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MAY 30 2018

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

10 CFR 50.73

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 50-387(388)/2018-002-00
UNIT 1 LICENSE NO. NPF-14
UNIT 2 LICENSE NO. NPF-22
PLA-7707

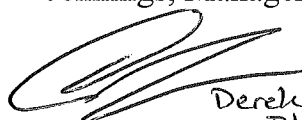
Docket No. 50-387
50-388

Attached is Licensee Event Report (LER) 50-387(388)/2018-002-00. This LER is reporting an event which caused a loss of secondary containment differential pressure that was determined to be reportable in accordance with 10 CFR 50.73(a)(2)(v)(C) as a condition that could have prevented 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 regulatory commitments.

Should you have any questions regarding this submittal, please contact Mr. Jason Jennings, Manager – Nuclear Regulatory Affairs at (570) 542-3155.


Derek Jones
Plant Mgr for Brad Berryman
B. Berryman

Attachment: LER 50-387(388)/2018-002-00

Copy: NRC Region I
Ms. T. E. Hood, NRC Project Manager
Ms. L. H. Micewski, NRC Sr. Resident Inspector
Mr. M. Shields, PA DEP/BRP

Electronic Copy:

B. Berryman
M. M. Thorpe-Kavanaugh (NSRB)
J. R. Jennings
D. J. LaMarca
K. Brown
T. L. Martin
M. J. Murphy
L. G. Oberrender
G. S. Lubinsky (DBD)

DCS



LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)
(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://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 Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. Facility Name Susquehanna Steam Electric Station Unit 1	2. Docket Number 05000387	3. Page 1 OF 3
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4. Title Loss of Secondary Containment Differential Pressure Following Surveillance Testing

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
04	03	2018	2018	002	00	05	30	2018	Susquehanna Steam Electric Station Unit 2	05000388
									N/A	05000

9. Operating Mode 5	11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)			
	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
10. Power Level 000	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(1)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(2)(ii)
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(iii)
		<input type="checkbox"/> 50.73(a)(2)(j)(C)	<input type="checkbox"/> Other (Specify in Abstract below or in NRC Form 366A)	

12. Licensee Contact for this LER

Licensee Contact Katie Brown, Senior Engineer - Nuclear Regulatory Affairs	Telephone Number (Include Area Code) (570) 542-3407
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13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable To ICES	Cause	System	Component	Manufacturer	Reportable To ICES
X	NG	BKR	ABB	Yes					

14. Supplemental Report Expected <input type="checkbox"/> Yes (If yes, complete 15. Expected Submission Date) <input checked="" type="checkbox"/> No	15. Expected Submission Date	Month	Day	Year
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Abstract (Limit to 1400 spaces, i.e., approximately 14 single-spaced typewritten lines)

On April 03, 2018 at approximately 00:19, the Susquehanna control room received indication of a loss of Secondary Containment Zone 3 differential pressure, noting differential pressure less than 0.25 inches water gauge (WG). As a result, Technical Specification 3.6.4.1 Surveillance Requirement 3.6.4.1.1 was not met. The alarm came in during Unit 1 surveillance testing.

The condition is being reported in accordance with 10 CFR 50.73(a)(2)(v)(C) as an event or condition that could have prevented fulfillment of a safety function. The condition was previously reported on April 03, 2018, at 02:53 in accordance with 10 CFR 50.72(b)(3)(v)(C) in EN #53310.

The direct cause of this event was due to vendor workmanship resulting in a missing cotter pin that prevented the Unit 2, Zone 3 Supply Fan breaker from closing and remaining closed.

Corrective actions include installation of cotter pin on the Unit 2, Zone 3 Supply Fan breaker, replacement of electronic control device, and addition of step to identified plant procedures to ensure a retaining pin is installed prior to installation of refurbished breakers.

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
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

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1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Susquehanna Steam Electric Station Unit 1	05000-387	2018	- 002	- 00

NARRATIVE

CONDITIONS PRIOR TO EVENT

Unit 1 – Mode 5, 0 percent Rated Thermal Power

Unit 2 – Mode 1, approximately 100 percent Rated Thermal Power

There were no structures, systems, or components that were inoperable at the start of the event that contributed to the event. Unit 1 was in a refueling outage and Secondary Containment Zone 1 was relaxed.

EVENT DESCRIPTION

On April 03, 2018 at approximately 00:19, the Susquehanna control room received indication of a loss of Secondary Containment Zone 3 HVAC [EIS: NG] differential pressure, noting differential pressure (dP) less than 0.25 inches water gauge (WG). As a result, Technical Specification (TS) 3.6.4.1 Surveillance Requirement 3.6.4.1.1 was not met. The alarm came in during Unit 1 surveillance testing.

An abbreviated timeline of the April 03, 2018 events is as follows:

00:01: Unit 1 surveillance testing initiated.

00:19: Unit 2 Control Room received Reactor Building HVAC and Zone 3 alarms. Operations entered applicable Unit 1 and Unit 2 TS 3.6.4.1 action statements due to loss of Zone 3 dP resulting from fan oscillations.

00:29 – 00:40: Unit 1 and Unit 2, Zone 3 fans [EIS: FAN] observed cycling. Operator placed all Zone 3 fans in STOP.

01:19: Operations determined Unit 2, Zone 3 fans [EIS: FAN] could not maintain dP.

01:35: Unit 1, Zone 3 was restarted and maintained appropriate dP.

01:45: Operations exited applicable TS 3.6.4.1 action statements.

During attempts to restart Unit 2, Zone 3 Supply Fan 2V212B [EIS: FAN], the fan was unable to start because the Unit 2, Zone 3 Supply Fan Breaker 2B28033 [EIS: BKR] could not close. The investigation concluded that the electronic control device was not functioning correctly. During the replacement of the control device, the axial pin that connects the trip paddle to the breaker was found to be improperly positioned such that it prevented the breaker from closing and remaining closed. The axial pin requires a cotter pin to keep the axial pin in place when the breaker closes and to remain closed. A cotter pin was installed and the electronic control device was replaced.

The condition is being reported in accordance with 10 CFR 50.73(a)(2)(v)(C) as an event or condition that could have prevented fulfillment of a safety function. The condition was previously reported on April 03, 2018, at 02:53 in accordance with 10 CFR 50.72(b)(3)(v)(C) in EN #53310.



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		YEAR	SEQUENTIAL NUMBER	REV NO.
Susquehanna Steam Electric Station Unit 1	05000-387	2018	- 002	- 00

CAUSE OF EVENT

The direct cause of this event was due to vendor workmanship resulting in a missing cotter pin that prevented the Unit 2, Zone 3 Supply Fan breaker from closing and remaining closed.

ANALYSIS/SAFETY SIGNIFICANCE

Based on engineering analysis of the event, secondary containment could have performed its safety function of isolating as assumed in the accident analysis and of re-establishing 0.25 inches of vacuum WG (drawdown) within the assumed accident analysis time (10 minutes).

This event will not be counted as a safety system functional failure (SSFF) for the NRC performance indicator based on the engineering analysis supporting the system's ability to fulfill the safety function.

CORRECTIVE ACTIONS

Pertinent corrective actions include the following:

1. Installation of cotter pin on the Unit 2, Zone 3 Supply Fan breaker and replacement of electronic control device (Action Complete).
2. Addition of step to identified plant procedures to ensure a retaining pin is installed prior to installation of refurbished breakers where applicable.

PREVIOUS SIMILAR EVENTS

The following are recent LERs involving loss of secondary containment:

LER 50-387(388)/2017-007-01, "Secondary Containment Declared Inoperable Due to the Opening of a Plenum," dated May 04, 2018.

LER 50-388(387)/2018-001-00, "Loss of Secondary Containment Differential Pressure During Entry into Unit 2 Zone 3 Exhaust Plenum," dated April 11, 2018.

LER 50-388(387)/2017-009-01, "Secondary Containment Declared Inoperable Due to Trip of Zone II Equipment Exhaust Fan," dated February 12, 2018.

LER 50-388(387)/2017-007-00, "Secondary Containment Declared Inoperable Due to Supply Air Flow," dated October 09, 017.

LER 50-388(387)/2017-006-00, "Secondary Containment Declared Inoperable Due to Trip of Zone II Exhaust Fan," dated September 06, 2017.

LER 50-388(387)/2017-005-00, "Secondary Containment Declared Inoperable Due to Trip of Zone III Filtered Exhaust Fan," dated August 18, 2017.

LER 50-387(388)/2017-004-00, "Secondary Containment Declared Inoperable Due to Failure of an Exhaust Fan Breaker," dated August 04, 2017.

LER 50-387(388)/2017-003-00, "Loss of Secondary Containment Zone 3 Due to Fan Trip," dated May 05, 2017.