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LICENSEE	EVENT	REPORT	(LER)	TEXT	CONTINUATION
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U.E. NUCLEAR REGULATORY COMMISSION

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

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)	PAGE (3)			
Lime rick Generating Station		YEAR SEQUENTIAL REVISION NUMBER NUMBER				
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FRC Form 366A

Unit Conditions Prior to the Event:

Refueling Outage in Progress

Reactor Power 0%; Core Offloaded

Description of the Event:

On June 11, 1987, the 1A1D103 Battery Charger failed during the performance of maintenance work on the 1A1 125 VDC Station Battery. At the time, the battery was disconnected from the bus and the battery charger, which normally supplies power to various safety related circuits and charges the batteries, was supplying the loads. Failure of a voltage regulator/current limiter card in the battery charger circuitry caused the DC output voltage to oscillate. The 'A' DC safeguard bus loads were manually shed and the bus de-energized. The Reactor Enclosure and Refueling Floor HVAC systems isolated as a result of the de-energization of their logic circuits and the Standby Gas Treatment and Reactor Enclosure Recirculation systems initiated as designed.

A Temporary Circuit Alteration (TCA) was installed in order to provide an alternate power supply to the de-energized bus. When the bus was re-energized, the 'A' channel Reactor Protection System (RPS) series breaker tripped on a shunt trip signal from its associated relays, causing the inboard Instrument Gas valve to close (Channel 'A' battery supplies control power to the channel 'A' RPS relays).

The EIIS codes for the affected systems are ED (Low Voltage Power System) and VA (Standby Gas Treatment and Reactor Enclosure Recirculation.)

Consequences of the Event:

The consequences of this event were minimal. The required engineered safety features initiated as designed. The unit was shut down for a refueling outage with the core offloaded at the time of the event. If this event occurred during power operation, the consequences would remain minimal because the station batteries would not be disconnected for maintenance and LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

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NRC Form 366A

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TEXT (If more space is required, use additional NRC Form 386A's) (17)

would be available to power the bus loads in the event of a charger failure.

Cause of the Event:

The 1A1D103 Battery Charger failure was due to failure of an integrated circuit controller card which functions to regulate voltage, limit current, and provide controlled startup of the charger. The cause for the controller card failure is currently unknown. The card has been sent to the manufacturer, C and D Batteries, for failure analysis. The EIIS code for the controller card (Model No. MYC 1970E) is ECBD.

The cause for the breaker trip during re-energization of the safequard bus is unknown. The subsequent troubleshooting of the circuit could not determine a cause for the breaker trip.

Corrective Actions:

The NSSSS isolations were verified and reset in accordance with general procedure GP-8 within 15 minutes of the event. The Reactor Enclosure and Refueling Floor HVAC systems were restored to service by 0520 hours on June 11. The controller card was replaced and the TCA terminated on June 12, 1987.

Actions Taken to Prevent Recurrence:

The failed controller card has been sent to its manufacturer for failure analysis. The Electrical Engineering Division will be requested to evaluate the RPS breaker response to the bus reenergization and recommend any appropriate actions to prevent the recurrence of this event. A supplemental report will provide the results of both of these evaluations.

Previous Similar Occurrences:

Previous Limerick LERs have reported NSSSS isolations resulting from a loss of RPS/UPS power supply due to different causes.

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

(215) 841-4000

July 15, 1987

Docket No. 50-352

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

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SUBJECT: Licensee Event Report Limerick Generating Station - Unit 1

This LER reports actuations of Engineered Safety Features as a result of a Station Battery Charger failure.

leference:	Docket No. 50-352	
leport Number:	87-023	
Revision Number:	00	
Event Date:	June 11, 1987	
leport Date:	July 15, 1987	
acility:	Limerick Generating Station	
	P.O. Box A, Sanatoga, PA 1946	

This LER is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(iv). We regret the delayed submittal of this LER and any inconvenience the delay may have caused.

Very truly yours, R'. H. Logue

Assistant to the Manager Nuclear Support Department

cc: W. T. Russell, Administrator, Region I, USNRC E. M. Kelly, Senior Resident Site Inspector See Service List