

LICENSEE EVENT REPORT (LER)

APPROVED ONE NO. 3180-010
EXPIRES - 8/31/85

FACILITY NAME (1)
Limerick Generating Station - Unit 1

DOCKET NUMBER (2)
0 5 0 0 0 3 5 2

PAGE (3)
1 OF 0 4

TITLE (4)
Failure of RHRWS System Rad Monitor Circuitry to Meet Technical Specifications

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												
0	2	1	3	8	6	8	6	0	1	2	0	0	0	3	1	4	8	6	DOCKET NUMBER (2) 0 5 0 0 0		

OPERATING MODE (9) **1**

POWER LEVEL (10) **1 0 0**

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)

<input type="checkbox"/> 20.402 (a)	<input type="checkbox"/> 20.406 (a)	<input type="checkbox"/> 60.73 (a) (2) (i)	<input type="checkbox"/> 73.71 (a)
<input type="checkbox"/> 20.406 (a) (1) (i)	<input type="checkbox"/> 60.36 (a) (1)	<input type="checkbox"/> 60.73 (a) (2) (v)	<input type="checkbox"/> 73.71 (a)
<input type="checkbox"/> 20.406 (a) (1) (ii)	<input type="checkbox"/> 60.36 (a) (2)	<input type="checkbox"/> 60.73 (a) (2) (vi)	OTHER (Specify in Abstract below and in Part 3, NRC Form 204)
<input type="checkbox"/> 20.406 (a) (1) (iii)	<input checked="" type="checkbox"/> 60.73 (a) (2) (ii)	<input type="checkbox"/> 60.73 (a) (2) (vii) (A)	
<input type="checkbox"/> 20.406 (a) (1) (iv)	<input type="checkbox"/> 60.73 (a) (2) (iii)	<input type="checkbox"/> 60.73 (a) (2) (vii) (B)	
<input type="checkbox"/> 20.406 (a) (1) (v)	<input type="checkbox"/> 60.73 (a) (2) (iv)	<input type="checkbox"/> 60.73 (a) (2) (i)	

LICENSEE CONTACT FOR THIS LER (12)

NAME: **John C. Nagle, Senior Engineer, Licensing Section**

TELEPHONE NUMBER: **2 1 5 8 4 1 - 5 1 8 4**

AREA CODE: **2 1 5**

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

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If you complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

Abstract: 86-012

On February 13, 1986, while in Operational Mode 1 at 99.8% power, it was determined that all four radiation monitors on the Residual Heat Removal Service Water (RHRWS) system were not in compliance with the Technical Specification Table 4.3.7.11-1, Note (1). The subject radiation monitors were not capable of automatically isolating the RHRWS system in the event of a downscale failure of a monitor. This capability had not been provided in the circuitry for the radiation monitors at the time of their installation.

All four monitors were declared inoperable and the appropriate Action Statement was complied with by collecting grab samples and analyzing them for gross radioactivity every 8 hours. A modification has been completed installing the proper circuitry.

There were no adverse effects as a result of this condition.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Limerick Generating Station Unit 1	DOCKET NUMBER (2) 0500035286	LER NUMBER (5)			PAGE (3)	
		YEAR 86	SEQUENTIAL NUMBER 012	REVISION NUMBER 00	02	OF 04

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

Unit Conditions Prior to the Event:

Mode 1 (Power Operation)
Reactor Power (99.8%)

Description of the Event:

During a review of a revision to a surveillance test, it was discovered that the installed circuitry of the Residual Heat Removal Service Water (RHRSW) system effluent radiation monitors, although in compliance with the Final Safety Analysis Report (FSAR) Section 11.5, "Process and Effluent Radiological Monitoring and Sampling Systems", did not cause an automatic isolation of the RHRSW system in the event of a downscale failure of a radiation monitor as required by the Technical Specification Table 4.3.7.11-1 (Note 1) pages 3/4 3-101 and 3/4 3-102.

Although no automatic isolation occurred, the operator would have been signaled of a downscale failure via an annunciator in the main control room and a pilot light on the Logarithmic Count Rate Meter (LCRM), which is located in the Auxiliary Equipment Room.

Consequences of the Event:

There were no adverse consequences resulting from this condition.

The possible consequences of a failure to isolate the RHRSW system due to a downscale failure of the radiation monitors would have been minimal.

In the event of a downscale failure of one of the monitors, the operator would have been alerted via an annunciator in the control room. Upon receipt of this alert, the appropriate action would have been taken, which may have included a manual isolation of the system.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

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

Cause of the Event:

This isolated event was the result of an administrative oversight during the development of the surveillance test for this equipment and during the review of the Technical Specifications conducted prior to receipt of the Operating License.

Corrective Actions:

All four radiation monitors were immediately declared inoperable and the appropriate Action Statement entered; Technical Specification Table 3.3.7.11-1, page 3/4 3-100, Action 101 - "With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided that, at least once per 8 hours, grab samples are collected and analyzed for gross radioactivity (beta or gamma)"

Modification No. 704, "Revise Output Circuitry of Selected LCRM Radiation Monitors", has been implemented in order to bring the system into compliance with the Technical Specification requirements.

A review was undertaken to determine if similar problems existed in other systems. This review revealed an additional problem with the RHRSW system. The "inop circuit failure" alarm feature had not been utilized as required on the RHRSW monitors. This feature provides a control room alarm and a RHRSW system effluent pathway isolation in the event of a circuit failure resulting from a low high voltage condition of a radiation monitor. The existing circuitry did provide isolation but did not provide a control room alarm in the event of an "inop circuit failure". This could have resulted in a system isolation which would not have been recognized as being caused by these radiation monitors.

Modification #704, mentioned previously, has also resolved this circuitry problem.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

TEXT (11 more space is required, use additional NRC Form 2662) (17)

In addition, this review determined that the "circuit failure" alarm feature had not been utilized on the Service Water Effluent Line radiation monitor (RISH-10-1K605). A temporary circuit alteration has been made to make this feature functional and a permanent modification is scheduled to be implemented by April 30, 1986.

Action Taken to Prevent Recurrence:

Implementation of the modifications identified as a result of the investigation will prevent recurrence.

Previous Similar Occurrences:

None.

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March 14, 1986

Docket No. 50-352

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Washington, DC 20555

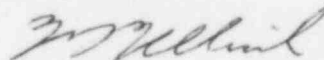
SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 1

This LER concerns a failure of the Residual Heat Removal Service Water System Effluent radiation monitors to meet a requirement of the Technical Specification.

Reference: Docket No. 50-352
Report Number: 86-012
Revision Number: 00
Event Date: February 13, 1986
Report Date: March 14, 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)(i)(B).

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 Service List

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