



10 CFR 50.73

LG-21-002

January 15, 2021

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 2020-002-00 HPCI and RCIC Were Not Un-Isolated During Startup Resulting in
Technical Specification Violations

In accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B) and 10 CFR 50.73(a)(2)(v)(D),
Limerick Generating Station hereby submits the enclosed Licensee Event Report.

There are no commitments contained in this letter.

If you have any questions, please contact Laura Lynch at (610) 718-3400.

Respectfully,

A handwritten signature in black ink, appearing to read "Frank Sturniolo".

Digitally signed by Sturniolo,
Frank
Date: 2021.01.14 14:20:36
-05'00'

Frank Sturniolo
Vice President – Limerick Generating Station
Exelon Generation Company, LLC

cc: Administrator Region I, USNRC
USNRC Senior Resident Inspector, Limerick Generating Station



LICENSEE EVENT REPORT (LER)

(See Page 3 for required number of digits/characters for each block)
(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

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, Library, and Information Collections Branch (T-6 A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollections.Resource@nrc.gov, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk ail: oir_submission@omb.eop.gov. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

1. Facility Name Limerick Generating Station Unit 1		2. Docket Number 05000	3. Page 352 1 OF 2
---	--	----------------------------------	---------------------------------

4. Title
HPCI and RCIC Were Not Aligned for Service During Startup Resulting in Technical Specification Violations

5. Event Date			6. LER Number			7. Report Date			8. Other Facilities Involved	
Month	Day	Year	Year	Sequential Number	Revision No.	Month	Day	Year	Facility Name	Docket Number
11	16	2020	2020	002	00	01	15	2021		05000
									Facility Name	Docket Number
										05000

9. Operating Mode 2	10. Power Level 2.0
-------------------------------	-------------------------------

11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)

<input type="checkbox"/> 10 CFR Part 20	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 10 CFR Part 73
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.69(g)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(4)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.71(a)(5)
<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 10 CFR Part 21	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(1)(i)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 21.2(c)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(i)
<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 10 CFR Part 50	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 73.77(a)(2)(ii)
<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<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)(v)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)	

OTHER (Specify here, in abstract, or NRC 366A).

12. Licensee Contact for this LER

Licensee Contact Laura Lynch	Phone 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 IRIS	Cause	System	Component	Manufacturer	Reportable to IRIS
N/A	N/A	N/A	N/A	N/A					

14. Supplemental Report Expected		15. Expected Submission Date		
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes (If yes, complete 15. Expected Submission Date)	Month	Day	Year

16. Abstract (Limit to 1560 spaces, i.e., approximately 15 single-spaced typewritten lines)

On 11/16/2020 at 0357 EST, Unit 1 was starting up in OPERATIONAL CONDITION 2 when the reactor steam dome pressure exceeded 150 psig without the Reactor Core Isolation Cooling (RCIC) System being aligned for service, contrary to Technical Specification (TS) 3.7.3. At 0435 EST the reactor steam dome pressure exceeded 200 psig without the High-Pressure Coolant Injection (HPCI) System being aligned for service, contrary to TS 3.5.1. The event was caused by failure to correctly perform the startup procedure. The startup procedure was revised to have a more robust verification and sign-off that RCIC and HPCI are aligned for service prior to raising pressure. HPCI does not have a redundant system; therefore, this condition is being reported per 10 CFR 50.73(a)(2)(v)(D) as an event that could have prevented fulfillment of a safety function. Contrary to the requirements of Limiting Condition for Operation (LCO) 3.0.4, LCO 3.5.1 and LCO 3.7.3 were not met before entering the mode of applicability. Therefore, this event is also being reported under 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by TS.



**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

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, Library, and Information Collections Branch (T-6 A10M), U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk Officer for the Nuclear Regulatory Commission, 725 17th Street NW, Washington, DC 20503; e-mail: oir_submission@omb.eop.gov. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

1. FACILITY NAME Limerick Generating Station, Unit 1	2. DOCKET NUMBER 05000- 352	3. LER NUMBER		
		YEAR 2020	SEQUENTIAL NUMBER 002	REV NO. 00

NARRATIVE

UNIT CONDITION PRIOR TO THE EVENT

Unit 1 was in OPERATIONAL CONDITION 2 (Startup) at 150 psig, approximately 2 percent power. There were no other structures, systems or components out of service that contributed to this event.

DESCRIPTION OF THE EVENT

On the morning of November 16, 2020, the Control Room Supervisor (CRS) directed the warm-up and alignment activities to commence on the Reactor Core Isolation Cooling (RCIC) system [E1IS BN] . At 03:57 hours reactor pressure reached 150 psig and RCIC was isolated and not operable as required by Technical Specification (TS) 3.7.3. As pressure was increased, the CRS directed the warm-up and alignment activities to commence on the High-Pressure Coolant Injection (HPCI) [E1IS BJ] system. At 04:35 hours reactor pressure reached 200 psig and HPCI was isolated and not operable as required by TS 3.5.1.

At 05:23 hours RCIC was aligned for service and declared operable; reactor pressure at this time was 212 psig. During shift change the oncoming operating crew recognized HPCI was still isolated and immediately took actions to complete the HPCI warm-up and align HPCI for operation. At 06:39 HPCI was made operable. An eight-hour ENS notification (ENS 55000) was made to the NRC at 12:13 under 10 CFR 50.72(b)(3)(v) for an event that could have prevented fulfillment of a safety function.

CAUSE OF THE EVENT

The CRS incorrectly interpreted the startup general procedure, which resulted in RCIC and HPCI being inoperable when required.

CORRECTIVE ACTIONS

The startup procedure was revised to include a more robust verification and sign-off that RCIC and HPCI are operable prior to raising pressure.

REPORTABILITY AND SAFETY CONSEQUENCE

HPCI does not have a redundant system; therefore, this condition is being reported as an event or condition that at the time of discovery could have prevented the fulfillment of the safety function per 10 CFR 50.73(a)(2)(v)(D).

LCO TS 3.0.4 requires the Limiting Condition for Operations be met prior to entry into a specified condition in the Applicability for that TS. The specified condition in the applicability for RCIC is OPERATIONAL CONDITION 2 with reactor steam dome pressure greater than 150 psig. The applicability for HPCI is OPERATIONAL CONDITION 2 with reactor steam dome pressure greater than 200 psig. Since RCIC and HPCI were inoperable when the specified condition in the Applicability was entered, TS 3.0.4 was violated for both RCIC and HPCI. This event is also being reported under 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by technical specifications.

The Automatic Depressurization System (ADS) and Low-Pressure Emergency Core Cooling Systems (ECCS) were OPERABLE during this time. The safety significance of this event is minimal due the short duration that HPCI and RCIC were inoperable.

PREVIOUS SIMILAR OCCURRENCES

None