NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

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

TITLE (4) Reactor Water Cleanup Isolation due to High Regenerative Heat Exchanger Room Temperature Caused by a Pressure Relief Valve Lifting

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)
0 3	2 4	8 8	8 8	0 0 9	0 1	0 5	1 3	8 8		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	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)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		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	TELEPHONE NUMBER
Charles A. Mengers, Senior Engineer, Licensing Section	AREA CODE 2 1 5 — 8 4 1 - 5 1 8 4

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X	C E	P C V	L 2 1 6 5	N							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X YES (If yes, complete EXPECTED SUBMISSION DATE)	NO		0 8	3 1	8 8

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

Abstract: LER 88-009 Rev. 01

On March 24, 1988, at 0448 hours, an isolation of the Reactor Water Cleanup (RWCU) system occurred. The isolation occurred when the regenerative heat exchanger room temperature sensing element sensed a temperature above its 122 degree Fahrenheit setpoint and initiated a Nuclear Steam Supply Shutoff System (NSSSS) Group III, Division I "steam leak detection high temperature" isolation. Upon receipt of the isolation signal, the inboard isolation valve (HV-044-1F001) closed and the 'A' and 'B' RWCU pumps tripped as designed. The high room temperature condition resulted when a pressure relief valve (PSV-044-108) lifted and the water from the shell side of the regenerative heat exchanger (10E207) flashed to steam. The isolation was reset at 1207 hours and RWCU was blocked to replace the leaking pressure relief valve PSV-044-108 (Lonergan Model D72G), located on the regenerative heat exchanger. There were no adverse consequences associated with this event and there was no release of radioactive material as a result of this event. Engineering has been requested to investigate and determine the failure mode of the pressure safety valves and suggest corrective actions to prevent recurrence. A supplemental report will be issued after the cause of the valve failure has been determined.

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

Unit Conditions Prior to the Event:

Operating Mode 1 (Power Operation)

Reactor Power - 100%

Description of the Event:

On March 24, 1988 at 0448 hours, an isolation of the Reactor Water Cleanup (RWCU) system occurred. The isolation occurred when the regenerative heat exchanger room temperature sensing element (TE-44-1N016A) sensed a temperature above its 122 degree Fahrenheit setpoint and initiated a Nuclear Steam Supply Shutdown System (NSSSS) Group III, Division 1 "steam leak detection high temperature" isolation. Upon receipt of the isolation signal, the inboard isolation valve (HV-044-1F001) closed and the 'A' and 'B' RWCU pump tripped, as designed, on the closure of the inboard isolation valve (HV-044-1F001). The isolation was reset at 1207 hours and the RWCU system was blocked to investigate and replace the leaking pressure relief valve PSV-044-108 (Lonergan model D72G), located on the regenerative heat exchanger (see attached sketch). The duration of the isolation signal was 7 hours and 19 minutes.

Consequences of the Event:

There were no adverse consequences associated with this event and there was no release of radioactive material as a result of this event. The RWCU system isolated as designed when the regenerative heat exchanger room temperature sensing element TE-44-1N016A initiated an NSSSS Group III Division 1 "steam leak detection high temperature" alarm. Had the inboard RWCU isolation failed to occur and steam continued to leak, the redundant channel outboard steam leak detection high temperature isolation signal would have isolated the system.

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

Cause of the Event:

The isolation occurred when the regenerative heat exchanger room temperature sensing element sensed a temperature above its 122 degree Fahrenheit setpoint. Water from the shell side of the first regenerative heat exchanger flashed to high temperature steam in the regenerative heat exchanger room when pressure relief valve PSV-044-108 (Lonergan model D72G) lifted. The cause of the valve lifting has not been determined and additional investigations are required. A supplemental report will be issued after a cause for the failure has been determined. The temperature sensing element sensed the steam temperature and initiated an NSSSS Division 1 "steam leak detection high temperature" alarm.

Corrective Actions:

Following the isolation, the RWCU system was blocked. Reactor water chemistry grab samples were taken on a periodic basis, in accordance with procedures, to ascertain reactor water purity following the isolation. Pressure relief valve PSV-044-108 was replaced on March 25, 1988.

Actions Taken to Prevent Recurrence:

Engineering has been requested to determine the failure mode of the pressure relief valve and suggest corrective actions to prevent recurrence of this event. A progress report will be issued by June 30, 1988.

EIIS Codes:

NSSSS - JM
Pressure relief valve - PCV
Reactor Water Cleanup System - CE
Temperature sensing element - TIT
Heat exchanger - HX

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

Previous Similar Occurrences:

Limerick LER 86-040 reported a RWCU isolation due to a pressure relief valve lifting below its setpoint.

Tracking codes: (B17) Component Failure

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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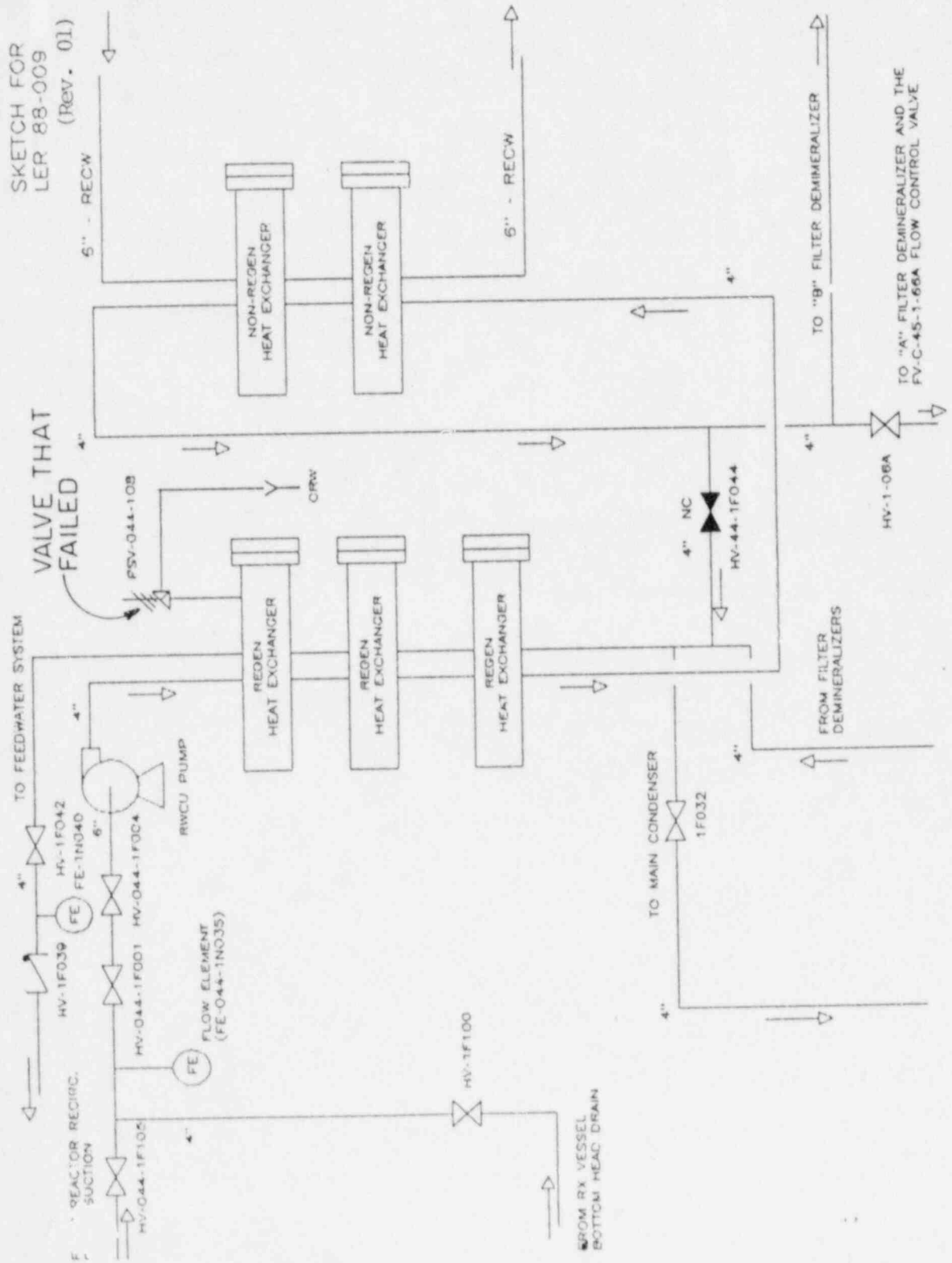
TEXT (If more space is required, use additional NRC Form 366A's) (17)



PHILADELPHIA ELECTRIC COMPANY

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May 13, 1988

Docket No. 50-352

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

SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 1

This revised LER concerns an isolation of the Reactor Water Cleanup System due to the lifting of a pressure relief valve which caused the temperature sensing element to sense a high room temperature.

Reference:	Docket No. 50-352
Report Number:	88-009
Revision Number:	01
Event Date:	March 24, 1988
Report Date:	May 13, 1988
Facility:	Limerick Generating Station P.O. Box A, Sanatoga, PA 19464

This revised LER is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(iv) to address the current status of the investigation for determining the cause of the event.

Very truly yours,

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

cc: W. T. Russell, Administrator, Region I, USNRC
T. J. Kenny, USNRC Senior Resident Inspector

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