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JUN 22 2015

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)/2015-003-00
UNIT 1 LICENSE NO. NPF-14
UNIT 2 LICENSE NO. NPF-22
PLA-7330

Docket Nos. 50-387
50-388

Attached is Licensee Event Report (LER) 50-387(388)/2015-003-00. The LER reports an event involving the inoperability of Secondary Containment. This LER is being submitted in accordance with 10 CFR 50.73(a)(2)(v)(C), for an event or condition that at the time of discovery could have prevented the fulfillment of the safety function of Secondary Containment to control the release of radioactive material.

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.~~



J. A. Franke

Attachment: LER 50-387(388)/2015-003-00

Copy: NRC Region I
Mr. J. E. Greives, NRC Sr. Resident Inspector
Mr. J. A. Whited, NRC Project Manager
Mr. B. Fuller, PA DEP/BRP



LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of
digits/characters for each block)

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 internet e-mail to Infocollections.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				
4. TITLE Secondary Containment Inoperability Due to Failure to Meet Technical Specification Surveillance Requirement 3.6.4.1.1													
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 Susquehanna Steam Electric Station, Unit 2		DOCKET NUMBER 05000388		
04	21	2015	2015	- 003	00	06	22	2015	FACILITY NAME		DOCKET NUMBER		
9. OPERATING MODE													
11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)													
1		<input type="checkbox"/> 20.2201(b)				<input type="checkbox"/> 20.2203(a)(3)(i)				<input type="checkbox"/> 50.73(a)(2)(i)(C)		<input type="checkbox"/> 50.73(a)(2)(vii)	
		<input type="checkbox"/> 20.2201(d)				<input type="checkbox"/> 20.2203(a)(3)(ii)				<input type="checkbox"/> 50.73(a)(2)(ii)(A)		<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
10. POWER LEVEL 100		<input type="checkbox"/> 20.2203(a)(1)				<input type="checkbox"/> 20.2203(a)(4)				<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)(i)				<input type="checkbox"/> 50.36(c)(1)(i)(A)				<input type="checkbox"/> 50.73(a)(2)(iii)		<input type="checkbox"/> 50.73(a)(2)(ix)(A)	
		<input type="checkbox"/> 20.2203(a)(2)(ii)				<input type="checkbox"/> 50.36(c)(1)(ii)(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)(iii)				<input type="checkbox"/> 50.36(c)(2)				<input type="checkbox"/> 50.73(a)(2)(v)(A)		<input type="checkbox"/> 73.71(a)(4)	
		<input type="checkbox"/> 20.2203(a)(2)(iv)				<input type="checkbox"/> 50.46(a)(3)(ii)				<input type="checkbox"/> 50.73(a)(2)(v)(B)		<input type="checkbox"/> 73.71(a)(5)	
		<input type="checkbox"/> 20.2203(a)(2)(v)				<input type="checkbox"/> 50.73(a)(2)(i)(A)				<input checked="" type="checkbox"/> 50.73(a)(2)(v)(C)		<input type="checkbox"/> OTHER	
		<input type="checkbox"/> 20.2203(a)(2)(vi)				<input type="checkbox"/> 50.73(a)(2)(i)(B)				<input type="checkbox"/> 50.73(a)(2)(v)(D)		Specify in Abstract below or in NRC Form 366A	
12. LICENSEE CONTACT FOR THIS LER													
LICENSEE CONTACT Richard W. McIntosh, Nuclear Regulatory Affairs								TELEPHONE NUMBER (Include Area Code) (570) 542-1695					
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				
14. SUPPLEMENTAL REPORT EXPECTED								15. EXPECTED SUBMISSION DATE		MONTH	DAY	YEAR	
<input checked="" type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)								<input type="checkbox"/> NO		09	18	2015	
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)													
<p>On April 21, 2015, at 2258 hours, the ventilation system that maintains Secondary Containment was unable to maintain a negative pressure requiring entry into the Action Statement for Technical Specification (TS) 3.6.4.1, Condition A, for the failure to meet Surveillance Requirement (SR) 3.6.4.1.1 for Susquehanna Steam Electric Station (SSES) Unit 1 and Unit 2. The Reactor Building (RB) Zone III differential pressure fell below the TS requirement of 0.25 inches water column (in. w.c.) while Zone III fans were in the test alignment for the hand switch. A wind gust had been previously recorded at the station. When the fans restarted, differential pressure was restored to meet the TS requirement of 0.25 in. w.c. at 2314 hours. TS 3.6.4.1, Condition A, was later exited on April 22, at 0015 hours.</p> <p>In accordance with 10 CFR 50.73(a)(2)(v)(C), this LER is being submitted for an event or condition that at the time of discovery, could have prevented the fulfillment of the safety function of Secondary Containment to control the release of radioactive material.</p> <p>Zone III supply fans shut down and then were unable to restart to maintain the required RB Zone III differential pressure. This event occurred following a high wind gust, and at a time when testing was required that used the test alignment for the hand switch for the RB ventilation fans. The cause of this event continues to be evaluated, so a supplement to this report will be provided with corrective action.</p> <p>There were no actual consequences to the health and safety of the public as a result of this event. An engineering evaluation concludes no Safety System Functional Failure actually occurred as a result of this event.</p>													

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

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 internet e-mail to Infocollections.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	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Susquehanna Steam Electric Station, Unit 1	05000387	2015	- 003	- 00	2 of 3

NARRATIVE**CONDITIONS PRIOR TO THE EVENT**

Unit 1 – Mode 1, 100 percent Rated Thermal Power
Unit 2 – Mode 5, Refueling

There were no systems, structures, or components that were inoperable at the start of the event and contributed to the event. On April 21, 2015, a procedure was in progress on Unit 2 for planned performance of Surveillance Requirements (SR). The procedure and SRs use a simulated loss of offsite power (LOOP) event, and load shedding from an Engineered Safeguards System (ESS) bus, and auto start of diesel generators from standby conditions. This procedure directs the use of a test alignment for the hand switch for the lead Reactor Building (RB) Secondary Containment Zone III supply fan for performance of the required surveillance testing. The test alignment for the hand switch defeats the low flow trip logic of operating supply fans and the auto start of the standby supply fans upon a loss and restoration of power to an ESS bus.

EVENT DESCRIPTION

On April 21, 2015, at 2258 hours, the ventilation system that maintains Secondary Containment was unable to maintain a negative pressure requiring entry into the Action Statement for Technical Specification (TS) 3.6.4.1, Condition A, for the failure to meet Surveillance Requirement (SR) 3.6.4.1.1 for Susquehanna Steam Electric Station (SSES) Unit 1 and Unit 2. The Reactor Building (RB) Zone III differential pressure fell below the TS requirement of 0.25 inches water column (in. w.c.) while Zone III fans were in the test alignment for the hand switch, [EIS System Code VA]. A wind gust of approximately 30 mph had been previously recorded at the station. The Zone III ventilation system is designed to shut down if the sensed differential pressure between the zone and the outside atmosphere is too high or too low, as can occur during winds. After the ventilation shuts down, the sensed differential pressure lowers and the system is designed to restart when operating properly. The RB ventilation was restored when the handswitch for the lead Zone III supply fan was returned to the START position, enabling the low flow trip logic of operating RB supply fans, and the auto start of the standby RB supply fans. When the fans restarted, differential pressure was restored to meet the TS requirement of 0.25 in. w.c. at 2314 hours. TS 3.6.4.1, Condition A, was later exited on April 22, at 0015 hours.

On April 22, 2015, at 0158 hours, this condition was reported as an 8-hour Event Notification #51001 in accordance with 10 CFR 50.72(b)(3)(v)(C) for any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material. SSES has no redundant Secondary Containment system. In accordance with 10 CFR 50.73(a)(2)(v)(C), this LER is being submitted for an event or condition that at the time of discovery, could have prevented the fulfillment of the safety function of Secondary Containment to control the release of radioactive material.

CAUSE OF THE EVENT

The cause of this event is still under evaluation. Zone III supply fans shut down and then were unable to restart to maintain the required RB Zone III differential pressure. This event occurred following a high wind gust, and at a time when testing was required that used the test alignment for the hand switch for the RB ventilation fans. A supplement to this LER will be provided.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Susquehanna Steam Electric Station Unit 1	05000387	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 3
		2015	-003	-00	

NARRATIVE**ANALYSIS/SAFETY SIGNIFICANCE**

The actual consequence of this event was a degradation of the Secondary Containment differential pressure, which led to an unplanned entry into the Action Statement for TS 3.6.4.1, Condition A, for Unit 1 and Unit 2. An Engineering evaluation was performed, which concluded that Secondary Containment could have performed its safety function of isolating as assumed in the SSES accident analysis and also of re-establishing 0.25 in. w.c. differential pressure within the assumed accident analysis time of 10 minutes (i.e., drawdown time). Therefore, the safety function of the Secondary Containment boundary and Standby Gas Treatment systems were unaffected and capable of performing their safety function during this event. As such, there were no actual consequences to the health and safety of the public.

Additionally, this event will not be counted as a safety system functional failure (SSFF) for the NRC performance indicator based on the engineering evaluation that was done in accordance with the Nuclear Energy Institute 99-02, Rev. 7, "Regulatory Assessment Performance Indicator Guideline" that concluded there was no loss of Secondary Containment's ability to fulfill its safety function.

CORRECTIVE ACTIONS

Compensatory action was immediately initiated to suspend movement of light loads over irradiated fuel in the Unit 2 Spent Fuel Pool and cavity. Corrective action was taken to restore the RB Zone III ventilation, and exit the TS 3.6.4.1, Condition A, when differential pressure for Secondary Containment was restored to meet the TS requirement in SR 3.6.4.1.1.

The cause of this event continues to be evaluated, so a supplement to this report will be provided with corrective action. In the interim, no other corrective action is needed because the next performance of the test procedure is on a 24 month frequency, during refueling.

PREVIOUS SIMILAR EVENTS

This event is similar to the following events involving the use of procedures that had an impact on maintaining the RB Secondary Containment ventilation.

- LER 50-387(388)/2014-007-00, Loss of Secondary Containment Pressure During RPS Transfer, issued June 12, 2014.
- LER 50-387(388)2013-006-01, Loss of Secondary Containment due to Differential Pressure not Meeting Technical Specification 3.6.4.1, issued July 30, 2014