

## LICENSEE EVENT REPORT (LER)

APPROVED ONE NO. 3140-0104  
EXPIRES - 6/31/93

FACILITY NAME (1)

Limerick Generating Station - Unit 1

DOCKET NUMBER (2)

05000352

PAGE (3)

1 OF 03

TITLE (4)

Reactor Water Cleanup System Isolation on High Differential Flow

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 NAME	DOCKET NUMBER (9)	
09	07	85	85	072	01	12	28	85		05000352	
OPERATING MODE (10)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)								
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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

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

FACILITY NAME (1)  Limerick Generating Station Unit 1	DOCKET NUMBER (2)  0 5 0 0 0 3 5 2 8 5	LER NUMBER (8)			PAGE (3)		
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TEXT (If more space is required, use additional NRC Form 364a (17))

Description of the Event:

On September 7, 1985 at 1039 with Unit 1 at 22.4 percent power, an isolation of the Reactor Water Cleanup (RWCU) system occurred. The isolation resulted from high differential flow between the inlet and outlet of the RWCU system while placing the "A" RWCU filter/demineralizer in service following regeneration. The high differential flow developed when outlet vent valve HV-45-1-07A (Zomax Tufline) did not fully close. Seals on two flow glasses in the backwash piping ruptured and the reactor coolant water/resin mixture was released to the RWCU area on elevation 313 of the Reactor Enclosure. The increased backwash line pressure caused the pressure relief valve PSV-45-1-67 to open and discharge resin in the "A" hold pump room.

The EIIS code for the affected system is CE and the code for the failed component is VTV.

Consequences of the Event:

The RWCU system was in service before the isolation occurred. The reactor water chemistry remained stable during the event. The liquid release to the affected areas is estimated to be 5.06 millicuries. The release was terminated by the RWCU system isolation which occurred 45 seconds after the high differential flow signal was generated. No personnel received any excessive exposure as a result of this event. No airborne radioactivity was detected and no radioactive material escaped beyond the boundaries of the Reactor Enclosure. The affected areas have been decontaminated. The adverse consequences, as a result of the RWCU system isolation, were minimal.

Cause of the Event:

The RWCU system isolated as a result of high differential flow between the system's inlet and outlet. The high differential flow developed when outlet vent valve HV-45-1-07A did not fully close. The limit switch incorrectly indicated the valve was closed. The valve was examined and found to bind during closure. The vent line pressure increased and ruptured the

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES 8-31-85

FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

Limerick Generating Station  
Unit 1YEAR SEQUENTIAL REVISION  
NUMBER NUMBER NUMBER

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

seals on two flow glasses allowing the release of the reactor coolant/resin mixture to the area. The increased line pressure also caused PSV-45-1-67 to open and discharge resin into the "A" hold pump room.

Corrective Actions:

The remotely operated manual isolation valve upstream of the air-operated vent valve was closed and the isolation signal reset. Decontamination was started and the RWCU system was returned to service by 1710. The outlet vent valve and limit switch were examined and equipment trouble tags were assigned to have them repaired. The major walkway and other floor areas were cleaned to allow unrestricted access by September 10, 1985. The "A" hold pump room is still under Radiation Work Permit restrictions as it was before the event occurred.

Action to Prevent Recurrence:

The RWCU filter/demineralizer startup procedure S45.8.A was revised to include the closing of isolation valves (1-39A(B) and 1-29A(B)) upstream from each vent valve prior to pressurizing the regenerated RWCU filter/demineralizer. This revision will prevent damage which could result from another automatic vent valve failure. Engineering is investigating the implementation of additional modifications.

Previous Similar Occurrences:

LER 85-002 reported a RWCU system isolation which resulted from high differential flow caused by the presence of air in the system's piping while placing the "B" RWCU filter/demineralizer into service.



PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

(215) 841-4000

November 22, 1985

Docket No. 50-352

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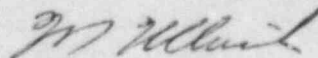
SUBJECT: Licensee Event Report  
Limerick Generating Station - Unit 1

This revised LER concerns the isolation of the Reactor Water Cleanup system on high differential flow. The revisions are indicated by vertical bars in the margin. Revision of this LER was necessitated by the discovery of an error in the estimated amount of radioactivity released to the area as reported in the original LER. In addition, the Consequences of the Event and Cause of the Event sections have been revised for clarity.

Reference:	Docket No. 50-352
Report Number:	85-072
Revision Number:	01
Event Date:	September 7, 1985
Report Date:	November 22, 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)(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

*IE22*  
*11*

cc: Troy B. Conner, Jr., Esq.  
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September, 1985

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