NRC Form 366 (9-83)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

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

TITLE (4)
Reactor Scram and NSSSS Isolations

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

OPERATING MODE (9)	4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)					
POWER LEVEL (10)	0 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
John C. Nagle, Engineer	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	E E	I N V T E	3 5 5	Y							

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)

Abstract: 84-039

On December 21, 1984, a temporary loss of power to an uninterruptible AC electrical panel caused the reactor water cleanup system and the reactor enclosure and refuel floor ventilation systems to isolate. The loss of power ('B' RPS logic), combined with concurrent surveillance testing on the 'A' RPS logic, also resulted in the generation of a full scram signal. The cause of the event was an overvoltage condition from the 'B' RPS static inverter. After the event, the scram signal was reset and all affected systems were returned to normal operation.

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

Description of the Event:

On December 21, 1984, at 2:52 a.m., prior to initial criticality, a full scram signal was generated. The reactor water cleanup system isolated, the reactor enclosure and refuel floor ventilation systems isolated, and both reactor recirculation pumps tripped. The event occurred as a result of a temporary loss of power to an uninterruptible AC electrical panel. After the event, the scram signal was reset and all affected systems were returned to normal operation.

Consequences of the Event:

At the time of the event, all control rods were fully inserted in the reactor. The Reactor Protection System (RPS) and the Nuclear Steam Supply Shutoff System (NSSSS) operated properly during the loss of power transient. Reactor coolant recirculation was terminated due to reactor recirculation pump end-of-cycle trip. The reactor water cleanup system was restored in less than one hour and the control rod drive cooling system was in service during this time to maintain compliance with Technical Specification 3.4.9.2. There were no adverse consequences.

Cause of the Event:

At the time of the event, a surveillance test was being performed on the 'A' Average Power Range Monitor (APRM). As expected, this produced a Channel 'A' half-scram.

The 1B RPS static inverter feeds electrical panel 1BY160. Panel 1BY160 feeds the 'B' RPS trip system and various NSSSS isolation relays. As a result of an overvoltage condition from the 1B static inverter, a feeder breaker to panel 1BY160 tripped open on overvoltage. Loss of power to 1BY160 caused the 'B' Channel of the RPS to actuate and initiate the full scram. Additionally, the NSSSS relays energized from 1BY160 de-energized, thereby isolating the reactor water cleanup system and the reactor enclosure and refuel floor ventilation systems.

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

Corrective Actions:

A recorder was connected to the output of the 1B RPS static inverter to monitor output voltage. Substantial voltage fluctuations were observed. The voltage regulator board in the static inverter was replaced on January 10, 1985 to correct the problem.

Previous Similar Occurrence:

LGS LER 84-005

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

(215) 841-4000

January 21, 1985

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 LER deals with the generation of a full scram signal and automatic isolation of the reactor water cleanup system and reactor enclosure and refuel floor ventilation systems. This event occurred prior to initial criticality.

Reference:	Docket No. 50-352
Report Number:	84-039
Revision Number:	00
Event Date:	December 21, 1984
Report Date:	January 21, 1985
Facility:	Limerick Generating Station P.O. Box A, Sanatoga, PA 19464

This LER is submitted pursuant to the requirements of 10 CFR 50/73(a)(2)(iv).

Very truly yours,

W. T. Ullrich
Superintendent
Nuclear Generation Division

cc: Dr. Thomas E. Murley, Administrator, Region I, USNRC
J. T. Wiggins, Senior Site Inspector
See Service List

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cc: Judge Helen F. Hoyt
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1/16/85