



# PECO NUCLEAR

A Unit of PECO Energy

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10CFR 50.73

April 8, 1997

Docket No. 50-352  
License No. NPF-39

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

SUBJECT: Licensee Event Report  
Limerick Generating Station - Unit 1

This LER reports two separate Unit 1 Primary Containment and Reactor Vessel Isolation Control System actuations, Engineered Safety Features, resulting in Reactor Water Clean-up (RWCU) system isolations. The RWCU system isolations were caused by lifting of the 'B' RWCU filter demineralizer influent pressure relief valve.

Reference:	Docket No. 50-352
Report Number:	1-97-005
Revision Number:	00
Event Date:	March 11, 1997
Report Date:	April 8, 1997
Facility:	Limerick Generating Station P.O. Box 2300, Sanatoga, PA 19464-2300

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

Very truly yours,

DMS:cah

cc: H. J. Miller, Administrator Region I, USNRC  
N. S. Perry, USNRC Senior Resident Inspector, LGS

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## LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH  
THIS INFORMATION COLLECTION REQUEST: 50.0 HRS.  
FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO  
THE INFORMATION AND RECORDS MANAGEMENT BRANCH  
(MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION,  
WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK  
REDUCTION PROJECT (3150-0104), OFFICE OF  
MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.FACILITY NAME (1)  
Limerick Generating Station, Unit 1DOCKET NUMBER (2)  
05000 352PAGE (3)  
1 OF 3TITLE (4) Two Separate Reactor Water Clean-up (RWCU) Isolations, Engineered Safety Features,  
Caused by Lifting of a Filter Demineralizer Pressure Safety Valve.

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
03	11	97	97	-- 005 --	0	04	08	97	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
POWER LEVEL (10)	100	20.402(b)	20.405(c)	X	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)(vi)	OTHER					
		20.405(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)					
		20.405(a)(1)(iv)	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: J. L. Kantner - Manager, Experience Assessment, LGS  
TELEPHONE NUMBER (Include Area Code): (610) 718-3400

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)				EXPECTED SUBMISSION DATE (15)			
YES (If vas. complete EXPECTED SUBMISSION DATE)		X	NO		MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On 03/11/97, at 2209 hours and 2310 hours, 2 separate Primary Containment and Reactor Vessel Isolation Control System (PCRIVICS) actuations initiated, Engineered Safety Features, causing Reactor Water Cleanup (RWCU) system isolations. The 2 PCRIVICS actuations were initiated by high differential flow conditions. An investigation revealed the high differential flow occurred when the pressure safety valve, -045-1-62B, for 'B' RWCU filter demineralizer lifted. On 03/13/97, the PSV was replaced and the RWCU system was restored. There were no adverse consequences and no radioactive material was released to the environment as a result of this event. A failure analysis will be performed to determine if a component failure caused the PSV to lift. Any findings from this analysis will be addressed as necessary. In the interim, the appropriate PSVs will be monitored to determine if a generic concern exists.

**LICENSEE EVENT REPORT (LER)**  
**TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Limerick Generating Station, Unit 1	05000 352	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		97	-- 005 --	0	

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

Unit Conditions Prior to the Event:

Unit 1 was in Operational Condition 1 (Power Operation) at 100% power level. There were no structures, systems, or components out of service that contributed to this event. The 'A' and 'C' Reactor Water Cleanup (RWCU, EIIS:CE) pumps and the 'B' filter demineralizer were in service.

Description of the Event:

On March 11, 1997, at 2209 hours and 2310 hours, 2 separate Primary Containment and Reactor Vessel Isolation Control System (PCRVICES, EIIS:JM) actuations initiated, Engineered Safety Features (ESF), causing RWCU system isolations. While restoring the 'A' RWCU filter demineralizer to service following filter regeneration, an isolation of the RWCU inboard Primary Containment (PC) valve occurred from high differential flow. The system was re-aligned and a walkdown identified no abnormalities. The isolation signal was reset and the system was re-started. Following start of the 'A' RWCU pump, a high differential flow annunciator alarmed and the inboard and outboard PC valves isolated. The system was secured and an investigation revealed the pressure safety valve, PSV-045-1-62B, for the 'B' RWCU filter demineralizer had lifted. On March 11, 1997, Operations personnel reset the second PCRVICES isolation signal. The PSV was replaced and by 0318 hours on March 13, 1997, the 'A' RWCU pump and 'A' filter demineralizer were returned to service.

At 0028 hours on March 12, 1997, a 4-hour notification was made to the NRC per 10CFR50.72 (b)(2)(ii), since this event resulted in automatic ESF actuations. This report is submitted in accordance with 10CFR50.73(a)(2)(iv).

Analysis:

The consequences of this event were minimal and there was no release of radioactive material to the environment. The RWCU system isolated in response to high differential flow initiated by the lifted PSV. The reactor water purity remained within the limits specified by Technical Specifications during this event.

Cause of the Event:

The 2 RWCU system isolations were initiated by high differential flow conditions caused by lifting of the 'B' RWCU filter demineralizer influent PSV.

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Limerick Generating Station, Unit 1		05000 352	97	-- 005 --	0	3 OF 3

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

The lifted PSV had been in service since issuance of the Unit 1 facility operating license on October 26, 1984. A total of 4 of these PSVs operate at the station under this same application and condition. No previous failures of these PSVs resulting in PCRVICES actuations have occurred.

Corrective Actions:

1. By June 30, 1997, an analysis is expected to be completed to determine if a component failure caused the PSV to lift. Any findings, including the potential need to replace these PSVs on an established frequency, will be addressed as necessary.
2. The appropriate RWCU filter demineralizer PSVs will be monitored to determine if a generic concern exists. Any corrective measures will be implemented as necessary.

Previous Similar Occurrences:

None