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April 11, 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 50-388/2021-005-01
UNIT 2 LICENSE NO. NPF-22
PLA-7997**

Docket No. 50-388

Attached is Licensee Event Report (LER) 50-388/2021-005-01. The LER supplement reports an event in which the Unit 2 'B' Reactor Protection System and Primary Containment Isolation System were 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 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 read "K. Cimorelli", written over a horizontal line.

K. Cimorelli

Attachment: LER 50-388/2021-005-01

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

Condition Prohibited by Technical Specification Due to Setpoint Drift Attributed to Age Related Degradation

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
12	15	2021	2021	- 005 -	01	04	11	2022	Facility Name	Docket Number
										05000
									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**

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
X	JC	LIS	B080	Y					

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)

At approximately 13:50 on December 15, 2021, during surveillance testing, personnel at the Susquehanna Steam Electric Station, Unit 2, found the setpoint for the Unit 2 'B' Reactor Vessel Water Level Narrow Range Indicator, LISB212N024B, had drifted outside of its Technical Specification (TS) Allowable Value (AV). Operators declared the Reactor Protection System and the Primary Containment Isolation System inoperable, and entered TS 3.3.1.1, Condition A, and TS 3.3.6.1, Condition A. The level indicator's setpoint was adjusted to within the TS AV, and TS 3.3.1.1, Condition A, and TS 3.3.6.1, Condition A, were exited at 15:42 on December 15. Based on the information available, the condition is considered to have existed for longer than allowed by TS 3.3.1.1 and TS 3.3.6.1. Therefore, the condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by the plant's TS.

The cause of the event was determined to be an increase in instrument drift due to age related degradation of LISB212N024B internal micro switch 1A. Contributing to this was that a work order was previously generated to replace the switch but not scheduled. Corrective actions included replacement of LISB212N024B, which included internal micro switches 1A and 1B.

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	- 005 -	01

NARRATIVE**CONDITIONS PRIOR TO EVENT**

Unit 1 – Mode 1, approximately 98 percent Rated Thermal Power (RTP)

Unit 2 – Mode 1, approximately 100 percent RTP

EVENT DESCRIPTION

At approximately 13:50 on December 15, 2021, during surveillance testing, personnel at the Susquehanna Steam Electric Station, Unit 2, found the setpoint for the Unit 2 'B' Reactor Vessel Water Level Narrow Range Indicator LISB212N024B [EIS System/Component Code: JC/LIS] had drifted outside of its Technical Specification (TS) Allowable Value (AV). Operators declared the Reactor Protection System and the Primary Containment Isolation System [JM] inoperable, and entered TS 3.3.1.1, "Reactor Protection System (RPS) Instrumentation," Condition A, and TS 3.3.6.1, "Primary Containment Isolation Instrumentation," Condition A. LISB212N024B was adjusted to within the TS AV, and TS 3.3.1.1, Condition A, and TS 3.3.6.1, Condition A, were exited at 15:42 on December 15.

Based on the information available, the condition is considered to have existed for longer than allowed by TS 3.3.1.1 and TS 3.3.6.1. Therefore, the condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by the plant's TS.

CAUSE OF EVENT

The cause of the event was determined to be an increase in instrument drift due to age related degradation of LISB212N024B internal micro switch 1A. Contributing to this was that a work order was previously generated to replace the switch but not scheduled.

ANALYSIS/SAFETY SIGNIFICANCE

While LISB212N024B was outside of the TS 3.3.1.1 and TS 3.3.6.1 allowable value, the other trip system channel was available with the exception of a 6.5-hour window when its indicators were out of service for surveillance. Excessive drift of LISB212N024B would not have occurred in the approximate 6.5 hours taken to satisfactorily surveil the other trip system which immediately followed surveillance of LISB212N024B. Therefore, RPS and Primary Containment Isolation System would have performed within their safety functions and the condition described herein did not result in a safety system functional failure. Accordingly, this event will not be counted as a safety system functional failure in the Reactor Oversight Process Performance Indicators. There were no actual consequences to the health and safety of the public as a result of this event.

CORRECTIVE ACTIONS

The switch was returned to within TS allowable values. Corrective actions included replacement of LISB212N024B, which included internal micro switches 1A and 1B.

**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

2021

SEQUENTIAL
NUMBER

- 005 -

REV
NO.

01

NARRATIVE**COMPONENT FAILURE INFORMATION**

Component: LISB212N024B Reactor Vessel Water Level Narrow Range
System: Reactor Protection System
Manufacturer: Barton
Model: 288A
Serial No: 28879

PREVIOUS OCCURRENCES

None.