

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3180-0104  
EXPIRES: 8/31/95

FACILITY NAME (1): Limerick Generating Station - Unit 1

DOCKET NUMBER (2): 050003521 OF 033

TITLE (4): Reactor Enclosure HVAC Isolation

EVENT DATE (8)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (9)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
1	2	3	0	8	4	8	4	0	0	0
				0	4	5	0	0	0	0
						0	1	2	9	8
										0
										5
										2
										1
										OF
										0
										3

OPERATING MODE (9): 2

POWER LEVEL (10): 0.00

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

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(e)	<input checked="" type="checkbox"/> 80.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 80.38(a)(1)	<input type="checkbox"/> 80.73(a)(2)(v)	<input type="checkbox"/> 73.71(a)
<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 80.38(a)(2)	<input type="checkbox"/> 80.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 80.73(a)(2)(i)	<input type="checkbox"/> 80.73(a)(2)(vii)(A)	
<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 80.73(a)(2)(ii)	<input type="checkbox"/> 80.73(a)(2)(vii)(B)	
<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 80.73(a)(2)(iii)	<input type="checkbox"/> 80.73(a)(2)(ix)	
<input type="checkbox"/> 20.406(a)(1)(vi)	<input type="checkbox"/> 80.73(a)(2)(iv)		

LICENSEE CONTACT FOR THIS LER (12):

NAME: John C. Nagle, Engineer/Special Projects

TELEPHONE NUMBER: 215 841-5184

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

SUPPLEMENTAL REPORT EXPECTED (14):

YES (if you complete EXPECTED SUBMISSION DATE):

NO:

EXPECTED SUBMISSION DATE (15):

MONTH	DAY	YEAR

ABSTRACT (Limit to 1600 spaces, i.e., approximately fifteen single space typewritten lines) (16)

Abstract: 84-045

With the unit starting-up the Reactor Enclosure HVAC isolated as a result of low differential pressure (dp). This isolation is one feature of the Reactor Enclosure Isolation System which is an Engineered Safety Feature designed to respond to various parameters such as High Radiation, Drywell High Pressure or Low Reactor Level. In conjunction with the isolation the standby Gas Treatment System and the Reactor Enclosure Recirculation System correctly responded. The isolation was promptly reset and the ventilation returned to normal.

As all inputs into the isolation logic were normal with the exception of differential pressure (dp) an investigation into the low dp was undertaken. Causes such as open Reactor Enclosure airlocks were eliminated and the investigation led to the conclusion that high winds which were present at the time of the event appear to be giving a false input to the outside sensing leg of the dp instrumentation. This conclusion has been confirmed by observations of the two independent control room dp indicators which show consistently different readings during periods of weather with significant wind velocities. Several modifications to the system are being contemplated for a long

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		84	01415	010	012	OF	013

TEXT (if more space is required, use additional NRC Form 366A (1))

term solution. As an interim measure the system is being operated, administratively, with the channel showing lower indicated differential pressure in the control mode. Because the system controls will act to maintain the reactor building dp at the system setpoint (which is higher than the low dp isolation trip point) any difference in dp between the two channels will be in a direction away from the isolation trip setpoint.

Description of the Event:

On December 30, 1984, an isolation of the Reactor Enclosure HVAC occurred with low dp annunciation, Standby Gas Treatment System and Reactor Enclosure Recirculation System initiation and appropriate valve and damper operations. A similar occurrence was reported on LER 84-041 for Limerick.

Consequences of the Event:

This event occurred with the unit in start-up and all systems performed as designed, therefore, the consequences of this event are minimal.

Cause of the Event:

The investigation into this event revealed that all other inputs into this portion of NSSSS system with the exception of low differential pressure were normal. Apparently, as evidenced by direct observations of the two independent dp indicators in the Control Room, high winds can cause a false input in the differential pressure sensors, such that the channels show significantly differing dp indications dependent on wind direction. If the channel showing the higher relative dp is in the control mode the lower channel (which is still actively monitoring dp) can cause isolations.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
			045	-00	03	OF	03

TEXT (if more space is required, use additional NRC Form 366A (1))

Corrective Actions:

The isolation was promptly reset and the HVAC system was restarted and returned to normal operation. As an interim measure the operators have been advised to place the channel demonstrating lower dp in the controlling mode, which will maintain the enclosure dp at the proper level, while assuring that any difference in indicated dp between the two channels will result in the non-controlling channel at a higher relative indicated dp such that a low dp isolation will only result from a valid condition. A request has been forwarded to Engineering Department to eliminate these difficulties. Some of the alternatives being investigated are: common outside sensing lead; relocating outside sensing lead; improved sensing elements; and a change in system trip time delay.

PHILADELPHIA ELECTRIC COMPANY

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PHILADELPHIA, PA. 19101

(215) 841-4000 January 29, 1985

Docket No. 50-352

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Washington, DC 20555

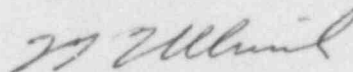
SUBJECT: Licensee Event Report  
Limerick Generating Station - Unit 1

This LER deals with the automatic isolation of the Reactor Enclosure Heating Ventilation and Air Conditioning System due to low differential pressure.

Reference:	Docket No. 50-352
Report Number:	34-045
Revision Number:	00
Event Date:	December 30, 1984
Report Date:	January 29, 1985
Facility:	Limerick Generating Station P.O. Box A, Sanatoga, PA 19461

This LER is submitted pursuant to the requirements of 10CFR50.73 (a) (2) (iv).

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

LE22  
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cc: Judge Helen F. Hoyt  
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January 16, 1985