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)
Limerick Generating Station - Unit 1	0 5 0 0 0 3 5 2	1 OF 0 3

TITLE (4)
Drywell Radiation Monitoring System Isolation Valve Failure To Close

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)
12	31	84	84	- 042	- 00	01	30	85		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
2	001	20.402(b)	20.405(c)	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)	X 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
John C. Nagle, Engineer - Special Projects	AREA CODE 215 841-5184

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

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)

Abstract: 84-042

On December 31, 1984, at 7:00 a.m., with Unit No. 1 in the startup condition and at less than one percent power level, the Drywell Radiation Monitoring System Supply and Return Isolation Valves, SV-026-190A and SV-026-190C, failed to close automatically from a manually initiated isolation signal. During surveillance testing, the "C" Refuel Floor Ventilation Exhaust Duct Radiation Monitor exhibited erratic indication, was declared inoperable and placed in the trip condition. During the verification of the isolation, it was found that the supply and return isolation valves failed to close automatically. The valves were then closed and secured in their isolated position by the control room operator. Investigation revealed incorrect wiring in the control logic for the valves. The control logic was correctly rewired and the operability of the control logic and the isolation valves was verified. The isolation valves were returned to service by 6:59 p.m.

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

Description of the Event:

On December 31, 1984, during surveillance testing of the Drywell Radiation Monitoring System, the "C" Refuel Floor Ventilation Exhaust Duct Radiation Monitor, RISH-026-1K610C, exhibited erratic indication and was declared inoperable. At 7:00 a.m., the monitor was placed in the "trip" condition in accordance with Technical Specification 3.3.2.b. During verification of the isolation, the Drywell Radiation Monitoring System supply and return isolation valves, SV-026-190A and SV-026-190C, were discovered open. These valves were manually closed by the control room operator. The two valves and their affected system were declared inoperable.

Consequences of the Event:

Unit No. 1 was in the startup condition at less than one percent power level. The two isolation valves were secured in their isolated position per Technical Specifications 3.6.3.a.2 while the valve isolation failure was investigated and corrected. Investigation showed that the two valves would close on all of their isolation signals (drywell pressure, reactor enclosure radiation, and reactor water level) except refuel floor high radiation. Consequences were minimal since there were currently no significant core fission product inventory and the refueling floor is not part of the secondary containment with the plant in the operating mode.

Cause of the Event:

Investigation revealed that the two isolation valves failed to close upon initiation of the isolation signal due to incorrect wiring within the control logic. The valves were wired to an isolation relay which was not affected by the trip of the "C" Refuel Floor Ventilation Exhaust Duct Radiation Monitor.

Further investigation revealed that the wiring within the control logic for these valves had been changed during a modification.

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

Prior to the closure of the modification and revision of the drawings, a field engineer checked out the control logic wiring. During the verification, a discrepancy was identified between the wiring and the print. The field engineer changed the wiring in accordance with the reference print. Since the engineer did not perform the proper level of research to determine the status of any outstanding items on the reference print, a wiring error resulted.

Corrective Actions:

The logic was rewired to correct the discrepancy and operability of the control logic was verified by performing a partial surveillance test with an approved temporary procedure change to isolate the two valves on a simulated isolation signal from the "C" Refuel Floor Ventilation Exhaust Duct Radiation Monitor. Both valves and their associated system were returned to service and declared operable at 6:59 p.m. on December 31, 1984. Additionally, all rework packages (field engineer documentation of wiring changes) are being reviewed to ensure that a similar error has not been made in another system and past testing (preoperational and surveillance) was reviewed to verify that similar wiring errors do not exist.

Also, all primary containment isolation valves which are required to isolate on a signal generated by high radiation in the refueling floor exhaust duct were verified to actuate properly by performance of a partial surveillance test that same evening.

A review of completed preoperational surveillance tests was performed on all primary containment isolation valves which receive an automatic isolation signal per Technical Specification 3.6.3-1 to ensure that the valves close on the associated isolation signal.

Previous Similar Occurrence:

None.

PHILADELPHIA ELECTRIC COMPANY

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PHILADELPHIA, PA. 19101

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January 30, 1985

Docket No. 50-352

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

SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 1

This LER concerns the failure of two Drywell Radiation Monitoring System isolation valves to close from an isolation signal.

Reference:	Docket No. 50-352
Report Number:	84-042
Revision Number:	00
Event Date:	December 31, 1984
Report Date:	January 30, 1985
Facility:	Limerick Generating Station P.O. Box A, Sanatoga, PA 19464

This LER is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(i).

Very truly yours,

W. T. Ullrich
Superintendent
Nuclear Generation Division

cc: Dr. Thomas E. Murley, Administrator, Region I, USNRC
J. T. Wiggins, Senior Site Inspector
See Service List

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1/16/85