

May 6, 2005

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

Limerick Generating Station, Unit 2
Facility Operating License No. NPF-85
NRC Docket No. 50-353

Subject: LER 2-05-001, Unit 2 Core Alterations With Source Range Monitors Inoperable

This Licensee Event Report (LER) addresses a Limerick Unit 2 condition prohibited by Technical Specifications in that core alterations were conducted while the Source Range Monitors (SRMs) were inoperable. The SRMs were inoperable due to a failure of the audible alarm function. SRM visual alarms, indications and rod block functions remained functional.

Report Number: 2-05-001
Revision: 00
Event Date: March 12, 2005
Discovered Date: March 12, 2005
Report Date: May 6, 2005

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

If you have any questions or require additional information, please do not hesitate to contact us.

Sincerely,

Original signed by

Ron J. DeGregorio
Vice President – Limerick
Exelon Generation Company, LLC

cc: S. J. Collins, Administrator Region I, USNRC
S. L. Hansell, USNRC Senior Resident Inspector, LGS

SUMMARY OF EXELON NUCLEAR COMMITMENTS
LS-AA-117-1003 Rev.2

The following table identifies commitments made in this document. (Any other actions discussed in the submittal represent intended or planned actions. They are described to the NRC for the NRC's information and are not regulatory commitments.)

Commitment #1

Committed date (or "outage"): 12/1/05

An evaluation of Operation's procedures will be performed to identify those affected by infrequently used refuel and outage related TS. Enhancements to the affected procedures will be implemented as required to ensure rule-based evaluations of TS impacts are performed.

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: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@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.

1. FACILITY NAME Limerick Generating Station, Unit 2	2. DOCKET NUMBER 05000353	3. PAGE 1 OF 4
--	-------------------------------------	--------------------------

4. TITLE
Core Alterations Performed With Source Range Monitor Alarm Horn Inoperable

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
03	12	2005	2005	- 001 -	0	05	6	2005		05000
										05000

9. OPERATING MODE 5	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: <i>(Check all that apply)</i>									
10. POWER LEVEL 0	<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 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)						
	<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 checked="" 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

FACILITY NAME John G. Hunter, Acting Manager – Regulatory Assurance	TELEPHONE NUMBER (Include Area Code) 610-718-3400
--	--

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
B	IB	ANN	170E	N					

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

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

Refueling operations were in progress on Unit 2 when the source range monitors (SRMs) were rendered inoperable as a result of loss of the SRM audible alarm function; SRM visual alarms remained functional. The operators failed to recognize that the Technical Specification (TS) requirement for an SRM audible alarm was not satisfied prior to granting permission to conduct core alterations, which resulted in a condition prohibited by TS. The SRM audible alarm was restored and core alterations were resumed. The procedure for loss of main control room annunciators was revised to address the TS impact of a loss of the SRM audible alarm function.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
Limerick Generating Station, Unit 2	05000353	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 4
		2005	-- 001	-- 00	

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

Unit Conditions Prior to the Event

Unit 2 was in Operational Condition (OPCON) 5 (Refueling) at 104 degrees Fahrenheit reactor coolant temperature and zero psig reactor pressure conducting refueling operations. There were no structures, systems or components out of service that contributed to this event.

Description of the Event

On Saturday March 12, 2005, at 07:43 hours, the annunciator (EIIS:ANN) horn for Unit 2 Main Control Room (MCR) was continuously sounding and could not be silenced due to an equipment failure. Fuses were removed to silence the horn. The operators entered procedure ON-122, Loss Of Main Control Room Annunciators. This equipment failure adversely affected 13 alarm panels in that the audible alarms were unavailable while the visual alarms remained functional. A dedicated individual with no concurrent duties was assigned to monitor the alarm panels and alert the duty reactor operator when any visual alarms were present.

Technical Specification (TS) 3.9.2 Refueling Operations – Instrumentation requires that at least one source range monitor (SRM) (EIIS:PI) have an audible alarm in the control room. This alarm became inoperable when the alarm horn fuses were removed but the licensed operators did not immediately recognize this. At 12:11 core alterations resumed resulting in a condition prohibited by TS.

Following shift turnover the licensed operators identified the TS requirement for an SRM audible alarm and suspended core alterations. Operations shift management decided that the dedicated individual monitoring the visual alarms could be credited as performing the SRM audible alarm function and permitted core alterations to continue. Following additional review, it was determined that core alterations be suspended until the plant staff could perform further review of the SRM operability determination.

At 21:50 the alarm horn was restored to operable status; core alterations resumed at 21:58. Concurrently the plant staff determined that SRM operability was not supported by use of the dedicated individual as the audible alarm function.

This event involved a condition prohibited by Technical Specifications. Therefore, this LER is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(i)(B).

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)	
Limerick Generating Station, Unit 2	05000353	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 4	
		2005	-- 001	-- 00		

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

Analysis of the Event

There were no actual safety consequences associated with this event. The potential safety consequences of this event were also minimal. The affected alarms lost the audible alarm function but retained the visual alarm function and were continuously monitored by a dedicated individual. SRM count rate, period indications and rod block functions remained functional. In addition, a reactor operator was monitoring SRM count rate as each fuel assembly was inserted into the core and was directed by procedure to suspend component movement if any SRM count rate doubled between steps. Further, NUREG-1433 Rev.3 (Standard Technical Specifications General Electric Plants, BWR/4) does not require an SRM alarm function, only indication of count rate is required.

The alarm horn is classified as non-safety related equipment. However, it is required to support the operability of the SRMs. The non-safety related classification of the alarm horn contributed to the licensed operator failure to identify the impact on SRM operability.

Cause of the Event

The cause of the event was that procedural guidance was less than adequate to ensure rule-based evaluation of infrequently used refuel and outage related TS.

Corrective Action Completed

The SRM audible alarm function was restored.

The procedure for loss of main control room annunciators was revised to address the TS impact of a loss of the SRM audible alarm function.

Corrective Action Planned

An evaluation of Operations' procedures will be performed to identify those affected by infrequently used refuel and outage related TS. Enhancements to the affected procedures will be implemented as required to ensure rule-based evaluations of TS impacts are performed. This action will be completed by December 1, 2005.

Previous Similar Occurrences

There were two previous similar occurrences of a condition prohibited by TS during refueling operations. LER 1-03-002 was submitted for a previous event when Unit 2 core alterations were conducted with refueling enclosure secondary containment integrity inoperable. LER 2-97-001 was submitted for a previous event when SRMs were inoperable during multiple control rod removals.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)		
Limerick Generating Station, Unit 2	05000353	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 4		
		2005	-- 001	-- 00			

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

Component data:

System: IB (Annunciator System)
 Component: ANN (Annunciator)
 Manufacturer: 170E (Edwards)
 Model number: 5531-P1