10 CFR 50.73

PHILADELPHIA ELECTRIC COMPANY

LIMERICK GENERATING STATION
P. O. BOX A
SANATOGA, PENNSYLVANIA 19464

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M. J. McCORMICK, JR., P.E.
PLANT MANAGER
LIMERICK GENERATING STATION

October 5, 1990
Docket No. 50-353
License No. NPF-85

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

SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 2

This LER reports an actuation of the Primary Containment and Reactor Vessel Isolation Control System, an Engineered Safety Feature, due to a personnel error resulting from disconnecting an incorrect wire.

Reference:	Docket No. 50-353
Report Number:	2-90-014
Revision Number:	00
Event Date:	September 6, 1990
Report Date:	October 5, 1990
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,

FOL MJM McCormick, JR.

JLP:rgs

cc: T. T. Martin, Administrator, Region I, USNRC
T. J. Kenny, USNRC Senior Resident Inspector, LGS

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

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

TITLE (4) Engineered Safety Feature actuation of the Primary Containment and Reactor Vessel Isolation Control System due to personnel error in disconnecting a wire.

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 9	0 6	9 0	9 0	- 0 1 4	- 0 0	1 0	0 5	9 0		0 5 0 0 0
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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
G. J. Madsen, Regulatory Engineer, Limerick Generating Station	AREA CODE 2 1 5 3 2 7 - 1 2 0 0

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)	X NO				

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

On September 6, 1990, at 2056 hours, a utility employed Instrumentation and Controls (I&C) technician disconnected the wrong wire while performing a surveillance test (ST) procedure. This caused an automatic actuation of the Primary Containment and Reactor Vessel Isolation Control System (PCRVICS), an Engineered Safety Feature. The PCRVICS actuation resulted in an isolation of the Reactor Water Cleanup (RWCU) system. The ST procedure being performed affected the logic of the RWCU outboard primary containment isolation valve, while the I&C technician erroneously disconnected a wire to the RWCU inboard primary containment isolation valve. The cause of this event was lack of attention to detail resulting in procedural non-compliance. Following the isolation, the I&C technician reconnected the wire. Main Control Room operators reset the isolation and restored the RWCU system to normal operation by 2106 hours. The consequences of this event were minimal. The PCRVICS isolation valve on RWCU system functioned as designed. Reactor water chemistry was not adversely affected because of the short duration of the isolation. The I&C technician performing the ST was counseled regarding proper work practices and a higher level of attention to detail.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Limerick Generating Station	0 5 0 0 0 3 5 3	9 0	— 0 1 4	— 0 0	0 2 OF 0 3

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

Unit Conditions Prior to the Event:

Unit 2 Operating Condition was 1 (Power Operation) at 100% power level. Unit 2 Surveiliance Test (ST) Procedure ST-2-044-631-2, "NSSSS - RWCU Area Differential Temperature - High," was being performed by an Instrumentation and Controls (I&C) technician per the normal monthly scheduled frequency just pripr to this event. There were no other structures, systems or components out of service or being tested which contributed to this event.

Description of the Event:

On September 6, 1990, a utility employed I&C technician was performing procedure ST-2-044-631-2, which affects the isolation logic to the primary containment outboard isolation valve on the Reactor Water Cleanup (RWCU)(EIIS:CE) System. At 2056 hours, the I&C technician disconnected a wire in the isolation logic for the RWCU system inboard primary containment isolation valve, HV-44-2F001(EIIS:ISV). Disconnecting the wire resulted in a RWCU isolation signal causing an automatic Primary Containment and Reactor Vessel Isolation Control System (PCRVICS) (EIIS:JM) actuation, an Engineered Safety Feature (ESF), which closed HV-44-2F001. Closure of HV-44-2F001 isolated the RWCU system, resulted in a trip of the operating RWCU pumps and shutdown the normally functioning RWCU system.

Main Control Room (MCR) operators observed annunciator indication in the MCR for the RWCU system isolation. Additionally, the I&C technician immediately notified the MCR operators that disconnecting the wire caused the isolation. The I&C technician reconnected the wire. MCR operators then reset the isolation using General Plant Procedure GP-8, "Primary and Secondary Containment Isolation Verification and Reset," and restored the RWCU system to normal system service in accordance with System operating procedure S44.7.A, "Reactor Water Cleanup Hot Startup," by 2106 hours on September 6, 1990.

A four (4) hour notification was made to the NRC on September 6, 1990, at 2212 hours in accordance with the requirements of 10CFR50.72(b)(2)(ii) since this event resulted in automatic actuation of an ESF. This report is being submitted in accordance with the requirements of 10CFR50.73(a)(2)(iv).

Analysis of the Event:

The consequences of this event were minimal. There was no release of radioactive material to the environment as a result of this event. The PCRVICS and the RWCU system functioned as designed in response to the isolation signal.

MCR operators reset the isolation and restored the RWCU system to its pre-transient condition in accordance with plant procedures within 10 minutes. Reactor water chemistry was not adversely affected because of the short duration of the isolation.

Immediate and follow-up actions to this type of event are provided in several MCR Annunciator Response Card (ARC) procedures and in General Plant Procedure GP-8, "Primary and Secondary Containment Isolation Verification and Reset." Licensed operators receive requalification training to review and perform operator responses to transients of this type. This training provides practice on immediate operator actions and minimizes the length of time certain systems are isolated, reducing the adverse impact on the plant. Therefore, as a result of adequate procedural guidance, training, prompt communications, and prompt operator actions, the event duration was limited and no adverse plant conditions developed.

Cause of the Event:

The cause of the event was a lack of attention to detail resulting in procedural compliance errors. The I&C technician disconnected the incorrect wire while performing procedure ST-2-044-631-2. This procedure has been successfully performed in the past on a monthly frequency. The wire is correctly labeled. The I&C technician in this event was adequately trained to perform the procedure. The investigation into this event determined no other causal factors; the I&C technician simply committed an error.

Corrective Actions:

The I&C technician performing the testing was counseled regarding proper work practices and attention to detail. This event was discussed at an I&C All Hands Meeting on September 14, 1990. This discussion included emphasis on attention to detail and procedure compliance, especially self-checking prior to taking action. In follow-up discussions held on October 3, 1990, we stressed to experienced workers the need for attention to detail and the need for self-checks. A letter has been sent to all I&C technicians informing them that actions are being developed which emphasize use of self-checking techniques. One measure that has already been accomplished is the placement of postings in the I&C shop reminding technicians to perform self-checks. We are investigating the feasibility of hardware changes to permit testing without disconnecting wires.

Previous Similar Occurrences:

LER 2-90-013 reported an isolation of the Reactor Core Isolation Cooling system due to a lack of attention to detail resulting in procedural non-compliance. Corrective actions to that event which occurred six days prior were under investigation when this event occurred; therefore, the corrective actions reported in LER 2-90-013 could not have prevented this event. LERs 1-84-031, 1-84-032, 1-85-003, 1-85-006, 1-85-011, and 1-85-051 reported isolations of the RWCU system due to personnel errors, but none were due to disconnecting the incorrect wire.

Tracking Codes: A6 - Failure to properly identify equipment
A2 - Failure to follow implementing procedures