensee Event Report #87-016-00, Docket #050-373 is being submitted to your office in accordance with 10CFR50.73(a)(2)(iv).

G. J. Diederich
Station Manager
LaSalle County Station

GJD/DML/kg

Enclosure

xc: Nuclear Licensing Administrator
NRC Resident Inspector
NRC Region III Administrator
INPO - Records Center

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