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December 19, 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(388)/2022-003-00
UNIT 1 LICENSE NO. NPF-14
UNIT 2 LICENSE NO. NPF-22
PLA-8034

Docket No. 50-387
And 50-388

Attached is Licensee Event Report (LER) 50-387(388)/2022-003-00. The LER reports an event in which one 13.8kV startup transformer was inoperable for longer than allowed by Technical Specifications (TS). This condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a 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 be "K. Cimorelli", written over a horizontal line.

K. Cimorelli

Attachment: LER 50-387(388)/2022-003-00

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, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk all: aira_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

Inoperable 13.8kV Startup Transformer due to Misaligned Load Tap Charger Local/Remote Control Switch

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	22	2022	2022	- 003 -	00	12	19	2022	Susquehanna Steam Electric Station Unit 1	05000387
									Facility Name	Docket Number
										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)

10 CFR Part 20	<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)	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 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)	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**

Derek R. Smith, Senior Engineer – Nuclear Regulatory Affairs

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

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

On October 22, 2022, operators at the Susquehanna Steam Electric Station identified the load tap changer (LTC) local/remote control switch on one of the two 13.8 kV startup transformers was in the remote position, as opposed to the required local position. Upon identification of the condition, operators entered Technical Specification (TS) 3.8.1, "AC Sources-Operating," Condition A for one offsite circuit inoperable. The switch was restored to the local position and the transformer was declared operable at 21:00 on October 22, 2022. Based on investigation and cause, the condition is likely to have existed since October 12, 2022, and is, therefore, being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by TS.

The cause of the event was determined to be inadvertent bumping of the LTC local/remote control switch during opening and closing of the transformer cabinet doors by maintenance personnel. This cause was attributed to a human performance error. Corrective actions include planned procedure revisions to verify the LTC control switches are properly positioned during transformer restoration. 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	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Susquehanna Steam Electric Station Unit 2	05000-388	2022	- 003 -	00

NARRATIVE**CONDITIONS PRIOR TO EVENT**

Unit 1 – Mode 1, approximately 85 percent Rated Thermal Power (RTP)

Unit 2 – Mode 1, approximately 100 percent RTP

There were no structures, systems, or components that were inoperable at the start of the event and contributed to the event. One of the two 13.8kV startup transformers was inoperable for planned maintenance.

EVENT DESCRIPTION

On October 22, 2022, operators at the Susquehanna Steam Electric Station identified the load tap changer (LTC) local/remote control switch [EIS Component Code: 33] on one of the two 13.8kV startup transformers [EIS System/Component Code: E/XFMR] was in the remote position, as opposed to the required local position. Upon identification of the condition, operators entered Technical Specification (TS) 3.8.1, "AC Sources-Operating," Condition A for one offsite circuit inoperable. Investigation determined the control switch was most likely inadvertently manipulated while restoring the transformer to operable from planned maintenance on October 12, 2022. The switch was restored to the local position and the transformer was declared operable at 21:00 on October 22, 2022.

The following timeline demonstrates the sequence of events:

10/10/2022 ~ 22:10: TS 3.8.1, Condition A is entered to support planned maintenance on one of the two 13.8 kV startup transformers.

10/11/2022 ~ 06:00: Routine preventative maintenance activities begin to inspect and change the oil in the transformer LTC. The LTC local/remote control switch is not manipulated per the work instructions.

10/11/2022 ~ 14:00: While removing the clearance order from the 480 V normal and alternate control cabinet [EIS Component Code: CAB], the transformer cooling fans [EIS Component Code: FAN] started unexpectedly, requiring troubleshooting to restore the transformer to operable.

10/11/2022 ~ 18:15: Maintenance of the LTC is completed and post maintenance testing (PMT) is completed successfully.

10/11/2022 through 10/12/2022 ~20:00: Troubleshooting on the unexpected fan start continued. Troubleshooting activities require access in the cabinet where the LTC local/remote control switch is located. Investigation determined this to be the most probable timeframe the switch was inadvertently bumped.

10/12/2022 ~ 20:00: The transformer is restored to service and declared Operable. TS 3.8.1, Condition A is exited.

10/22/2022 ~ 15:13: The control room received a report that the transformer LTC local/remote control switch was found in the remote position, as opposed to the expected local position. The transformer is declared inoperable and TS 3.8.1, Condition A is entered.

10/22/2022 ~ 21:00: The LTC local/remote control switch is placed in the correct position and the transformer is declared operable. TS 3.8.1, Condition A is exited.

Based on the timeline above, the transformer was inoperable for longer than allowed by TS. Therefore, this condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by TS.

**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

2022

SEQUENTIAL

NUMBER

- 003 -

REV

NO.

00

NARRATIVE**CAUSE OF EVENT**

The cause of the event was determined to be inadvertent bumping of the LTC local/remote control switch during opening and closing of the transformer cabinet doors by maintenance personnel. This cause was attributed to a human performance error.

ANALYSIS/SAFETY SIGNIFICANCE

Based on engineering analysis of the event, station AC sources could have performed their safety function for this condition. If the startup transformer were unable to provide power, the alternate startup transformer is capable of providing offsite AC power to systems and components required to operate the engineering safety features for one unit and safe shutdown loads on the other unit. In addition, if both offsite sources were unavailable, the four aligned Emergency Diesel Generators (DGs) would supply the required power to emergency loads. Both the alternate startup transformer and the DGs were available during the time the LTC was in the remote position. Therefore, the electrical distribution system could have fulfilled its safety function for the condition described.

This event will not be counted as a safety system functional failure for the NRC performance indicator based on the engineering analysis supporting the system's ability to fulfill the safety function. There were no actual consequences to the health and safety of the public as a result of this event.

CORRECTIVE ACTIONS

1. Share lessons learned with station maintenance personnel.
2. Revise station operation procedures to verify the LTC control switches are in proper positions for operability during transformer restoration.

COMPONENT FAILURE INFORMATION

Not applicable.

PREVIOUS OCCURRENCES

None.