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December 9, 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 50-388/2021-004-00**  
**UNIT 2 LICENSE NO. NPF-22**  
**PLA-7977**

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**Docket No. 50-388**

Attached is Licensee Event Report (LER) 50-388/2021-004-00. The LER reports an event in which a Unit 2 Main Turbine Pressure Regulator was inoperable for longer than allowed by Technical Specifications (TS). The condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as condition prohibited by TS.

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 "Derek Jones".

Derek Jones Acting Site VP for K. Cimorelli

K. Cimorelli

Attachment: LER 50-388/2021-004-00

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: [oir\\_submission@omb.eop.gov](mailto: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**

Susquehanna Steam Electric Station, Unit 2

**2. Docket Number**

05000388

**3. Page**

1 of 3

**4. Title**

Unit 2 Main Turbine Pressure Regulator Inoperable for Longer Than Allowed by Technical Specifications

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
10	11	2021	2021	- 004 -	00	12	09	2021	Facility Name	Docket Number
										05000
									Facility Name	Docket Number
										05000

**9. Operating Mode**

1

**10. Power Level**

095

**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 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 checked="" 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**

D. Smith, Licensing Engineer

**Phone Number (Include Area Code)**

(570) 542-1377

**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
02	28	2022

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

At approximately 13:21 on October 11, 2021, the Susquehanna Steam Electric Station, Unit 2, experienced an automatic reactor scram due a main turbine trip. All turbine bypass valves (TBVs) opened to control reactor pressure but did not subsequently re-close. Preliminary troubleshooting identified an inoperable pressure transmitter PT-20101B as the cause of the TBVs failure to re-close. To control reactor pressure, operators manually closed the four main steam isolation valves and utilized the main steam line drains and the High Pressure Coolant Injection System. Based on preliminary failure information, it is likely that the 'B' Pressure Transmitter was inoperable for longer than allowed by Technical Specification (TS) 3.7.8. Therefore, this event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by TS.

The cause of the event is under investigation and will be provided in a supplement to this report with 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	- 004 -	00

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

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

Unit 2 – Mode 1, approximately 95 percent RTP

At approximately 13:21 on October 11, 2021, the Susquehanna Steam Electric Station (SSES), Unit 2, experienced an automatic reactor scram due a main turbine trip. All turbine bypass valves (TBVs) [EIS System/Component Codes: JI/PCV] immediately opened.

**EVENT DESCRIPTION**

On October 11, 2021, at approximately 13:21, Susquehanna Steam Electric Station Unit 2 reactor automatically scrammed due to a main turbine [EIS System/Component Code: TA/TRB] trip (Note the Scram event is being reported under LER-2021-003-00). The Unit 2 Control Room received indication of a main turbine trip with both divisions of the Reactor Protection System (RPS) [EIS System Code: JC] actuated and all control rods inserted. The turbine bypass valves [EIS System/Component Code: JI/PCV] opened automatically to control reactor pressure and subsequently remained open. Preliminary troubleshooting determined the cause of the TBVs staying open was inoperable Pressure Transmitter PT-20101B [EIS System/Component Code: SB/PT], the 'B' Main Steam Pressure Secondary Transmitter. Operators manually closed the four main steam isolation valves [EIS System/Component Code: SB/ISV] at 13:24 to slow down the reactor depressurization and cooldown post-scram. Reactor pressure was initially stabilized and maintained using the main steam line drains [EIS System/Component Code: SB/DRN] and the High Pressure Coolant Injection (HPCI) [EIS System: BJ] System.

Based on preliminary failure information, it is likely that the 'B' Pressure Transmitter was inoperable for longer than allowed by Technical Specification (TS) 3.7.8, "Main Turbine Pressure Regulation System." Therefore, this event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by TS. The pressure transmitter was restored to an operable status, and power ascension activities commenced at approximately 01:00 on October 15.

**CAUSE OF EVENT**

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

**ANALYSIS/SAFETY SIGNIFICANCE**

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

**CORRECTIVE ACTIONS**

Corrective actions 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	- 004 -	00

**NARRATIVE****COMPONENT FAILURE INFORMATION**

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

**PREVIOUS OCCURRENCES**

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