

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMS NO. 3150-0104

EXPIRES: 8/31/86

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Limerick Generating Station Unit 1	0500035286	00	08	00	02	OF	03

TEXT (If more space is required, use additional NRC Form 366A (1))

Unit Condition Prior to the Event:

Mode 1 (Power Operation)
Reactor Power 99%
Power Ascension Testing in Progress

Description of the Event:

On January 24, 1986 at 0545 hours, the operators received an alarm, "Control Room Chlorine Isolation Initiated". The main control room ventilation system isolated and the 'A' train of the Control Room Emergency Fresh Air System, an engineered safety feature (ESF), started. The remaining three chlorine indicators, which also measure the chlorine concentration in the control room ventilation intake air, were observed to show normal levels. All automatic isolations occurred as verified by system procedure S78.0.B, "Verification of Control Room HVAC Response to a Control Room Isolation Signal".

The EIIS code for the affected system is VI and the code for the defective component is AE.

Consequences of the Event:

No adverse consequences resulted from this event because the Main Control Room Isolation system and Control Room Emergency Fresh Air system responded as designed. Continuous monitoring of the control room ventilation intake air was provided by the operable redundant 'D' chlorine analyzer.

Cause of the Event:

The control room chlorine isolation and ESF actuation resulted from a defective analyzer tape in the 'C' analyzer. The tape in the 'C' chlorine analyzer was inspected and a non-uniform discoloration was discovered in a section of the tape. The

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APPROVED OMS NO. 3190-0104

EXPIRES 8/31/86

FACILITY NAME (1) Limerick Generating Station Unit 1	DOCKET NUMBER (2) 0500035286	LER NUMBER (3)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		86	008	0003	OF	03

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

chlorine analyzer operates on light transmittance through the tape and such discoloration causes the device to indicate a false high chlorine level. The chlorine analyzer is a MDA Scientific, Inc. Model 7040 FAN.

Corrective Actions:

The analyzer tape was advanced beyond the discolored section, the isolation reset, and the main control room normal ventilation was restored by 0615 hours.

Action Taken to Prevent Recurrence:

A chlorine detection system which is expected to be more reliable has been temporarily installed and is undergoing functional testing. It is expected to replace the current system and be fully implemented by late February, 1986. The new system, which is manufactured by Anacon, uses an electrochemical reduction process rather than the present photo-optic/analyzer tape method. In addition, a modification to provide a more reliable isolation logic for the Main Control Room Ventilation system is being considered. This logic would require isolation signals from two of the four chlorine detectors to produce a system isolation as compared to the present logic which acts from a single signal.

Previous Similar Occurences

LERs 84-008, 84-010, 84-028, 84-033, 84-046, 85-029, 85-030, 85-031, 85-042, 85-050, 85-059, 85-063, 85-081, 85-085, 85-086, 85-092, 85-093, 85-097, 86-005, and 86-007 reported chlorine analyzer failures which caused the Control Room Emergency Fresh Air System to actuate.

PHILADELPHIA ELECTRIC COMPANY

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February 11, 1986

Docket No. 50-352

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U.S. Nuclear Regulatory Commission
Washington, DC 20555

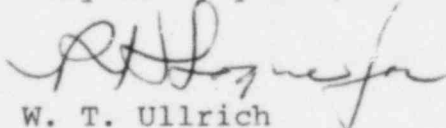
SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 1

This LER concerns the actuation of the Control Room
Emergency Fresh Air System (an Engineered Safety Feature) due to
a chlorine analyzer failure.

Reference:	Docket No. 50-352
Report Number:	86-008
Revision Number:	00
Event Date:	January 24, 1986
Report Date:	February 11, 1986
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

cc: Dr. Thomas E. Murley, Administrator, Region I, USNRC
E. M. Kelly, Senior Resident Site Inspector
See Attached Service List

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