



PECO ENERGY

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10CFR50.73

September 26, 1995

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 an Engineered Safety Feature actuation after the Reactor Core Isolation Cooling (RCIC) system isolated, due to a minor pressure fluctuation during a water flow transient in the RCIC system steam supply line, caused by a lack of procedural guidance.

Reference:	Docket No. 50-352
Report Number:	1-95-005
Revision Number:	00
Event Date:	August 27, 1995
Report Date:	September 26, 1995
Facility:	Limerick Generating Station P.O. Box 2300, Sanatoga, PA 19464-2300

This LER is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(iv).

Very truly yours,

DMS:cah

cc: T. T. Martin, Administrator Region I, USNRC
N. S. Perry, USNRC Senior Resident Inspector, LGS

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LICENSEE EVENT REPORT (LER)

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.

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

FACILITY NAME (1) Limerick Generating Station, Unit 1		DOCKET NUMBER (2) 05000 - 352	PAGE (3) 1 OF 3
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TITLE (4) Reactor Core Isolation Cooling (RCIC) System Isolation, an ESF Actuation, Due to a Water Flow Transient in the RCIC Steam Supply Line Caused by a Lack of Procedural Guidance

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
08	27	95	95	-- 005 --	0	09	26	95	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9) 2	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
POWER LEVEL (10) 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					
	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	TELEPHONE NUMBER (Include Area Code) (610) 718-3400
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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

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	NO X				

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

On 08/27/95 at 2251 hours, during performance of System procedure S49.1.B, "Recovery from RCIC Steam Line Isolation and Resultant Turbine Trip," the Reactor Core Isolation Cooling (RCIC) system warmup bypass valve HV-049-1F076 was opened and the RCIC system isolated on a low steam supply line pressure signal. This is an Engineered Safety Feature actuation. The isolation was reset at 2256 hours, and the inboard Primary Containment isolation valve HV-049-1F007 and the warmup bypass valve HV-049-1F076 were reopened. Procedure S49.1.B was then satisfactorily completed without incident. The consequences of this event were minimal in that the unit was shutdown for an 8-day maintenance outage and the RCIC system was not required for operation. The inadvertent RCIC system isolation was caused by a minor pressure fluctuation during a water flow transient in the steam supply line. The cause of the water being present in the RCIC system steam supply line was caused by a lack of procedural guidance on draining the RCIC system steam supply line when the reactor is flooded up. Appropriate System procedures will be developed for the RCIC, High Pressure Coolant Injection, and Main Steam systems. Also, General Plant procedure GP-2 will be revised to address this event.

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.

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

Unit Conditions Prior to the Event

On August 20, 1995, Unit 1 had been shutdown for a planned 8-day maintenance outage to replace a failed fuel bundle. This outage required the reactor pressure vessel (RPV, EIIS:RPV) to be flooded up to the Main Steam system lines. On August 27, 1995, Unit 1 was in Operational Condition 2 (Startup), the RPV pressure was approximately 101 psig, and Operations personnel were performing the System (S) Operating Procedure S49.1.B, "Recovery from RCIC Steam Line Isolation and Resultant Turbine Trip." Unbeknownst to Operations personnel, water remained inside the RCIC system steam supply line as a result of the RPV flood up.

Description of the Event

On August 27, 1995 at 2251 hours, during performance of procedure S49.1.B, the Reactor Core Isolation Cooling (RCIC, EIIS:BN) system warmup bypass valve HV-049-1F076 was opened and the RCIC system isolated on a low steam supply line pressure signal. This is an Engineered Safety Feature (ESF, EIIS:JC) actuation. A preliminary investigation concluded that the isolation was potentially caused by a minor pressure fluctuation during a water flow transient in the steam supply line. The isolation was reset at 2256 hours, and the inboard Primary Containment isolation valve HV-049-1F007 and the warmup bypass valve HV-049-1F076 were reopened. Procedure S49.1.B was then satisfactorily completed without incident.

A four hour notification was made to the NRC at 0148 hours on August 28, 1995, in accordance with the requirements of 10CFR50.72(b)(2)(ii) since this event resulted in an ESF actuation. This report is submitted in accordance with the requirements of 10CFR50.73(a)(2)(iv).

Analysis of the Event

The consequences of this event were minimal in that the unit was shutdown for an 8-day maintenance outage and the RCIC system was not required for operation. The RCIC system responded appropriately to the low steam supply line pressure signal and closed the associated isolation valves. Operations expeditiously reset the RCIC system isolation, thereby preventing any impact on other plant systems. Operations determined the isolation to be invalid since reactor pressure was 101 psig which is greater than the RCIC system isolation setpoint of ≤ 64.5 psig. There was no release of radioactive materials to the environment as a result of this event.

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

Cause of the Event

The inadvertent RCIC system isolation was caused by a minor pressure fluctuation during a water flow transient in the steam supply line. When the RCIC system warmup bypass valve was opened, water was sent through the steam supply line into the depressurized RCIC system steam piping. The pressure transmitters, PIS-49-1N658A, C, E, and G, which provide the isolation signal are located on the steam supply line. The water flow transient in the steam supply line was sensed by the pressure transmitters and resulted in the false low pressure signal.

The cause of the water being present in the RCIC system steam supply line was caused by a lack of procedural guidance on draining the RCIC system steam supply line following an unusual plant condition. In general, the RPV and cavity are flooded up during refueling outages when most systems, including RCIC, are also blocked out for maintenance. In bringing the plant back online following a refueling outage, systems such as RCIC are drained as part of clearance restoration instructions. During the planned 8-day maintenance outage, the RCIC system had not been blocked, and therefore, no clearance instructions existed for draining the system. As a result, the RCIC system steam supply line contained water when Operations personnel opened the warmup bypass valve.

Corrective Actions

1. An S procedure will be developed for draining the RCIC system when the RPV is flooded up and an operational hydrostatic test is not required. Additionally, appropriate S procedures will be developed for the High Pressure Coolant Injection and the Main Steam systems. These procedures are expected to be developed by November 30, 1995.
2. Procedure GP-2, "Normal Plant Startup," will be revised to include steps to verify that the RCIC, HPCI, and Main Steam system steam supply lines are drained following RPV flood up to the Main Steam system lines. This action is expected to be completed by November 15, 1995.

Previous Similar Occurrences

None