

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Limerick Generating Station Unit 1 DOCKET NUMBER (2) 0 5 0 0 0 3 5 2 1 OF 04

TITLE (4) Initiation of an Engineered Safety Feature due to a Reactor Enclosure Isolation Caused by a Personnel Error

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)
03	26	88	88	010	00	04	25	88			050000
											050000

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

OPERATING MODE (9) <u>1</u>	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(a)	<input checked="" type="checkbox"/> 90.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
POWER LEVEL (10) <u>01915</u>	<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 90.36(a)(1)	<input type="checkbox"/> 90.73(a)(2)(v)	<input type="checkbox"/> 73.71(e)
	<input type="checkbox"/> 20.405(a)(1)(B)	<input type="checkbox"/> 90.36(a)(2)	<input type="checkbox"/> 90.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 306A)
	<input type="checkbox"/> 20.408(a)(1)(iii)	<input type="checkbox"/> 90.73(a)(2)(ii)	<input type="checkbox"/> 90.73(a)(2)(viii)(A)	
	<input type="checkbox"/> 20.408(a)(1)(iv)	<input type="checkbox"/> 90.73(a)(2)(k)	<input type="checkbox"/> 90.73(a)(2)(viii)(B)	
	<input type="checkbox"/> 20.408(a)(1)(v)	<input type="checkbox"/> 90.73(a)(2)(iii)	<input type="checkbox"/> 90.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Charles A. Mengers, Senior Engineer, Licensing Section TELEPHONE NUMBER 215 841-5184

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS

SUPPLEMENTAL REPORT EXPECTED (14) YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15) MONTH DAY YEAR

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

Abstract:

On March 26, 1988 at 0241 hours a reactor enclosure isolation occurred on low differential pressure between the reactor enclosure and outside air. The isolation caused Reactor Enclosure Recirculation System and Standby Gas Treatment System, Engineered Safety Features, to initiate as designed. A valving error during return to service of the instrument air system caused system pressure to drop, ultimately resulting in the isolation. After being alerted by air header low pressure alarms, a back-up air supply was valved in. At 0247 hours, six minutes after the isolation occurred, the isolation was reset and reactor enclosure ventilation returned to service. The cause of the valving error was a personnel error by a utility employed non-licensed operator to properly follow an implementing procedure. The operator involved was counseled regarding the care and diligence required in following procedures. In addition, this event and the procedures associated with it will be reviewed in training for non-licensed personnel by June, 1988. There were no adverse consequences and no release of radiation occurred as a result of this event.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Limerick Generating Station Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 5 2	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 8	- 0 1 0	- 0 0	0 2	OF	0 4

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

Plant Conditions Prior to the Event:

Operating Mode 1, reactor power 95%

Description of the Event:

On March 26, 1988 at 0241 hours a reactor enclosure isolation occurred on low differential pressure. The isolation caused two Engineered Safety Features (ESF) to initiate as designed: Reactor Enclosure Recirculation System (RERS) and Standby Gas Treatment System (SGTS).

On March 26, 1988 at approximately 0210 hours a non-licensed utility employed operator restored the 'A' instrument air system to service after maintenance on the air dryer. At 0235 hours the main control room (MCR) received a "Low Scram Air Header Pressure" alarm followed by the "B Instrument Air Header Low Pressure" alarm. A floor supervisor was dispatched immediately to the instrument air compressors. Subsequently, the floor supervisor opened the 15-1009B valve, the service air tie to the 'B' instrument air header. The air headers quickly returned to normal pressure of approximately 73 psig and 105 psig respectively. However, the isolation logic circuitry of the Reactor Enclosure Ventilation System had initiated an isolation on low differential pressure (reactor enclosure to outside air). The system isolates when the differential pressure is less than or equal to 0.1 inches water column, after a 100 second time delay. At 0241 hours the reactor enclosure isolated and RERS and SGTS initiated as designed. The isolation was reset and reactor enclosure ventilation returned to service at 0247 hours, 6 minutes after the isolation occurred.

Consequences of the Event:

Normal Reactor Enclosure Ventilation tripped and the Reactor Enclosure Ventilation valves isolated as a result of the event. Standby Gas Treatment System (SGTS) and Reactor Enclosure Recirculation System (RERS) operated as designed. There was no release of radioactive material as a result of this event. If the primary RERS or SGTS train had failed to initiate, the redundant loops of both systems are designed to automatically initiate after a time delay.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Limerick Generating Station Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 5 2 8 8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 8	- 0 1 0	- 0 0	0 3	OF 0 4

TEXT (if more space is required, use additional NRC Form 3654's) (17)

Cause of the Event:

The cause of the event was the utility employed non-licensed operator failed to properly follow procedures. When completing the procedure to restore the 'A' instrument air system to service, the operator missed a step in the procedure. This step was to open the inlet and outlet valves of the 'A' air dryer afterfilter. With these valves closed the 'A' instrument air compressor was isolated and unable to supply air to the header. This left only the 'B' instrument air compressor in service to the instrument air headers. The combination of system leakage and only one compressor operating caused the header air pressure to drop. When the header pressure dropped the outlet dampers on the reactor enclosure exhaust fans drifted closed causing the reactor enclosure differential pressure to reach the 0.1 inch water column setpoint and the system isolated after a 100 second time delay. Header air pressure was restored by opening the tie valve, 15-1009B, which is normally closed, to the service air system. This system is a backup to the instrument air supply system.

Corrective Actions:

At approximately 0241 hours valve 15-1009B was opened supplying service air to the 'B' instrument air header. The reactor enclosure isolation was reset and normal ventilation was put in service at 0247 hours. The inlet and outlet of the A instrument air dryer package were subsequently opened and the A Instrument Air compressor was placed in service.

Actions Taken to Prevent Recurrence:

The operator involved was counseled regarding the care and diligence required when restoring a blocking permit and placing a system in service. Training will be given to non-licensed personnel as described below:

1. A review of the LER and the event
2. A review of the system procedures for the compressed air systems

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FACILITY NAME (1) Limerick Generating Station Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 5 2 8 8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8	0 1 0	0 0	0 4	OF 0 4

TEXT (if more space is required, use additional NRC Form 366A (1) (17))

3. A review of the proper method of applying and clearing a block when the block requires using a system procedure in conjunction with a blocking sequence.

This training will be incorporated into the continuing training program and will be completed by June, 1988.

A request has been sent to the Plant Technical staff to evaluate the reliability of the redundant system features and the system status instrumentation of the instrument air system. This effort is intended to mitigate the consequences of a valving error on this system.

EIIS Codes:

- Reactor Enclosure Ventilation, VA
- Standby Gas Treatment System, BH
- Instrument Air Supply, LD
- Service Air System, LF
- Reactor Enclosure Recirculation System, BH

Previous Similar Occurrences:

A number of LERs involve isolation of the Reactor Enclosure Ventilation, however, none have a similar cause.

Tracking Codes: A2 Failure to properly follow implementing procedures.

PHILADELPHIA ELECTRIC COMPANY

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PHILADELPHIA, PA. 19101

(215) 841-4000

April 25, 1988

Docket No. 50-352

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Washington, DC 20555

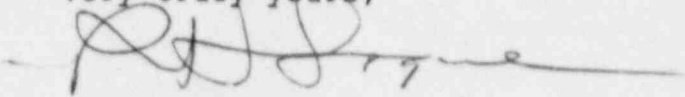
SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 1

This LER concerns an unplanned isolation of the Reactor Enclosure along with the actuation of the Standby Gas Treatment System and Reactor Enclosure Recirculation System due to a personnel error.

Reference: Docket No. 50-352
Report Number: 88-010
Revision Number: 00
Event Date: March 26, 1988
Report Date: April 25, 1988
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)(iv).

Very truly yours,


R. H. Logue
Assistant to the Manager
Nuclear Support Division

cc: W. T. Russell, Administrator, Region I, USNRC
T. P. Johnson, USNRC Senior Resident Inspector

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