

PHILADELPHIA ELECTRIC COMPANY

LIMERICK GENERATING STATION

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SANATOGA, PENNSYLVANIA 19464

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J. DOERING, JR.
PLANT MANAGER
LIMERICK GENERATING STATION

November 4, 1991
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 in that an incorrect trip unit was selected and tested during performance of a Surveillance Test procedure. The actuation closed the High Pressure Coolant Injection System steam supply line outboard isolation valve, an event which alone could have prevented the fulfillment of the safety function of a system.

Reference:	Docket No. 50-353
Report Number:	2-91-016
Revision Number:	00
Event Date:	October 7, 1991
Report Date:	November 4, 1991
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) and 10CFR50.73(a)(2)(v).

Very truly yours,



KOS:cah

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

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Limerick Generating Station, Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 5 3 1 OF 0 3										PAGE (3) 1 OF 0 3																													
TITLE (4) This LER reports a High Pressure Coolant Injection System Isolation caused by an I&C Technician selecting and testing the incorrect trip unit.																																																	
EVENT DATE (5) MONTH DAY YEAR 1 0 0 7 9 1 9 1										LER NUMBER (6) SEQUENTIAL NUMBER 0 1 6										REPORT DATE (7) MONTH DAY YEAR 0 0 1 1 0 4 9 1										OTHER FACILITIES INVOLVED (8) FACILITY NAMES DOCKET NUMBER(S) 0 5 0 0 0 0																			
OPERATING MODE (9) 1										THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5 (Check one or more of the following) (11)																																							
POWER LEVEL (10) 1 0 0										20.402(b)										20.405(a)										X 50.73(a)(2)(iv)										73.71(b)									
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										20.405(a)(1)(iii)										50.73(a)(2)(i)										50.73(a)(2)(vii)(A)																			
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LICENSEE CONTACT FOR THIS LER (12)																																																	
NAME G. J. Madsen, Regulatory Engineer, Limerick Generating Station															TELEPHONE NUMBER AREA CODE 2 1 1 5 3 1 2 7 1 - 1 1 2 1 0 1 0																																		
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																																	
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SUPPLEMENTAL REPORT EXPECTED (14)															EXPECTED SUBMISSION DATE (15)															MONTH DAY YEAR																			
YES (if yes) YES EXPECTED SUBMISSION DATE															X NO																																		

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

On October 7, 1991, during performance of a Surveillance Test (ST) procedure, an Instrumentation and Controls (I&C) technician was switching electronically between trip units and inadvertently placed the selector switch to the next numbered trip unit. The technician then depressed the switch to begin the functional test which resulted in a Primary Containment and Reactor Vessel Isolation Control System actuation, an Engineered Safety Feature actuation, which closed the Unit 2 High Pressure Coolant Injection (HPCI) system steam supply line outboard isolation valve. This was an event which alone could have prevented the fulfillment of the safety function of a system. The HPCI system was restored to normal system alignment within 21 minutes. The actual consequences of this event were minimal in that an accident condition did not occur while the HPCI system was isolated, and the system was not called upon to perform its intended safety function. The cause of this event was a personnel error by the I&C technician performing the ST procedure in that insufficient attention to detail was applied to the performance of the ST procedure. The technician involved was admonished by the Maintenance and I&C Superintendent for failure to apply the principles of self-check and attention to detail while performing the ST procedure. The technician presented the causal factors involved in his inattentiveness and the necessity to apply the principle of self-check at an I&C technician All-Hands Meeting.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1) Limerick Generating Station, Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 5 3 9 1	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (if more space is required, use additional NRC Form 366A's) (17)

Unit Conditions Prior to the Event:

Unit 2 was in Operational Condition 1 (Power Operation) at 100% power level. Unit 2 Surveillance Test (ST) procedure ST-2-056-606-2, "HPCI - Turbine Trip; Turbine Exhaust Pressure - High; Pump Suction Pressure - Low; (PIS-56-2N65C, PIS-56-2N656B, PIS-56-2N656F)," was being performed by an Instrumentation and Controls (I&C) technician per the normal monthly scheduled frequency just prior 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 October 7, 1991, a utility employed I&C technician was performing ST procedure ST-2-056-606-2. At 0921 hours, the I&C technician was switching electronically between trip units and inadvertently placed the selector switch to the next numbered trip unit to the trip unit specified to be tested in the ST procedure. The technician then depressed the switch to begin the functional test which resulted in a Primary Containment and Reactor Vessel Isolation Control System (PCRIVICS, EIIS:JM) actuation, an Engineered Safety Feature (ESF) actuation, which closed the Unit 2 High Pressure Coolant Injection (HPCI, EIIS:BJ) system steam supply line outboard isolation valve, HV-55-2F003.

Main Control Room (MCR) operators observed annunciator indication in the MCR for the HPCI system isolation. Additionally, the I&C technician immediately notified the MCR operators that selecting and testing the incorrect trip unit had caused the isolation. MCR operators then reset the isolation using General Plant (GP) Procedure GP-8, "Primary and Secondary Containment Isolation Verification and Reset," and restored the HPCI system to normal system alignment by 0942 hours on October 7, 1991.

A four (4) hour notification was made to the NRC on October 7, 1991, at 1307 hours in accordance with the requirements of 10CFR50.72(b)(2)(ii) and 10CFR50.72(b)(2)(iii) since this event resulted in automatic actuation of an ESF and an event which alone could have prevented the fulfillment of the safety function of a system since the HPCI system is a single train system. This report is being submitted in accordance with the requirements of 10CFR50.73(a)(2)(iv) and 10CFR50.73(a)(2)(v).

Analysis of the Event:

The actual consequences of this event were minimal in that an accident condition did not occur during the time in which the HPCI system was isolated, and therefore, the HPCI system was not called upon to perform its intended safety function. Additionally, no radioactive material was released to the environment as a result of the HPCI system being isolated. The HPCI system was isolated for 21 minutes during this event. If an accident had occurred while the HPCI system was isolated, the operators would have bypassed or reset the isolation per procedure GP-8 and opened the isolation valve. If the HPCI isolation valve

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EXPIRES 6/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)	PAGE (3)						
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

could not be opened, sufficient Emergency Core Cooling Systems were available to ensure safe shutdown of the reactor and to mitigate the consequences of an accident. Additionally, the Reactor Core Isolation Cooling (RCIC, E11S:BN) system and the Main Steam Relief Valves (MSRVs, E11S:SB) were operable and could have been utilized by the operators to assist in reactor pressure and level control.

Cause of the Event:

The cause of the event was a personnel error by the I&C technician performing the ST procedure in that insufficient attention to detail was applied to the performance of the ST procedure. The technician was electronically switching between trip units and inadvertently placed the selector switch to the next numbered trip unit which selected the HPCI Steam Line High Differential Pressure (Flow) trip unit rather than the HPCI Pump Low Suction Pressure trip unit during performance of the ST procedure. Actuation of the incorrect trip unit caused a trip of the PCR VICS logic, resulting in closure of the HPCI system steam supply line outboard isolation valve. This test has been successfully performed in the past on a monthly frequency. The trip units are 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.

Corrective Actions:

The technician involved was admonished by the Maintenance and I&C Superintendent for failure to apply the principles of self-check and attention to detail while performing the ST procedure. The technician made a presentation at an I&C Technician All Hands Meeting on October 11, 1991, which discussed the causal factors involved in his inattentiveness and the necessity to apply the principle of self-check.

Previous Similar Occurrences:

Previous LERs between 1984 and 1991 have reported ESF actuations caused by inattention to detail by I&C technicians. The corrective actions for each of these LERs have reduced the frequency of occurrence of this type of personnel error. Only two other LERs caused by I&C technician personnel error have been reported in 1991. These two events were not caused by the individual involved in the event reported in this LER. The causes of these previous LERs (1-91-005 and 1-91-020) were a failure to follow procedures and lack of attention to detail caused by a failure to perform a self-check, respectively. Plant management is continuing their efforts in making further improvements in the area of attention to detail. These types of personnel errors will be monitored and appropriate corrective actions will be taken as deemed necessary.

Tracking Codes: A6 - Failure to properly identify equipment