

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) LaSalle County Station Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 7 4	PAGE(S) 1 OF 3
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TITLE (4) Unit 2 Delta Temperature Leak Detection for Division 1 and 2 of Residual Heat Removal Design Error

EVENT DATE (5)			LER NUMBER (8)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
07	01	85	85	03	2	01	02	86			0 5 0 0 0
											0 5 0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)

OPERATING MODE (9) 4	20.402(b)	20.408(e)	90.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 0.00	20.408(a)(1)(ii)	90.30(a)(1)	90.73(a)(2)(v)	73.71(a)
	20.408(a)(1)(iii)	90.30(a)(2)	90.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)
	20.408(a)(1)(iii) <input checked="" type="checkbox"/>	90.73(a)(2)(iii)	90.73(a)(2)(vii)(A)	
	20.408(a)(1)(iv)	90.73(a)(2)(iv)	90.73(a)(2)(vii)(B)	
	20.408(a)(1)(v)	90.73(a)(2)(iii)	90.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Kermit C. Wittenburg, Technical Staff Engineer, ext. 772	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 NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS
B	I	J	T	E					
			P 4	2 7					
				N					

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On May 24, 1985, a potential problem was identified during the performance of LST-85-52, a functional test for proper indication from various Leak Detection temperature sensors. It was observed that the sensors designated as monitoring the cool air entering the Unit 2 Residual Heat Removal rooms were located on the wall beside the duct, rather than in the duct as per the Unit 1 design. The design was investigated and on July 1, 1985, at 1530 hours with Unit 2 in Cold Shutdown, it was determined that the sensors as installed were not capable of sensing a differential temperature across the RHR rooms thus rendering the Unit 2 Division I and II LD Isolation system for differential temperature inoperable.

The affected sensors have been relocated to their proper position per Modification M-1-2-85-53.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) LaSalle County Station Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 7 4	LER NUMBER (5)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 5	0 3 2	0 1	0 2	OF	0 3

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

I. EVENT DESCRIPTION

On May 24, 1985, a potential problem was identified during the performance of LST-85-52, a functional test for proper indication from various Leak Detection (LD, IJ) temperature sensors. It was observed that the sensors designated as monitoring the cool air entering the Unit 2 Residual Heat Removal (RHR, BO) rooms from the Core Standby Cooling System Equipment Cooling Air System (VY, VF), were located on the wall beside the duct rather than in the duct as per the Unit 1 design.

This design was investigated for operability and on July 1, 1985, at 1530 hours with Unit 2 in Cold Shutdown, it was determined that the sensors, as installed, were not capable of sensing a differential temperature across the RHR rooms, thus rendering the Division I and II LD Isolation System (JM) for differential temperature inoperable.

II. CAUSE

The Unit 2 sensors are built in accordance with the Unit 2 design drawings.

Mechanical Engineering Change Notice, M-586LS, dated October 5, 1981, was issued to relocate the temperature sensors on both Unit 1 and Unit 2. The actual work involved is entirely electrical in nature. The electrical construction group has no record of receiving the mechanical ECN. The only record for the change to the Unit 1 system location is documented in Field Change Requests 8735 and 8736, dated in 1981. No Field Change Request was made for the Unit 2 sensors.

The root cause of the error was the failure of the original engineering organization to ensure that the Unit 1 changes were reflected in the Unit 2 design.

III. PROBABLE CONSEQUENCES OF THE OCCURRENCE

The consequences of the Division I and II RHR differential temperature logic being inoperable was minimal since the failure of both Division differential temperature sensors to function per operational design did not affect the operability of the Division I and II ambient temperature sensors or any of the other numerous leak detection isolation signals which would act to protect the equipment if a leak were to occur.

IV. CORRECTIVE ACTIONS

The affected sensors have been relocated to a proper position per Modification M-1-2-85-53, Work Request L50001.

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FACILITY NAME (1) LaSalle County Station Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 7 4	LER NUMBER (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (if more space is required, use additional NRC Form 365A's) (17)

IV. CORRECTIVE ACTIONS (Continued)

The Station Nuclear Engineering Department (SNED) was requested to review the as-built locations of the sensors for the Leak Detection Reactor Water Cleanup (CE) Heat Exchanger areas for Unit 2. The SNED review concluded that the sensor locations are proper and satisfactory.

SNED was also requested to analyze the RHR system operation with the "as found" location to determine the actual operational response of the differential temperature LD system. It has been determined that the differential temperature loops would have provided a zero or negative delta temperature (which reads out as zero) under all leak conditions.

V. PREVIOUS OCCURRENCES

The only similar event of this nature is documented in DVR 1-2-85-51 where the cable labels were swapped between an inlet differential temperature sensor and an ambient temperature sensor during initial construction for the Unit 2 RCIC equipment area LD system.

As a result of this event, LST-85-52 was performed, which tested LD temperature sensors by applying hot/cold sources to the thermocouples. The test results were satisfactory.

VI. NAME AND TELEPHONE NUMBER OF PREPARER

Kermit C. Wittenburg, Tech Staff Engineer, 815/357-6761, extension 772.



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February 10, 1986

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

Dear Sir:

Reportable Occurrence Report #85-032-01, Docket #050-374 is being submitted to your office in accordance with 10CFR 50.73. This supplement provides details of planned corrective actions.

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

GJD/DRR/kg

Enclosure

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

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