

LICENSEE EVENT REPORT (LER)

APPROVED OMS NO. 3180-0104 EXPIRES - 8/31/85

FACILITY NAME (1) Limerick Generating Station - Unit 1 DOCKET NUMBER (2) 05000352 PAGE (3) 1 OF 04

TITLE (4) Unplanned Isolation of the Reactor Enclosure HVAC Due to a Break in Equipment Access Airlock

Table with columns: EVENT DATE (8), LER NUMBER (6), REPORT DATE (7), OTHER FACILITIES INVOLVED (8). Includes sub-columns for MONTH, DAY, YEAR and FACILITY NAME, DOCKET NUMBER.

Table for regulatory requirements: OPERATING MODE (1), POWER LEVEL (18), and various 20.402(a) and 20.406(a) categories with checkboxes.

LICENSEE CONTACT FOR THIS LER (12) NAME: John C. Nagle, Senior Engineer, Licensing Section. TELEPHONE NUMBER: 215 841-5184.

Table for component failure analysis with columns: CAUSE, SYSTEM, COMPONENT, MANUFACTURER, REPORTABLE TO NRC.

SUPPLEMENTAL REPORT EXPECTED (14) YES (if you complete EXPECTED SUBMISSION DATE) [X] NO. EXPECTED SUBMISSION DATE (15) MONTH, DAY, YEAR.

ABSTRACT (Limit to 1000 spaces, i.e., approximately fifteen single-spaced typewritten lines) (16)

Abstract: 86-014

At approximately 0822 on February 27, 1986 while in Operational Mode 1 at 100 percent power, a reactor enclosure isolation occurred, along with actuation of the Reactor Enclosure Recirculation System (RERS) and the Standby Gas Treatment System (SGTS). A breach in the elevation 217 reactor equipment access airlock occurred while moving construction equipment through the airlock outer door. The outer door had been opened to allow movement of large construction equipment into the airlock and while it was open, the inner door was opened, creating a low differential pressure condition. The low differential pressure condition, after a 100 second designed time delay, actuated the isolation of the Reactor enclosure HVAC. The isolation was confirmed, the system reset, and the HVAC system returned to normal.

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FACILITY NAME (1) Limerick Generating Station Unit 1	DOCKET NUMBER (2) 0500035286	LER NUMBER (3)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	VERSION NUMBER		
		86	14	00	02	OF 04

TEXT (If more space is required, use additional NRC Form 766A) (17)

Unit Conditions Prior to the Event:

Operational Mode 1 (Power)
Reactor Power 100%

Description of the Event:

An unplanned actuation of the Reactor Enclosure Recirculation System (RERS) and the Standby Gas Treatment System (SGTS) occurred while construction forces were moving large equipment through the reactor enclosure equipment access airlock. While moving the equipment into the airlock in preparation for a plant modification, the inner door was inadvertently opened. A low differential pressure condition was sustained for greater than the system designed 100 second time delay, causing a reactor enclosure isolation.

During the event of February 27, 1986, two Security Officers were assigned to the airlock to supervise the movement of construction personnel and equipment through the outer airlock door, which is alarmed to the security system. One officer stood watch outside near the door, while the second officer logged in the construction personnel just inside the airlock near the outer door. Although the inner door, by written instructions to the Security Officer was to remain closed, the door was opened and was not noticed by the Security Officers who were preoccupied near the outer door. Because of the infrequent use of the reactor enclosure equipment access, warning lights and horns were never installed for the airlock. Lights and horns are installed however on other non-equipment (personnel) airlocks in order to alert personnel when doors are open. Consequently, the Security Officers were not alerted to the fact that the inner door was opened. Following the isolation, the inner door was re-closed, and the differential pressure returned to normal. The operator confirmed the isolation and then reset the system and secured the RERS and SGTS.

The EIIS code for this system is VA.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		-0	14	-0	0	03 OF 04

TEXT (If more space is required, use additional NRC Form 365a) (17)

Consequences of the Event:

Both the SGTS and RERS functioned as designed; therefore, there were no adverse consequences as a result of this event.

Cause of the Event:

The isolation was caused by a breach in the reactor enclosure equipment access airlock while construction personnel were moving equipment through the airlock outer door. The cause of the breach (open inner door) was not discovered until after investigation and after a planned repeat of the event was performed. Both the inner and outer doors being open at the same time caused the differential pressure between the reactor enclosure and the outside to decrease below the normal -0.25 inches of water, which after the designed 100-second time delay, actuated the reactor enclosure isolation.

Corrective Actions:

The isolation was reset in accordance with operating procedure GP-8, the SGTS and RERS were secured, and the HVAC system restored to normal.

Actions Taken to Prevent Recurrence:

The Engineering and Research Department has been requested to investigate the design and installation of a local warning light and horn and a remote annunciator in the main control room to alert personnel that the doors of the reactor enclosure equipment access airlock are open. Also, future "security assistance" requests for the reactor enclosure equipment airlock doors will delineate security posting requirements which will include posting the watch in such a manner that both sides of the inner

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		0 1 4	0 0 1 4	0 0 1 4	0 4	0 4

TEXT (11 more spaces if required, use additional NRC Form 366A) (17)

door are under constant surveillance whenever the outer door of the airlock is open. Written instructions have been posted to the security forces which emphasize the importance of continued vigilance while assisting in the movement of construction personnel through the equipment access, to avoid having both doors open simultaneously.

Previous Similar Occurrences:

Reactor enclosure ventilation isolations were reported in the following LERs: 84-014, 84-029, 84-041, 84-045, 85-005, 85-012, 85-018, 85-020, 85-023, 85-041, 85-067, 85-089, and 86-002. However, none of the previous events were from the same cause.

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March 27, 1986

Docket No. 50-352

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Washington, DC 20555

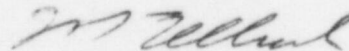
SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 1

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 breach in the equipment access airlock.

Reference: Docket No. 50-352
Report Number: 86-014
Revision Number: 00
Event Date: February 27, 1986
Report Date: March 27, 1986
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,



W. T. Ullrich
Superintendent
Nuclear Generation Division

cc: Dr. Thomas E. Murley, Administrator, Region I, USNRC
E. M. Kelly, Senior Resident Site Inspector
See Service List

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