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Nuclear

10CFR50.73

November 18, 2005

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 1-05-004 Minimum Critical Power Ratio Limiting Condition For Operation
Noncompliance


This Licensee Event Report (LER) addresses an evaluation of the impact of a General Electric Part 21 report dated 9/20/05 which determined that Limerick Unit 1 operated in non-compliance with Technical Specification 3.2.3, Minimum Critical Power Ratio (MCPR), on two occasions when the MCPR was less than the limiting condition for operation (LCO). These periods of operation exceeded the allowance stated in the TS action statement.

Report Number: 1-05-004
Revision: 00
Event Date: May 29, 2004
Discovered Date: September 20, 2005
Report Date: November 18, 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,



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

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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 intended as regulatory commitments.)

Commitment #1

Committed Date (or Outage): NA

None

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 1	2. DOCKET NUMBER 05000352	3. PAGE 1 OF 3
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4. TITLE Minimum Critical Power Ratio Limiting Condition For Operation Noncompliance

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
05	29	2004	2005	-004-	0	11	18	2005		05000
									FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)											
	<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)								
10. POWER LEVEL 94	<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 Robert E. Kreider, Manager- Regulatory Assurance	TELEPHONE NUMBER (include Area Code) 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	AC	N/A	G080	N					

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

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

An evaluation of the impact of a General Electric Part 21 report determined that Limerick Unit 1 operated in non-compliance with Technical Specification 3.2.3 Minimum Critical Power Ratio on two occasions during control rod pattern adjustments. Unit 1 is no longer vulnerable to a repeat occurrence of this condition. GE is currently reviewing previous cycles for Unit 1 and Unit 2. A new databank and coding will be installed in 3D Monicore following issuance of the GE review.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Limerick Generating Station, Unit 1	05000352	2005	004	00	2 OF 3

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

Unit Conditions Prior to the Event

Unit 1 was in Operational Condition (OPCON) 1 (Power Operation) on May 29, 2004 at approximately 94% power returning to 100% power from a control rod pattern adjustment and on September 11, 2004 at approximately 94% power returning to 100% power from a control rod pattern adjustment. There were no structures, systems or components out of service that contributed to this event.

Description of the Event

On September 20, 2005 General Electric issued a Part 21 report notification to the NRC. The report identified an error in the GE-14 ATLAS critical power test results due to deformation of the Zircaloy spacers used in GE-14 and GE-12 fuel [EIS: AC].

An evaluation of Limerick Unit 1 operating history identified that a noncompliance with Technical Specification 3.2.3 Minimum Critical Power Ratio occurred on two occasions. The evaluation of Unit 2 determined that TS compliance was maintained during the current operating cycle.

On May 29, 2004, a control rod pattern adjustment was performed on Unit 1. The evaluation determined that a noncompliance with Technical Specification 3.2.3 occurred for approximately six hours. The peak Maximum Fraction of Limiting Critical Power Ratio (MFLCPR) value was 1.03.

On September 11, 2004, a control rod pattern adjustment was performed on Unit 1. The evaluation determined that a noncompliance with Technical Specification 3.2.3 occurred for approximately seven hours. The peak MFLCPR was 1.002.

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

Analysis of the Event

There were no actual safety consequences associated with this event. The potential safety consequences of this event were minimal.

There was no adverse impact to the fuel and very low safety significance since no transient occurred during the times when MFLCPR exceeded 1.0; therefore no safety limit was challenged.

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FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Limerick Generating Station, Unit 1	05000352	2005	- 004	- 00	3 OF 3

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

Cause of the Event

The event was caused by a deformation in the Zircaloy spacer during GE-14 ATLAS critical power testing. This deformation resulted in a non-conservative error in the test results.

Corrective Action Completed

An evaluation of Unit 1 and Unit 2 vulnerability to the Part 21 condition has been completed. No compensatory measures are required at this time.

To prevent a similar issue from occurring on Unit 2, an administrative limit was implemented to provide additional margin to the calculation of the MFLCPR prior to Unit 2 entering the portion of the operating cycle where the Part 21 issue is applicable.

Corrective Action Planned

GE is currently reviewing previous cycles for Unit 1 and Unit 2, which GE will complete by December 31, 2005.

A new databank and coding will be installed in Unit 1 and Unit 2 3D Monicore. This action will be completed by March 31, 2006.

Previous Similar Occurrences

There were no previous similar occurrences where noncompliance with a TS power distribution limit existed for a period that exceeded the TS action statement allowance for restoration.

Component data:

Cause:	B	(Design, Manufacturing, Construction/Installation)
System:	AC	Reactor Core System
Component:	N/A	
Manufacturer:	G080	General Electric
Type:	GE-14	Fuel
Model:	N/A	
Reportable to EPIX:	No	