

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) **Limerick Generating Station Unit 1** DOCKET NUMBER (2) **0 5 0 0 0 3 5 2 1** OF **0 4** PAGE (3)

TITLE (4) **Technical Specification Violation due to Drywell Sump Flow Detection System Inoperability**

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)
0	2	1988	88	005	00	0	3	1888			0 5 0 0 0
<p>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)</p>											

OPERATING MODE (8) <b>1</b>	20.402(b)	20.406(e)	80.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) <b>0 5 0</b>	20.408(a)(1)(i)	80.36(a)(1)	80.73(a)(2)(iv)	73.71(e)
	20.408(a)(1)(ii)	80.36(a)(2)	80.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.408(a)(1)(iii)	<input checked="" type="checkbox"/> 80.73(a)(2)(i)	80.73(a)(2)(viii)(A)	
	20.408(a)(1)(iv)	80.73(a)(2)(ii)	80.73(a)(2)(viii)(B)	
	20.408(a)(1)(v)	80.73(a)(2)(iii)	80.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME **Charles A. Mengers, Senior Engineer, Licensing Section** TELEPHONE NUMBER **215 841-5184**

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

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

EXPECTED SUBMISSION DATE (15) **0 6 0 3 8 8**

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

Abstract:

On February 19, 1988 it was determined that the Unit 1 drywell sump flow leakage monitoring system, one of four reactor coolant leakage monitoring systems, was inoperable in violation of Technical Specification 3.4.3.1. A technical review of the drywell sump flow monitoring system for Unit 2 preoperational testing found that replication of a wiring change made in August 1987, as part of a Unit 1 modification, would prevent the system from providing indication of a drywell leakage rate larger than those specified in Technical Specification 3.4.3.2. The drywell sump flow leakage monitoring system was therefore declared inoperable. There were no adverse consequences as a result of this event and no release or radiation occurred as a result of this event. Unit 1 drywell leakage remained below the Technical Specification limits during the period of inoperability. Once identified, the wiring was restored to its original configuration, and at 1830 hours on February 19, the system was declared operable. An investigation to determine the root cause is underway; the results will be provided in a supplement to this LER.

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

Plant Conditions Prior to the Event:

Operating Mode: Operation Condition 1

Reactor Power: 50%

Description of the Event:

At approximately 0900 hours on February 19, 1988 the Unit 1 drywell sump flow monitoring system, consisting of floor drain and equipment drain flow monitoring, was declared inoperable. During a technical review of the system for Unit 2 preoperational testing, it was found that replication of a wiring change made as part of a Unit 1 modification completed in August 1987 rendered the Unit 1 system unable to indicate leakage rates greater than Technical Specification 3.4.3.2.

A modification was implemented during the Unit 1 first refuel outage to increase the accuracy of drywell leakage indications by changing the drywell sump level detector reference legs. During the installation of the modification a wiring change was processed to change the alarm sequence of the system. During the Unit 2 technical review it was found that high leakage rates would not be indicated properly due to the wiring change affecting the sequencing of the timers in the flow measuring cycle. The equipment drain tank flow indication could be in error at flow rates greater than the Technical Specification limit of 25 GPM (identified leakage). The floor drain sump flow monitor was found to be accurate up to 5 GPM (unidentified leakage), the Technical Specification limit, but inaccurate over approximately 10 GPM. A temporary circuit alteration (TCA) to restore the wiring to the previous configuration was approved by the Plant Operations Review Committee (PORC). TCA #1276 was applied at 1830 hours on February 19, 1988 restoring the drywell sump flow monitoring system to operable status.

Unit 1 operations from 0420 hours on August 26, 1987 to 1830 hours on February 19, 1988 did not comply with the requirements of Technical Specification 3.4.3.1, except for periods when the unit was in Cold Shutdown.

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

Consequences of the Event:

There were no adverse consequences, and no release of radiation occurred as a result of this event. The drywell sump flow monitoring system was capable of accurately displaying leak rates up to 25 GPM and 5 GPM (identified and unidentified, respectively) so that the appropriate Technical Specification Actions would have been taken had these limits been reached. Operations and conditions of Unit 1 were such that drywell equipment drain tank and floor drain sump leakage remained below the Technical Specification limits of 25 GPM and 5 GPM respectively during the period of inoperability.

In the event a high-leakage condition had occurred, one or all of the three remaining reactor coolant system leakage detection systems required by Technical Specification 3.4.3.1 would have alerted the operator to a reactor coolant leakage condition. These systems are:

1. The primary containment atmosphere gaseous radioactivity monitoring system,
2. the drywell unit coolers condensate flow rate monitoring system, and,
3. the primary containment and temperature monitoring system

In addition, a flow integration system is used to determine leakage each shift.

Cause of the Event:

The investigation to determine the root cause is continuing and a supplement to this LER will be provided by June 4, 1988.

Corrective Actions:

At 1830 hours on February 19, a TCA was installed to restore the wiring to original as-built condition and the drywell sump flow monitoring system was declared operable. A complete review of

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TEXT (If more space is required, use additional NRC Form 365A's) (17)

the system modification with the TCA installed was completed which verified the system operated as required by the design basis.

Actions Taken to Prevent Recurrence:

The root cause determination will dictate actions to prevent recurrence. These actions will be part of the supplement to this LER.

EIIS Codes:

Leak Monitoring System IJ

Previous Similar Occurrences:

None

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March 18, 1988

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 details a violation of Technical Specification 3.4.3.1 due to the drywell sump flow detection system being inoperable. The investigation of root cause is continuing and a supplement to this LER will be provided by June 4, 1988.

Reference: Docket No. 50-352  
Report Number: 88-005  
Revision Number: 00  
Event Date: February 19, 1988  
Report Date: March 18, 1988  
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,



R. E. Logue  
Assistant to the Manager  
Nuclear Support Division

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

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