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November 3, 2025

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

10 CFR 50.73

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 50-387(388)/2025-002-00
UNIT 1 LICENSE NO. NPF-14
UNIT 2 LICENSE NO. NPF-22
PLA-8197

Docket No. 50-387
50-388

Attached is Licensee Event Report (LER) 50-387(388)/2025-002-00. The LER reports an event involving a two concurrent, unrelated equipment issues that resulted in the loss of both sub-systems of the Control Room Emergency Outside Air Supply system for approximately 35 minutes. This event was determined to be reportable in accordance with 10 CFR 50.73(a)(2)(v)(C) as an Event or Condition That Could Have Prevented Fulfillment of a Safety Function.

There were no actual consequences to the health and safety of the public as a result of this event.

This letter contains no new or revised regulatory commitments.

A handwritten signature in black ink, appearing to read "E. Casulli".

E. Casulli

Attachment: LER 50-387(388)/2025-002-00

Copy: NRC Region I
Mr. R. Wehrmann, NRC Senior Resident Inspector
Mr. R. Guzman, NRC Project Manager
Mr. M. Shields, PA DEP/BRP

Attachment to PLA-8197

LER 50-387(388)/2025-002-00



LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form
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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, Library, and Information Collections Branch (T-6 A10M), U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by email to Infocollections.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 Susquehanna Steam Electric Station (SSES) Unit 1	☒ 050 ☐ 052	2. Docket Number 00387	3. Page 1 OF 3
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4. Title
Both Sub-Systems of the Control Room Emergency Outside Air Supply System Impacted by Concurrent, Unrelated Equipment Issues in the Control Structure Heating, Ventilation & Air Conditioning System

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	☒ 050 ☐ 052	Docket Number
09	04	2025	2025	002	00	11	03	2025	SSES Unit 2		00388
									Facility Name	☐ 052	Docket Number

9. Operating Mode 1	10. Power Level 095 / 100
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11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)

☒ 10 CFR Part 20	☐ 20.2203(a)(2)(vi)	☒ 10 CFR Part 50	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)	☐ 73.1200(a)
☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)	☐ 73.1200(b)
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)	☐ 73.1200(c)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)	☐ 73.1200(d)
☐ 20.2203(a)(2)(i)	☒ 10 CFR Part 21	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(A)	☒ 10 CFR Part 73	☐ 73.1200(e)
☐ 20.2203(a)(2)(ii)	☐ 21.2(c)	☐ 50.69(g)	☐ 50.73(a)(2)(v)(B)	☐ 73.77(a)(1)	☐ 73.1200(f)
☐ 20.2203(a)(2)(iii)		☐ 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)		☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(ii)	☐ 73.1200(h)
☐ 20.2203(a)(2)(v)		☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)		
☐ OTHER (Specify here, in abstract, or NRC 366A).					

12. Licensee Contact for this LER

Licensee Contact Andrew Sabisch, Nuclear Regulatory Affairs Principal Engineer	Phone Number (Include area code) 570-542-1461
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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
X	VI	CDMP	E232	Y					

14. Supplemental Report Expected					15. Expected Submission Date				
☒ No	☐ Yes (If yes, complete 15. Expected Submission Date)								

16. Abstract (Limit to 1326 spaces, i.e., approximately 13 single-spaced typewritten lines)

On September 4, 2025, while the "A" Control Structure Heating, Ventilation and Air Conditioning (HVAC) fan (0V103A) was out of service for planned, proactive belt replacement, the hydro motor for the "B" Control Room Fan (0V117B) discharge damper failed resulting in the damper going closed. With both the 0V103A and 0V117B fans out of service, both subsystems of the Control Room Emergency Outside Air Supply (CREOAS) system were rendered inoperable. The 0V103A fan was expeditiously worked, tested, and returned to service thereby restoring one sub-system to operable status. The approximately 35-minute concurrent inoperability of both subsystems of CREOAS is being reported in accordance with 10 CFR 50.73(a)(2)(v)(C) as an event or condition that could have prevented fulfillment of a safety function.

There were no actual consequences to the health and safety of the public as a result of this event.

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

(See NUREG-1022, R.3 for instruction and guidance for completing this form
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1. FACILITY NAME Susquehanna Steam Electric Station Unit 1	☒ 050	2. DOCKET NUMBER 00387	3. LER NUMBER		
	☐ 052		YEAR 2025	SEQUENTIAL NUMBER 002	REV NO. 00

NARRATIVE**CONDITIONS PRIOR TO THE EVENT:**

Unit 1: Mode 1, approximately 95% Rated Thermal Power
Unit 2: Mode 1, approximately 100% Rated Thermal Power

There were no inoperable structures, systems, or components at the start of the issues that contributed to the event.

EVENT DESCRIPTION

On September 4, 2025, two concurrent, unrelated equipment issues associated with the Control Structure HVAC system [EIS System Code: VI] resulted in both sub-systems of the Control Room Emergency Outside Air Supply (CREOAS) system being adversely impacted.

The following is a timeline of the significant points associated with the event.

September 4, 2025, at approximately 1341: The "A" Control Structure HVAC fan (0V103A) [EIS Component Code: FAN] was proactively removed from service to facilitate replacement of the belts which had contributed to elevated vibration.

September 4, 2025, at approximately 1515: Control room personnel noted a change in background noise which was subsequently determined to have been caused by the failure of the Control Structure Supply Fan 0V117B discharge damper hydro motor [EIS Component Code: CDMP] resulting in the damper [EIS Component Code: DMP] closing. Reduced air flow through the control room dampers was also noted.

September 4, 2025, at approximately 1550: Belt replacement on the 0V103A fan was completed. Following successful post maintenance testing, the 0V103A fan was returned to service resulting in restoration of the 'A' CREOAS subsystem. The duration of the concurrent inoperability of the 0V103A and 0V117B fans was approximately 35 minutes.

September 5, 2025, at approximately 2111: the discharge damper hydro motor for the 0V117B fan was replaced, tested and placed back in service resulting in restoration of the 'B' CREOAS subsystem.

CAUSE OF THE EVENT

Two separate and independent events occurred concurrently that impacted the CREOAS system.

Vibration is routinely monitored on the 0V103A fan. Following vibration data collection on September 4, 2025, the station elected to proactively remove the 0V103A fan from service to replace the fan belts. In accordance with station procedures, the belt replacement was planned during a window where no conflicting work was being performed, or redundant equipment was out of service.

While the 0V103A fan was out of service for the planned belt replacement, the 0V117B discharge damper hydro motor failed. There had been no indications of degraded performance with the 0V117B hydro motor prior to the failure.



LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

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NARRATIVE

CAUSE OF THE EVENT (cont.)

As shown above, the causes of the inoperability of the 0V103A fan and the 0V117B fan were unrelated and were not within operators' ability to foresee and prevent.

ANALYSIS / SAFETY SIGNIFICANCE

The event reported herein did not result in an actual loss of safety function. The control structure habitability envelope is serviced by multiple fan systems during normal operation. On an initiation signal, the 'B' CREOAS fan (0V101B) and associated filter train would have automatically started and provided filtered outside air into the control structure habitability envelope. The 'B' CREOAS subsystem and control room floor cooling could have fulfilled the required safety function to maintain the control room habitability through its pressurization function for the timeframe of the work on the 'A' fan system. The 'A' control room fan system was functional and could have provided the pressurization and cooling function if required. Since there was no actual loss of safety function, this event will not be counted as a safety system functional failure under the NRC Reactor Oversight Process Performance Indicator. There were no actual consequences to the health and safety of the public as a result of this event.

CORRECTIVE ACTIONS

Key corrective actions taken in response to these issues included replacing the belts on the 0V103A fan, replacing the hydro motor on the 0V117B fan discharge damper and performing post-maintenance testing of both components to verify they were operating properly.

COMPONENT FAILURE INFORMATION

There was only one component failure associated with this LER which was the hydro motor for the 0V117B fan discharge damper.

Component Identification – HDM07831B

Component Name – Control Structure Supply Air Fan 0V117B Discharge Damper Hydro Motor

Manufacturer / Model – Emerson Electric Company / Asco ITT NH95

Part Number – NH95G2602F21-57

PREVIOUS OCCURRENCES

NONE