10 CFR 50.73



LG-25-081

April 21, 2025

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 2025-001-00 Bypass Leakage on the B Train of Standby Gas Treatment System HEPA Filters Exceeded Technical Specification Value

In accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B), 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 Jordan Rajan at (610) 718-3400.

Respectfully,

Gillin, Michael F. Digitally signed by Gillin, Michael F. Date: 2025.04.21 17:39:22 -04'00'

Michael F. Gillin Vice President – Limerick Generating Station Constellation Energy Generation, LLC

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

NRC FORM 366 U.S. NU(				J.S. NUCLEAR	AR REGULATORY COMMISSION				APPROVED BY OMB: NO. 3150-0104						EXPIRES: 04/30/2027		
(04-02-2024) UNIT OF A CONTROL									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 email to Infocollects.Resource@nc.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. 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								050	2. Doc	cket Nur	mber	3. Page					
Limerick Generating Station Unit T										052	352				1	OF	3
4. Title Bypass Leakage on the B Train of Standby Gas Treatment System HEPA Filters Exceeded Technical Specification Value																	
5. Event Date 6. LER Number				6. LER Number	7. Report Date				8. Other Facilities Involved								
Month	Month Day Year		Year	Sequential Number	Revision No. Month Day		у	Year	Facility Nan Limeric	cility Name imerick Unit 2				050	Docket	Number 353	
02	19 2	2025	2025	- 001 -	00	04	21	1 2	2025	Facility Nan	ame				052	Docket	Number
9. Operating Mode OPCON 1						10. Pov	ower Level 100										
11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)																	
10 CFR	Part 2	0	20.22	03(a)(2)(vi)	10 CFR Part 50				50.73(a)(2)(ii)(A) 50.73(a)					viii)(A)		73.1	200(a)
20.220	1(b)		20.22	03(a)(3)(i)	50	.36(c)(1)(i)	(A)		50.73(a)(2)(ii)(B)		В) [	50.73(a)(2)(viii)(E		viii)(B)		73.1	200(b)
20.220	1(d)		20.2203(a)(3)(ii) 50.			50.36(c)(1)(ii)(A)		50.73(a)(2)(iii)		[	50.73(a)(2)(ix)(A)			73.1	200(c)		
20.220	3(a)(1)		20.2203(a)(4) 5			50.36(c)(2)			50.73(a)(2)(iv)(A) 50.73(a			0.73(a)(2)(	)(2)(x) 73.1200(d)				
20.2203(a)(2)(i)			10 CFF	R Part 21	50.46(a)(3)(ii)				50.73(a)(2)(v)(A) 1			10 0	10 CFR Part 73			73.1	200(e)
20.2203(a)(2)(ii)		i)	21.2(0	c)	50.69(g)				50.73(a)(2)(v)(B)			73.77(a)(1)			73.1200(f)		
20.2203(a)(2)(iii)		ii)			50.73(a)(2)(i)(A)				50.73(a)(2)(v)(C)			73.77(a)(2)(i)			73.1200(g)		
20.2203(a)(2)(iv)		v)		1	50	.73(a)(2)(i)	)(B)	50.		0.73(a)(2)(v)(D)		73.77(a)(2)(ii)		ii)	73.1200(h)		200(h)
20.2203(a)(2)(v)		')			50	.73(a)(2)(i)	(C)		50.73	(a)(2)(vii)	i)						
OTHEF	₹ (Specif	iy here, i	in abstract	, or NRC 366A)													
12. Licensee Contact for this LER																	
Licensee ContactPhone Number (Include area code)Jordan Rajan610-718-3400																	
13. Complete One Line for each Component Failure Described in this Report																	
Cause	Sys	stem	Compon	ent Manufact	urer Repo	ortable to IR	ιs	Ca	ause	Syste	em	Comp	onent M	anufact	urer	Reporta	able to IRIS
Α	В	ιH	FLT	A220	)	Yes											
	14. Supplemental Report Expected								45 1			ine Det		lonth	D	ay	Year
No Yes (If yes, complete 15. Expected Submission Date)						e											
16. Abstract ( On Februa	Limit to 13 11111111111111111111111111111111111	کو 26 space 2025, ز	es, i.e., appr at 08:40	oximately 13 sing the B train c	le-spaced t f Standl	ypewritten li by Gas T	<sup>ines)</sup> reatr	nent s	Syster	n (SGTS)	) was	remo	ved fron	n servi	ce to	test	the

On February 19, 2025, at 08:40 the B train of Standby Gas Treatment System (SGTS) was removed from service to test the charcoal adsorber and High-Efficiency Particulate Air (HEPA) filter banks. The test identified the as-found leakage for the upstream and downstream HEPA filter banks exceeded the Technical Specification (TS) leakage allowance. The HEPA filters were replaced, and the system was satisfactorily retested. This condition was reportable per 10 CFR 50.73(a)(2)(i)(B).

The B train of SGTS was previously tested on March 19, 2020, and the as-found leakage was elevated. Since the leakage was close to the TS acceptance criteria, the issue was entered into the corrective action process. The HEPA filters exceeded the leakage criteria because Engineering did not ensure maintenance was scheduled and executed prior to exceeding the TS limit. An action to perform post trending analysis will be added to the Surveillance Test package to ensure the filters do not exceed the TS leakage criteria before the next scheduled performance.

NRC FORM 366A	U.S. NUCLEAR REGULATOR	RY COMMISSION	APPROVED BY OMB: NO.	3150-010	4 EXPIRES	S: 04	/30/2027	
(See NUREG-1022, I http://www.nrc.go	ICENSEE EVENT REPOR CONTINUATION SHE R.3 for instruction and guidance for com v/reading-rm/doc-collections/nuregs/sta	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 email 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, T25 17th Street NW, Washington, DC 20503. 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		050	2. DOCKET NUMBER		3. LER NUMBER	2		
Limerick Generatir	ng Station Unit 1	050	352	2025	= 001	- [	NO.	
NARRATIVE					1			
Unit Condition Pri	ior to the Event							
Unit 1 was in Ope Operational Cond systems or comp Description of the	erational Condition (OPCON) 1 ( lition (OPCON) 1 (Power Opera onents out of service that contri <u>Event</u>	(Power Operat ation) at approx buted to this e	ion) at approximately 100 imately 100% power. The vent.	)% powe ere were	er. Unit 2 was in e no other struct	ures	3	
On February 19, 2 service to test the HEPA filter banks charcoal adsorbe removes any cart redundant protec	2025, at 08:40 the B train of Sta e charcoal adsorber and High-Ef and a charcoal adsorber. The r removes gaseous iodine that i oon fines that may become entra tion against failure of the upstre	andby Gas Trea fficiency Partic upstream HEF may be presen ained in the air am HEPA filte	atment System (SGTS) [I ulate Air (HEPA) filter bar PA filter bank removes ra t in the air stream. The d stream after leaving the	EIIS:BH] nks. Ea dioactive ownstre charcoa	l was removed fi ch SGTS train h e particulates, w am HEPA filter t al adsorber and p	rom as tv hile bank brovi	wo the t iding	
Leakage must be leakage testing of 0.11 percent and and the system w	less than 0.05 percent to meet f the HEPA filter banks. The tes the as-found downstream HEP /as retested. The system was d	the Technical st identified the A filter bank lea declared operal	Specification (TS) limit fo as-found leakage for the akage was 0.16 percent. ble on February 20, 2025	or in plac e upstrea The HE 5, at 11:4	ce penetration ar am HEPA filter b EPA filters were i 14.	nd bank repla	was aced,	
The B train of SG percent, and the a acceptance criter 4328138) stating	TS was last tested on March 19 as-found downstream HEPA filte ia, the issue was entered into th the HEPA filters should be repla	9, 2020. The a er bank was 0. ne corrective ad aced prior to th	s-found leakage of the up 046 percent. Since the lo ction process. A note wa le next performance of th	ostream eakage s added e test.	filter bank was ( was close to the I to the Issue Re	0.04 TS port	4 (IR	
The exact time th the as-found leak than seven days. were times that th both SGTS trains	e B train of SGTS was inoperating age measured in 2025, the leak Additionally, since the exact da the A train of SGTS was likely ind being inoperable was not enter	ble cannot be d age likely exis ite the B train c operable while red. This cond	letermined. Based on the ted for greater than the T of SGTS became inopera the B train of SGTS was ition is reportable per 10	e leakag S accep ble canr also inc CFR 50	e measured in 2 otance criteria fo not be determine operable. The ac .73(a)(2)(i)(B).	2020 r gre ed, th ction	and eater here h for	

## Analysis of the Event

The HEPA filters failed because Engineering did not ensure maintenance was scheduled and executed prior to exceeding the TS limit. The issue report for the degraded high HEPA filter bank leakage was not flagged as system health issue and the subsequent reviews did not identify the challenge to the TS limit.

NRC FORM 366A U.S. NUCLEAR REGULATOR	<b>XY COMMISSION</b>	APPROVED BY OMB: NO.	3150-0104	EXPIRES	S: 04/30/2027				
(04-02-2024) LICENSEE EVENT REPOR CONTINUATION SHE (See NUREG-1022, R.3 for instruction and guidance for com http://www.nrc.gov/reading-rm/doc-collections/nuregs/sta	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 email 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. 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	050	2. DOCKET NUMBER		3. LER NUMBER					
	050		YEAR	SEQUENTIAL	REV NO				
Limerick Generating Station Unit 1	052	352	2025	- 001	- 00				
NARRATIVE					•				
Safety Consequence									
There was no actual safety consequence associated with this event. The HEPA filter banks are conservatively credited with an efficiency of 99.0 percent. The as-found bypass leakage is bounded by the Alternate Source Term (AST) assumed SGTS HEPA filter bank efficiency. The B train of SGTS filter train was available to perform its design basis functions during the period where the upstream and downstream HEPA filter bypass leakage percentages exceeded the Technical Specification limits. This event is not a safety system functional failure.									
Cause of the Event									
The HEPA filters failed because Engineering did the TS limit.	not ensure ma	intenance was scheduled	d and exe	ecuted prior to e	exceeding				
Corrective Actions Completed									
The HEPA filters were replaced on the B train of SGTS, and the test was re-performed verifying the in-place penetration and leakage testing of the HEPA filter banks met the TS surveillance requirements.									
Corrective Actions Planned									
<ul> <li>Review open deficiencies on TS equipment that could result in equipment inoperability to ensure the actions to address equipment deficiencies are properly scheduled.</li> <li>Add a task to the Surveillance Test work packages that perform Charcoal/HEPA testing for TS trains to perform post testing trending analysis to ensure that the Charcoal/HEPA filters are projected not to exceed the TS leakage criteria before the next scheduled performance.</li> </ul>									
Previous Similar Occurrences									
There have been no previous similar licensee ev	ent reports in t	he past ten years.							
Component Data									

System: BH (Emergency/Standby Gas Treatment System) Component: FLT (Filter) Component Number:

- 0B-F183 Upstream HEPA filter bank
- 0B-F170 Downstream HEPA filter bank

Manufacturer: A220 (AAF International)