10 CFR 50.73

# PHILADELPHIA ELECTRIC COMPANY

LIMERICK GENERATING STATION

P. O. BOX A

SANATOGA, PENNSYLVANIA 19464

(215) 327-1200 EXT. 2000

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

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December 29, 1989 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 unplanned actuation of the Primary Containment and Reactor Vessel Isolation Control System (an Engineered Safety Feature) due to a Plant Operations procedure deficiency.

Reference:	Docket No. 50-353
Report Number:	2-89-014
Revision Number:	00
Event Date:	December 02, 1989
Report Date:	December 29, 1989
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, In Commit f

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

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#### Unit Conditions Prior to the Event:

Operating Condition: 4 (Cold Shutdown) Power Level: 0%

#### Description of the Event:

On December 2, 1989, at 1322 hours, an unexpected actuation of the Unit 2 Primary Containment and Reactor Vessel Isolation Control System (PCRVICS) (EIIS:JM), an Engineered Safety Feature (ESF), occurred. The Group IA (Main Steam Isolation Valves and Main Steam Line Drain Valves) isolation signal resulted from the 'Main Turbine Condenser Vacuum - Low' actuation logic.

The reactor was in COLD SHUTDOWN and plant operators were implementing General Plant (GP) procedure GP-3, "Normal Plant Shutdown." The annunciators (EIIS: ANN) for Group I PCRVICS alarmed in the Main Control Room (MCR) seven minutes after plant operators opened the Main Condenser Vacuum Breaker Valves. The operators immediately recognized the cause of the alarms and notified shift supervision. An operator was then sent to the Auxiliary Equipment Relay Room to place the four Condenser Low Vacuum Isolation Bypass Switches in BYPASS. The Group IA isolation signal was then reset at 1344 hours, in accordance with procedure GP-8, "Primary and Secondary Containment Isolation Verification and Reset." All Group IA valves were closed prior to the event, so no valve movement occurred as a result of this isolation signal. Total time of the isolation signal was 22 minutes.

A four (4) hour notification was made to the NRC at 1455 hours on December 2, in accordance with 10CFR 50.72 (b)(2)(ii) since the event resulted in the automatic actuation of the PCRVICS which is an ESF. Accordingly, this report is being submitted in accordance with 10CFR 50.73(a)(2)(iv).

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## Consequences of the Event:

There was no release of radioactive material to the environment or adverse consequences due to the Main Steam Line isolation signal. All affected valves were already closed, therefore no valve movement occurred. The Isolation Actuation Instrumentation responded to the reduction in Condenser Vacuum and performed as designed. In addition, with the reactor in COLD SHUTDOWN, Operability of the Main Steam Line Isolation Actuation Instrumentation is not required by Technical Specifications.

### Cause of the Event:

This event was caused by a procedure deficiency. Procedure GP-3, did not contain sufficient guidance to ensure that the 'Main Condenser Vacuum - Low' PCRVICS isolation is bypassed prior to breaking condenser vacuum. In GP-3, prior to step 3.3.27.1 (Open Main Condenser Vacuum Breakers), is step 3.3.27.g which states, "Remove the Steam Jet Air Ejectors (SJAE) from service per S07.2.A and shut down Off-Gas System." Procedure S07.2.A "Shutdown of the Steam Jet Air Ejector and Breaking Main Condenser Vacuum," does specify to place the Condenser Low Vacuum Isolation Bypass Switches in BYPASS and, under normal plant shutdown conditions, is sufficient to prevent this event. However, on this occasion, the SJAE was previously removed from service and the Main Condenser Vacuum was being maintained by use of the Mechanical Vacuum Pump from 1915 on December 1 until the event time (1322 on December 2). Step 3.3.27.g referencing procedure S07.2.A was verified as having already been performed since the SJAEs were not in service. GP-3 did not contain the additional action from procedure S07.2.A to ensure that the 'Main Condenser Vacuum - Low' actuation logic was bypassed prior to opening the Main Condenser Vacuum Breakers in step 3.3.27.1.

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## Corrective Actions:

After observing the annunciator alarms for a Group I isolation signal, shift operators responded using guidance of procedure GP-8, "Primary and Secondary Containment Isolation Verification and Reset." The initiating cause and proper isolation system response was verified. The four Condenser Low Vacuum Isolation Bypass Switches were then placed in BYPASS and the PCRVICS Group IA isolation signal was reset at 1344 on December 2, 1989.

## Actions Taken to Prevent Recurrence:

Procedure GP-3, was revised to include instructions to ensure the Condenser Low Vacuum Isolation Bypass Switches are placed in BYPASS prior to breaking condenser vacuum.

The appropriate GP procedures will be reviewed and revised as necessary by February 20, 1990, to ensure that other actions in the GP or System procedure are not missed or misunderstood as a result of referencing portions of System procedures.

#### Previous Similar Occurrences:

NONE

Tracking Codes: D2 - Inadequate procedure - did not cover situation