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NOV 17 2016

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

10 CFR 50.73

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 50-388(387)/2016-006-00
UNIT 1 LICENSE NO. NPF-14
UNIT 2 LICENSE NO. NPF-22
PLA-7548

Docket No. 50-387
50-388

Attached is Licensee Event Report (LER) 50-388(387)/2016-006-00. The LER reports an event involving loss of secondary containment differential pressure due to a stuck exhaust damper. This event 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.

A handwritten signature in black ink, appearing to read "Robert J. Franssen".

R. J. Franssen

Attachment: LER 50-388(387)/2016-006-00

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



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 FOIA, Privacy and Information Collections Branch (T-5 F53), 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, NEOF-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 2	2. DOCKET NUMBER 05000388	3. PAGE 1 OF 3
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4. TITLE Loss of Secondary Containment Due to Damper Controller Sticking

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
09	22	2016	2016	006	00	11	17	2016	Susquehanna Steam Electric Station Unit 1	05000387
									FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE 1	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)
10. POWER LEVEL 100	<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)
	<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)(i)
	<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)(ii)
		<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> OTHER Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT C. E. Manges, Jr., Senior Engineer - Nuclear Regulatory Affairs	TELEPHONE NUMBER (Include Area Code) (570) 542-3089
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
E	VA	Bushing	Contromatics	Yes					

14. SUPPLEMENTAL REPORT EXPECTED	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO			

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On September 22, 2016 at 03:20, a Nuclear Plant Operator (NPO) reported that Reactor Building Zone II differential pressure (dP) was steady at 0.15 inches water gauge (WG) resulting in entry into Technical Specification 3.6.4.1. Operations determined that the flow control damper (PDD27522A) for the "A" Zone II equipment exhaust fan (2V206A) was sticking, resulting in Zone II dP not being properly controlled. The linkage for the damper was agitated and the damper moved to control dP as designed. Operations placed the "B" division fan (2V206B) in service. Following the fan swap, dP held steady at 0.31 inches WG with 2V206B in service and 2V206A in standby. Technical Specification 3.6.4.1 was cleared at 03:42.

This event was reported in accordance with 10 CFR 50.72(b)(3)(v)(C) as a condition that could have prevented fulfillment of a safety function (EN 52255). The condition also requires a Licensee Event Report (LER) in accordance with 10 CFR 50.73(a)(2)(v)(C).

The cause of the event was age related degradation of the brass bushing and grease hardening in the damper linkage. Corrective actions include initiating work orders to disassemble, inspect, and replace the brass bushings for the remaining similar dampers. A Preventive Maintenance strategy will be evaluated following completion of the inspections of the remaining dampers.

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	2016	- 006	- 00

NARRATIVE**CONDITIONS PRIOR TO EVENT**

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

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

EVENT DESCRIPTION

On September 22, 2016 at 03:20, a Nuclear Plant Operator (NPO) reported that Reactor Building Zone II differential pressure (dP) was steady at 0.15 inches water gauge (WG) resulting in entry into Technical Specification 3.6.4.1. Operations determined that the flow control damper (PDD27522A) [EIS System/Component Identifier: VA/DMP] for the "A" Zone II equipment exhaust fan (2V206A) [EIS System/Component Identifier: VA/FAN] was sticking, resulting in Zone II dP not being properly controlled. The linkage for the damper was agitated and the damper moved to control dP as designed. Operations placed the "B" division fan (2V206B) in service. Following the fan swap, dP held steady at 0.31 inches WG with 2V206B in service and 2V206A in standby. Technical Specification 3.6.4.1 was cleared at 03:42.

During troubleshooting for this event, the linkage was disassembled and the damper was manually stroked with the linkage arm. The damper stroked smoothly with no binding. Internal inspection identified no issues. The pivot point for the linkage arm was disassembled and replaced. When the pivot point was disassembled, Maintenance discovered that the brass bushing and pins were worn and the grease was hardened and sticky.

This event was reported in accordance with 10 CFR 50.72(b)(3)(v)(C) as a condition that could have prevented fulfillment of a safety function (EN 52255). The condition also requires a Licensee Event Report (LER) in accordance with 10 CFR 50.73(a)(2)(v)(C).

CAUSE OF EVENT

The cause of the event was age related degradation of the brass bushing and grease hardening.

ANALYSIS/SAFETY SIGNIFICANCE

An engineering evaluation was performed and concluded that secondary containment could have performed its safety function of isolating as assumed in the accident analysis and also of re-establishing 0.25 inches vacuum (drawdown) within the assumed accident analysis time (10 minutes). Therefore, the subject event did not cause a loss of safety function. This event will not be counted as a safety system functional failure (SSFF) for the NRC performance indicator based on the engineering analysis that shows there was no loss of ability to fulfill the safety function.

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CONTINUATION SHEET**

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Susquehanna Steam Electric Station Unit 2	05000-388	YEAR	SEQUENTIAL NUMBER	REV NO.
		2016	- 006	- 00

CORRECTIVE ACTIONS

Key corrective actions include the following:

1. Work orders were written to disassemble, inspect, and replace the brass bushings for the remaining similar dampers (PDD27522B, PDD17522A/B, PDD17512A/B, and PDD27512A/B).
2. A PM strategy will be evaluated following completion of the inspections of the remaining similar dampers. Industry benchmarking revealed that no other stations perform PMs on these damper linkage arms, and the failure history at Susquehanna is small / minimal.

COMPONENT FAILURE INFORMATION

Information on the failed bushing is as follows:

Manufacturer: Contromatics

Model #: 375SR

PREVIOUS SIMILAR EVENTS

LER 50-387(388) / 2016-012-00, "Secondary Containment Declared Inoperable Due to Loss of Differential Pressure as a Result of Solenoid Failure," dated May 26, 2016

LER 50-387(388) / 2016-003-00, "U2 Zone 3 HVAC Unable to Maintain Zone 3 Differential Pressure Greater than 0.25 in wg," dated May 6, 2016

LER 50-387 / 2015-013-01, "Loss of Differential Pressure in Zone I of Secondary Containment Due to Solenoid Valve Failure," dated August 5, 2016

LER 50-388(387) / 2015-010-01, "Supplement Report to LER-2015-010-00, Loss of Differential Pressure in Zone II of Secondary Containment," dated July 6, 2016

LER 50-387(388) / 2015-002-00, "Secondary Containment Inoperability Due to Failure to Meet Technical Specification Surveillance Requirement 3.6.4.1.1," dated June 10, 2015