

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1) **Limerick Generating Station - Unit 1** DOCKET NUMBER (2) **0501010352** PAGE (3) **1 OF 013**

TITLE (4) **Failure of 1B RPS Static Inverter**

EVENT DATE (8)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (9)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME		DOCKET NUMBER (2)
01	10	85	85	007	00	02	08	85			0501010111
											0501010111

OPERATING MODE (9) **2** THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)

POWER LEVEL (10) 003	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(-)	<input checked="" type="checkbox"/> 20.736(2)(iv)	<input type="checkbox"/> 73.716(i)
	<input type="checkbox"/> 20.406(b)(1)(ii)	<input type="checkbox"/> 20.346(i)	<input type="checkbox"/> 20.736(2)(v)	<input type="checkbox"/> 73.716(j)
	<input type="checkbox"/> 20.406(b)(1)(iii)	<input type="checkbox"/> 20.346(ii)	<input type="checkbox"/> 20.736(2)(vi)	<input type="checkbox"/> OTHER (Specify in Abstract below and in Test, NRC Form 366A)
	<input type="checkbox"/> 20.406(b)(1)(iv)	<input type="checkbox"/> 20.736(2)(iii)	<input type="checkbox"/> 20.736(2)(vii)(A)	
	<input type="checkbox"/> 20.406(b)(1)(v)	<input type="checkbox"/> 20.736(2)(iv)	<input type="checkbox"/> 20.736(2)(viii)(B)	
	<input type="checkbox"/> 20.406(b)(1)(vi)	<input type="checkbox"/> 20.736(2)(v)	<input type="checkbox"/> 20.736(2)(ix)(A)	

LICENSEE CONTACT FOR THIS LER (12)

NAME **John C. Nagle, Engineer - Special Projects** TELEPHONE NUMBER **215 841-5184**

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC
X	EI	NVT	E13615	Y					

SUPPLEMENTAL REPORT EXPECTED (14) YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15) MONTH **1** DAY **1** YEAR **1**

ABSTRACT (Limit to 1600 spaces, i.e., approximately fifteen single space typewritten lines) (16)

Abstract: 85-007

On January 10, 1985, at 8:21 a.m., with Unit 1 at less than 5 percent power, a half-scrum signal on the 'B' Reactor Protection System (RPS) channel was initiated. The Reactor Water Cleanup system, the Drywell Chilled Water system, and Refuel Floor Ventilation system isolated, and both reactor recirculation pumps tripped. At 8:58 a.m., a similar event occurred. The events occurred as a result of a temporary loss of power to the 1B RPS and Uninterruptible Power System 120 VAC Distribution Panel No. 1BY160. The RPS and NSSSS systems performed as designed during the loss of power transients. In each event, a faulty voltage regulator card in the 1B static inverter caused an overvoltage condition resulting in the trip of the electrical supply breakers to the 1BY160 panel. The half-scrum signals and NSSSS isolation signals were reset. The faulty voltage regulator card was replaced after the second half-scrum.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Limerick Generating Station Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 5 2 8 5	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		0 0 7	0 0 7	0 0 0	0 2	OF	0 3

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

Description of the Event:

On January 10, 1985, at 8:21 a.m., with Unit 1 at less than 5 percent power, a half-scrum signal on the 'B' Reactor Protection System (RPS) channel occurred. The Reactor Water Cleanup system, Drywell Chilled Water system, and Refuel Floor Ventilation system isolated, and both reactor recirculation pumps tripped. The event occurred as a result of a temporary loss of power to the 1B Reactor Protection System (RPS) and Uninterruptible Power System (UPS) 120 VAC Distribution Panel No. 1BY160. After the event, the half-scrum signal was reset and all affected systems were returned to normal operation.

On January 10, 1985, at 8:58 a.m., a second half-scrum signal occurred on the same RPS channel along with similar Nuclear Steam Supply Shutoff System (NSSS) isolations and the trip of both reactor recirculation pumps. This second event also occurred due to a loss of power to the 1BY160 panel. After the event, the 1BY160 panel was transferred to its alternate AC source, the half-scrum signal was reset and all affected systems were returned to normal operation.

Consequences of the Event:

The Reactor Protection System and Nuclear Steam Supply Shutoff System performed as designed during the loss of power transients. Reactor coolant recirculation was terminated due to the reactor recirculation pump end-of-cycle trip. The Reactor Water Cleanup system was restored in less than one hour, therefore, there were no adverse affects on reactor water chemistry. There were no adverse consequences as a result of these events.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 5	- 0 0 7	- 0 0	0 3	OF	0 3

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

Cause of the Event:

A voltage recorder in place for troubleshooting prior to the event indicated that a bad voltage regulator board was responsible for voltage fluctuations from the "B" RPS and UPS static inverter. The voltage fluctuations caused an overvoltage condition which resulted in the trip of the 1B160 panel electrical supply breakers. Loss of power to the 1B160 panel caused the "B" RPS and outboard NSSSS circuits to de-energize. On de-energization, RPS initiated a half-scrum and an end-of-cycle trip of both reactor recirculation pumps. The NSSSS de-energization isolated Reactor Water Cleanup, Drywell Chilled Water, and Refuel Floor HVAC systems. All actions subsequent to the voltage fluctuations occurred as designed.

Corrective Actions:

In each event, the half-scrum and NSSSS isolations were reset. After the second event, the 1B160 panel was transferred from the static inverter to its alternate AC source. The bad voltage regulator board in the static inverter was replaced to correct the voltage fluctuation problem, and panel 1BY160 was returned to its preferred source.

Previous Similar Occurrences:

LGS LER's 84-005, 84-039.

PHILADELPHIA ELECTRIC COMPANY

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P.O. BOX 8699

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February 8, 1985

Docket No. 50-352

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Washington, DC 20555

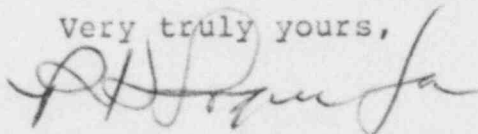
SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 1

This LER concerns the half-scrum and Nuclear Steam Supply Shutoff System isolations on Unit 1.

Reference: Docket No. 50-352
Report Number: 85-007
Revision Number: 00
Event Date: January 10, 1985
Report Date: February 8, 1985
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,



W. T. Ullrich
Superintendent
Nuclear Generation Division

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J. T. Wiggins, Senior Site Inspector
See Service List

LE22
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January 16, 1985