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October 28, 2021

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

10 CFR 50.73

**SUSQUEHANNA STEAM ELECTRIC STATION  
LICENSEE EVENT REPORT 50-388/2021-002-00  
UNIT 2 LICENSE NO. NPF-22  
PLA-7970**

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**Docket No. 50-388**

Attached is Licensee Event Report (LER) 50-388/2021-002-00. The LER reports an event in which the secondary containment was inoperable due to differential pressure exceeding the Technical Specification limit. The condition is being reported in accordance with 10 CFR 50.73(a)(2)(v)(C) as an event or condition which could have prevented the 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 "K. Cimorelli".

K. Cimorelli

Attachment: LER 50-388/2021-002-00

Copy: NRC Region I  
Mr. C. Highley, NRC Senior Resident Inspector  
Ms. A. Klett, NRC Project Manager  
Mr. M. Shields, PA DEP/BRP

**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 <https://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](mailto:Infocollections.Resource@nrc.gov), and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk all: [omb\\_submission@omb.eop.gov](mailto:omb_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**

Susquehanna Steam Electric Station

**2. Docket Number**

05000388

**3. Page**

1 of 3

**4. Title**

Loss of Secondary Containment

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	30	2021	2021	- 002 -	00	10	28	2021	Facility Name	Docket Number
										05000
										05000

**9. Operating Mode**

1

**10. Power Level**

100

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

<b>10 CFR Part 20</b>	<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)	<b>10 CFR Part 73</b>
<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 checked="" type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.71(a)(5)
<input type="checkbox"/> 20.2203(a)(2)(i)	<b>10 CFR Part 21</b>	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input 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)	<b>10 CFR Part 50</b>	<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 in NRC 366A).**12. Licensee Contact for this LER****Licensee Contact**

Shane Jurek, Principal Licensing Engineer

**Phone Number (Include Area Code)**

(570) 542-1695

**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

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

Month	Day	Year
01	31	2022

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

On August 30, 2021, at 09:55, operators at the Susquehanna Steam Electric Station (SSES), Unit 2, identified that Reactor Building Zone II Pressure Differential Indicator (PDI), PDI-27581, was stuck at a reading of 0.32" water column vacuum. Operators also reported difficulties opening doors in the SSES Unit 2 Reactor Building, indicating a positive secondary containment differential pressure (D/P). At this time, operators determined that a loss of the secondary containment had occurred and entered the off-normal procedure for the condition. Review of alternate indication documented from earlier that day, identified the condition likely existed longer than allowed by the Technical Specification Surveillance Requirement 3.6.4.1.1 associated Note. This condition is being reported under 10 CFR 50.73(a)(2)(v)(C) as a loss of safety function. Secondary containment was restored to an operable status at 10:30 on August 30.

The cause of the event is under investigation and will be provided in a supplement to this Licensee Event Report with the associated corrective actions. There were no actual safety consequences associated with the described condition.

**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	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Susquehanna Steam Electric Station, Unit 2	05000-388	2021	- 002 -	00

**NARRATIVE****CONDITIONS PRIOR TO EVENT**

Unit 1 – Mode 1, approximately 100 percent Rated Thermal Power (RTP)

Unit 2 – Mode 1, approximately 100 percent RTP

At 04:00 on August 30, 2021, operators at the Susquehanna Steam Electric Station (SSES), Unit 2, identified that both the A and B Standby Gas Treatment (SGT) System Zone 2 Outside Delta Pressure Indicators, pressure differential indicators (PDIs) PDI-07554A2 and PDI-07554B2 [EIS System/Component Codes BH/PDI], respectively, were indicating below downscale on the associated meters while the digital display was reading -0.25" water column (wc) vacuum. This is indicative of a positive differential pressure (D/P) in the secondary containment. At the time of discovery, this was believed to be an "indication-only" issue.

**EVENT DESCRIPTION**

At 09:55, while investigating the downscale indication on the A and B SGT System Zone 2 Outside Delta Pressure Indicators, PDI-07554A2 and PDI-07554B2, operators at SSES, Unit 2, identified that the SGT System Zone 2 Exhaust System Circulating Space/Outside D/P Indicator, PDI-27581 [BH/PDI], was stuck at a reading of 0.32" wc vacuum. Operators also reported difficulties opening doors in the SSES Unit 2 Reactor Building, indicating a positive secondary containment D/P. At this time, operators determined that a loss of the secondary containment had occurred and entered the off-normal procedure for the condition. Entry into Technical Specification Limiting Condition for Operation (LCO) 3.6.4.1, Condition A was evaluated and determined to be unnecessary at the time of discovery based on no known breach in secondary containment and the SGT subsystem was determined to be capable of drawing down secondary containment to 0.25" wc vacuum. This allowance is defined within the associated Note for Surveillance Requirement (SR) 3.6.4.1.1.

Subsequently, when reviewing the stuck indication on PDI-27581 in aggregate with the downscale readings on PDI-07554A2 and PDI-07554B2, it was determined firm evidence exists that secondary containment D/P was likely lost at 04:00 when PDI-07554A2 and PDI-07554B2 were identified as reading downscale. As a result, the four-hour allowance of the Note modifying SR 3.6.4.1.1 would result in the SR not met at approximately 08:00 and LCO 3.6.4.1, Condition A being entered. Because there is no redundant system to secondary containment, this event requires reporting under 10 CFR 50.73(a)(2)(v)(C) as a condition that could have prevented the fulfillment of a safety function needed to control the release of radioactive material.

**CAUSE OF EVENT**

The cause of the event is under review and will be provided in a supplement to this Licensee Event Report (LER).

**ANALYSIS/SAFETY SIGNIFICANCE**

Safety significance information will be provided in a supplement to this LER.

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

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**1. FACILITY NAME**

Susquehanna Steam Electric Station,  
Unit 2

**2. DOCKET NUMBER**

05000-388

**3. LER NUMBER**

YEAR	SEQUENTIAL NUMBER	REV NO.
2021	- 002 -	00

**NARRATIVE****CORRECTIVE ACTIONS**

Corrective actions will be provided in a supplement to this LER.

**COMPONENT FAILURE INFORMATION**

Component failure information will be provided in a supplement to this LER, if applicable.

**PREVIOUS OCCURRENCES**

Previous occurrences will be provided in a supplement to this LER, if applicable.