

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Limerick Generating Station Unit 1	DOCKET NUMBER (2) 0500035288	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		88	013	00	02	OF 04

TEXT (if more space is required, use additional NRC Form 366A (1/17))

Unit Conditions Prior to the Event:

Operating Mode - 4 (Cold Shutdown)

Reactor Power - 0%

Description of the Event:

On April 9, 1988 at 1536 hours a full scram signal was received when an intermediate range monitor (IRM) detector failed.

While in cold shutdown with a reactor coolant temperature of 171 degrees F and a half-scram (A2 channel) manually in place in order to comply with Technical Specification 3.3.1, the 'F' IRM spiked upscale causing a 'B1' channel trip. This completed the logic for the Reactor Protection System and produced a full scram signal. All control rods were previously inserted, thus no control rod motion took place as a result of the scram signal.

Immediately following the event, operators observed the 'F' IRM to be changing its reading while all other SRM and IRM channels confirmed that there was no change in actual neutron flux. The 'F' IRM was then determined to be malfunctioning and was bypassed.

Consequences of the Event:

The scram which occurred as a result of this event did not result in control rod motion due to all rods previously being inserted.

Had the IRM detector malfunctioned during reactor startup only a half-scram signal would have resulted. Corrective actions would then have been taken to bypass the defective IRM and the half-scram signal reset.

There was no release of radioactive material to the environment as a result of this event.

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TEXT (if more space is required, use additional NRC Form 266A's) (17)

Cause of the Event:

The cause of this event was a defective IRM detector. The 'F' IRM which was observed to have an erratic output, was disconnected and electrically tested. The resulting test data confirmed that the detector was defective. This full-scrum occurred as a result of the half-scrum resulting from the 'F' detector spike coupled with a half-scrum which was manually inserted into Channel 'A2' in accordance with Technical Specification 3.3.1, Action b. This Action states, "with the number of OPERABLE channels less than required by the Minimum OPERABLE channels per Trip System requirement for both trip systems, place at least one trip system in the tripped condition within 1 hour and take the action required by Table 3.3.1-1." This action is required because the Technical Specifications require that the IRMs be tested prior to proceeding from Operating Condition 1 to 2. Following plant shutdown, a sufficient number of IRM channels had not been tested and declared operable. Therefore, a manual half scrum had been inserted in the A2 channel to comply with Technical Specification 3.3.1. The failed detector is a General Electric Part No. 112C3144G008 manufactured by Reuter Strokes.

Corrective Actions:

The 'F' IRM was bypassed when it was determined to be defective. An Instrument and Control Engineer checked the vicinity of the 'F' IRM drawer and preamp but found no work in progress which might be causing the erratic readings. The scrum was then reset in accordance with procedure. The 'F' IRM detector was replaced and the 'F' IRM channel declared operable on April 16, 1988 at 0150 hours.

Action Taken to Prevent Recurrence:

There are no specific actions to prevent recurrence for this event. The failure of an IRM detector is determined by electrical testing. The specific cause of the failure of the detector is not able to be determined due to the levels of radioactivity present at the irradiated detector. Replacement of the detector is the normal course of action for this problem.

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TEXT (if more space is required, use additional NRC Form 366A's (1))

EIIS Codes:

DET - Detector

ROD - Rod

Previous Similar Occurrences:

None

Tracking Code: B15 (Failure Due to Normal Wear)

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May 3, 1988

Docket No. 50-352

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

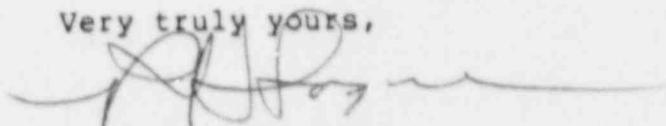
SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 1

This LER reports a reactor scram signal generated when an intermediate range monitor spiked upscale due to a defective detector.

Reference:	Docket No. 50-352
Report Number:	88-013
Revision Number:	00
Event Date:	April 9, 1988
Report Date:	May 3, 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)(iv).

Very truly yours,



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

cc: W. T. Russell, Administrator, Region I, USNRC
T. J. Kenny, USNRC Senior Resident Inspector

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