

Kevin Cimorelli
Site Vice President

Susquehanna Nuclear, LLC
769 Salem Boulevard
Berwick, PA 18603
Tel. 570.542.3795 Fax 570.542.1504
Kevin.Cimorelli@TalenEnergy.com



January 26, 2022

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

10 CFR 50.73

**SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 50-387/2021-005-00
UNIT 1 LICENSE NO. NPF-14
PLA-7980**

Docket No. 50-387

Attached is Licensee Event Report (LER) 50-387/2021-005-00. The LER reports an event involving an automatic scram due to a Reactor Protection System actuation as a result of Turbine Valve fast closure. The condition is being reported in accordance with 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in automatic actuation of a system listed in 10 CFR 50.73(a)(2)(iv)(B).

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 be "K. Cimorelli", written over a horizontal line.

K. Cimorelli

Attachment: LER 50-387/2021-005-00

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 Infocollects.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. 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 1	2. Docket Number 05000387	3. Page 1 of 2
---	-------------------------------------	--------------------------

4. Title
Automatic Reactor Scram due to Turbine Control Valve Fast Closure

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
11	30	2021	2021	- 005 -	00	1	26	2022	Facility Name	05000
										Docket Number
										05000

9. Operating Mode 1 **10. Power Level** 080

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

<input checked="" type="checkbox"/> 10 CFR Part 20	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.36(c)(2)	<input checked="" 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)	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)	10 CFR Part 21	<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)	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 in NRC 366A).

12. Licensee Contact for this LER

Licensee Contact: Peggy Kramer, Regulatory Affairs Engineer Phone Number (include Area Code): (570) 542-3131

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 **15. Expected Submission Date**

No Yes (If yes, complete 15. Expected Submission Date)

Month: 05 Day: 23 Year: 2022

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

At approximately 12:54 on November 30, 2021, Susquehanna Steam Electric Station, Unit 1, experienced an automatic reactor scram during Turbine Valve Cycling surveillance testing. During surveillance testing of Main Stop Valve 4 (MSV-4), a simultaneous closure of Turbine Control Valve 4 (TCV-4) occurred, resulting in a Division II Reactor Protection System (RPS) actuation. While the half scram signal was actuated, a Division I RPS actuation occurred, resulting in a full reactor scram. All control rods inserted, and operators placed mode switch to shut down.

This event was reported by Event Notification 55616 in accordance with 10 CFR 50.72(b)(2)(iv)(B) and 10 CFR 50.72(b)(3)(iv)(A). This event is also reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in automatic actuation of a system listed in 10 CFR 50.73(a)(2)(iv)(B).

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 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
<https://www.nrc.gov/reading-m/doc-collections/huregs/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 all: oira_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	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Susquehanna Steam Electric Station, Unit 1	05000-387	2021	- 005 -	00

NARRATIVE

CONDITIONS PRIOR TO EVENT

Unit 1 – Mode 1, approximately 80 percent Rated Thermal Power (RTP)
Unit 2 – Mode 1, approximately 100 percent RTP

Unit 1 Turbine Valve Cycling surveillance testing was in progress at the time of the event.

EVENT DESCRIPTION

At approximately 12:54 on November 30, 2021, the Susquehanna Steam Electric Station, Unit 1, experienced an automatic scram due to a Reactor Protection System (RPS) [EIS System Code: JC] actuation during Turbine Valve Cycling surveillance testing. During the fast closure portion of the surveillance test on Main Stop Valve 4 (MSV-4) [EIS System/Component Codes: TA/SHV], Control Valve 4 (CV-4) [TA/FCV] unexpectedly fast closed, thereby generating a Turbine Control Valve (TCV) fast closure on Division II RPS. While the half scram signal was in on Division II RPS, a Division I RPS trip signal was generated which caused a full reactor scram. All control rods inserted and operators placed the mode switch to shutdown.

This event was reported by Event Notification 55616 in accordance with 10 CFR 50.72(b)(2)(iv)(B) and 10 CFR 50.72(b)(3)(iv)(A). This event is also reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in automatic actuation of a system listed in 10 CFR 50.73(a)(2)(iv)(B).

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

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

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.

PREVIOUS OCCURRENCES

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