



10CFR50.73

LG-15-125
October 22, 2015

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

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

Subject: LER 2015-002-00, Condition Prohibited by Technical Specifications Due to Standby Gas Treatment System Subsystem Inoperable

This Licensee Event Report (LER) addresses a condition prohibited by Technical Specifications due to inoperability of the 0B Standby Gas Treatment System (SGTS) subsystem. The subsystem was inoperable due to a failed differential pressure control instrument.

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

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

Richard W. Libra
Vice President – Limerick Generating Station
Exelon Generation Company, LLC

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



LICENSEE EVENT REPORT (LER)
(See Page 2 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 and Information Collections Branch (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.

1. FACILITY NAME Limerick Generating Station, Unit 1	2. DOCKET NUMBER 05000352	3. PAGE 1 OF 3
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4. TITLE
Condition Prohibited by Technical Specifications Due to Standby Gas Treatment System Subsystem 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
08	27	2015	2015	002	00	10	22	2015		05000
									FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
1	<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)
10. POWER LEVEL 100	<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 B. Dickinson, 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	BH	PDC	M430	Y					

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

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

While operating at full power, a degraded Standby Gas Treatment System (SGTS) subsystem differential pressure (dP) control instrument failed upscale. The subsystem was determined to be operable at the time of the failure. After the corrective maintenance activity it was determined that the failed instrument caused the subsystem to be inoperable. The 0B SGTS subsystem was determined to have been inoperable for a period that exceeded the SGTS Technical Specification (TS) allowable outage time (AOT) based on firm evidence regarding the time of the instrument failure. The cause of the 0B SGTS subsystem inoperability was a degraded SGTS dP control instrument. The degraded SGTS dP control instrument was replaced and the 0B SGTS subsystem was restored to operable status.



**LICENSEE EVENT REPORT (LER)
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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 and Information Collections Branch (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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		2015	- 002	- 00	

NARRATIVE

Unit Conditions Prior to the Event

Unit 1 was in Operational Condition (OPCON) 1 (Power Operation) at approximately 100% power. There were no other structures, systems or components out of service that contributed to this event.

Description of the Event

On Thursday, September 3, 2015, Limerick Unit 1 was operating at approximately 100% power preparing to conduct corrective maintenance on the 0B Standby Gas Treatment System (SGTS) (EIS:BH) differential pressure (dP) controls (EIS:PDC). At 1657 hours, 0B SGTS was removed from service and declared inoperable to support repair of the degraded dP control instrument. 0B SGTS was restored to operable status on September 4, 2015, at 2050 hours, after replacement of the degraded instrument (PDY-076-161B). SGTS dP control for Unit 2 was not affected. It was later identified by Engineering that the existing degraded dP control instrument rendered the 0B SGTS subsystem inoperable. Also, firm evidence existed indicating that the condition was present since August 27, 2015, when the degraded instrument failed off-scale high. The degraded SGTS subsystem had been statused as degraded but operable.

TS 3.6.5.1.1 Reactor Enclosure Secondary Containment Integrity Surveillance Requirement (SR) 4.6.5.1.1.c.2 requires operating one SGTS subsystem for one hour maintaining greater than or equal to 0.25 inches of vacuum water gauge in the reactor enclosure at a flowrate not exceeding 2500 cfm. It was identified after the instrument was replaced that the degraded dP control on the 0B SGTS subsystem could result in the flowrate exceeding the 2500 cfm TS limit during a reactor enclosure drawdown. Per TS 3/4.6.5 Bases, the 2500 cfm limit ensures that the reactor enclosure design leak tightness is maintained.

When one SGTS subsystem is inoperable TS 3.6.5.3 Standby Gas Treatment System, Action a, requires restoration of the inoperable SGTS subsystem within 7 days. 0B SGTS was declared inoperable on September 3, 2015, at 1657 hours, to support corrective maintenance. However, firm evidence of 0B SGTS inoperability due to the degraded dP channel was identified to be present from August 27, 2015, at 0239 hours, to September 4, 2015, at 2050 hours (approximately 8 days and 18 hours).

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).

Analysis of the Event

There was no actual safety consequence associated with this event. The potential safety consequence of this event was minimal.

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NARRATIVE

On September 4, 2015, Operations requested an Engineering review of the operability determination for the degraded 0B SGTS dP control instrument. On October 1, 2015, Engineering completed a technical evaluation which identified that, with the degraded SGTS dP control instrument, 0B SGTS flow following a reactor enclosure drawdown would exceed the 2500 cfm SGTS TS limit. Therefore, the degraded instrument rendered 0B SGTS inoperable.

Per the UFSAR Section 6.5.1.1, SGTS is designed to exhaust sufficient filtered air from the reactor enclosure and/or refueling area to maintain a negative pressure of about 0.25 inch wg. in the affected volumes during secondary containment isolation. The failed dP control instrument would have resulted in the 0B SGTS subsystem operating at maximum flow during a secondary containment isolation. This would have caused the TS limit of 2500 cfm to be exceeded.

Cause of the Event

The cause of the 0B SGTS subsystem inoperability was a degraded SGTS dP control instrument.

Corrective Actions Completed

The degraded SGTS dP control instrument was replaced and the 0B SGTS subsystem was restored to operable status.

Previous Similar Occurrences

There were no previous similar occurrences in the last five years of reportable unplanned SGTS inoperability due to a condition prohibited by TS.

Component data:

System: BH Emergency/Standby Gas Treatment System
 Component: PDC Control, Differential, Pressure
 Component number: PDY-076-161B
 Manufacturer: M430 Siemens Energy & Automation.
 Model number: 77-16