



10CFR50.73

September 17, 2012

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Limerick Generating Station, Unit 1  
Facility Operating License No. NPF-39  
NRC Docket No. 50-352

Subject: LER 2012-006-00, Valid Manual Actuation of the Reactor Protection System

This Licensee Event Report (LER) addresses a valid manual actuation of the reactor protection system during an outage with all control rods inserted. The actuation was initiated when the mode switch was placed in the "Shutdown" position when it was identified that the required nuclear instrumentation surveillance tests were not in surveillance.

This LER is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(iv)(A).

There are no commitments contained in this letter.

If you have any questions, please contact Robert B. Dickinson at (610) 718-3400.

Respectfully,

Original signed by

Thomas J. Dougherty  
Vice President – Limerick  
Exelon Generation Company, LLC

cc: Administrator Region I, USNRC  
USNRC Senior Resident Inspector, LGS

**LICENSEE EVENT REPORT (LER)**  
(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

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**4. TITLE**  
Valid Manual Actuation of the Reactor Protection System due to a Personnel Error and Surveillance Test Weakness

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
07	19	2012	2012	- 006	- 00	09	17	2012	FACILITY NAME	DOCKET NUMBER
										05000
										05000

<b>9. OPERATING MODE</b>  4	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:</b> <i>(Check all that apply)</i>							
	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
<b>10. POWER LEVEL</b>  0	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)		Specify in Abstract below or in NRC Form 366A			

**12. LICENSEE CONTACT FOR THIS LER**

NAME Robert B. Dickinson, Manager – Regulatory Assurance	TELEPHONE NUMBER <i>(Include Area Code)</i> 610-718-3400
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**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

<b>14. SUPPLEMENTAL REPORT EXPECTED</b> <input type="checkbox"/> YES <i>(If yes, complete 15. EXPECTED SUBMISSION DATE)</i> <input checked="" type="checkbox"/> NO	<b>15. EXPECTED SUBMISSION DATE</b>	MONTH	DAY	YEAR

**ABSTRACT** *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

A valid manual actuation of the reactor protection system was initiated during an outage with all control rods inserted. The reactor mode switch was repositioned from "Shutdown" to "Refuel" during preparation to perform control rod exercising. The mode switch was returned to "Shutdown" when it was identified that the required nuclear instrumentation surveillance tests were not in surveillance. The cause of the event was a personnel error caused by a test weakness. The "Pre-control Rod Withdrawal Check and CRD Exercise OPCONs 3,4 With No Core Alterations" surveillance test does not have verification steps to ensure that the Surveillance Test Coordinator (STC) input is accurate. The "Pre-control Rod Withdrawal Check and CRD Exercise OPCONs 3,4 With No Core Alterations" surveillance test Attachment 2 will be revised to add an additional Work Management signoff for a peer check of the STC input. The notes and body of Attachment 2 will be revised to improve human factoring.

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**NARRATIVE**

Unit Conditions Prior to the Event

Unit 1 was in Operational Condition (OPCON) 4 (Cold Shutdown) with reactor coolant temperature at approximately 131 degrees Fahrenheit and reactor pressure at approximately zero psig. A reactor cooldown was in progress to support an outage. The outage was caused by a failure of 124A load center transformer. There were no structures, systems or components out of service that contributed to this event.

Description of the Event

On Wednesday, July 19, 2012, Limerick Unit 1 was in an outage. The "Pre-control Rod Withdrawal Check and CRD Exercise OPCONs 3,4 With No Core Alterations" surveillance test (ST-6-047-471-1) was in progress to establish the conditions needed to support control rod exercising. Attachment 2 of the test had been completed by the Surveillance Test Coordinator (STC) to provide the surveillance test status of the source range monitor (SRM) and intermediate range monitor (IRM) nuclear instrumentation (NI) (EIIS:IG) systems. The STC made an error when completing Attachment 2 which indicated that two required surveillance tests were in surveillance when in fact they had exceeded their due date.

At 1509 hours, the mode switch (EIIS:HS) was placed in the "Refuel" position to support planned control rod exercising as directed by the test. A licensed operator then identified that the required surveillance tests had not been performed. At 1537 hours, the mode switch was returned to the "Shutdown" position which resulted in a valid manual actuation of the reactor protection system (RPS) (EIIS:JC).

An 8-hour NRC ENS notification was required by 10CFR50.72(b) (3) (iv) (A) for a valid actuation of RPS. The ENS notification (#48121) was completed on Thursday July 19, 2012, at 2156 EDT. This event involved a manual actuation of RPS. Therefore, this LER is being submitted pursuant to the requirements of 10CFR50.73(a) (2) (iv) (A).

Analysis of the Event

There was no actual safety consequence associated with this event. The potential safety consequences of this event were minimal. The reactor was in cold shutdown with all control rods inserted at the time of the event.

The STC provided an incorrect status of the NI surveillance tests needed for control rod exercising when the "Pre-control Rod Withdrawal

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Check and CRD Exercise OPCONs 3,4 With No Core Alterations" surveillance test Attachment 2 was completed. Tests that are verified to be in surveillance are to be circled in Attachment B. The error occurred when two expired tests were circled by the STC.

Cause of the Event

The cause of the event was a personnel error caused by a test weakness. The "Pre-control Rod Withdrawal Check and CRD Exercise OPCONs 3,4 With No Core Alterations" surveillance test does not have verification steps to ensure that the STC input is accurate.

Corrective Action Planned

The "Pre-control Rod Withdrawal Check and CRD Exercise OPCONs 3,4 With No Core Alterations" surveillance test Attachment 2 will be revised to add an additional Work Management signoff for a peer check of the STC input. The notes and body of Attachment 2 will be revised to improve human factoring.

Previous Similar Occurrences

There were no similar occurrences of valid manual actuation of the reactor protection system due to surveillance test status control errors in the previous three years.