Brad Berryman
Site Vice President

Susquehanna Nuclear, LLC
769 Salem Boulevard
Berwick, PA 18603
Tel. 570.542.2904 Fax 570.542.1504
Brad.Berryman@TalenEnergy.com

TALEN ENERGY

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

10 CFR 50.73

APR 0 2 2018

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 50-387/2017-008-00
UNIT 1 LICENSE NO. NPF-14 **Docket No. 50-387**
PLA-7697

Attached is Licensee Event Report (LER) 50-387/2017-008-00. This LER reports the improper staging of equipment near a Core Spray Unit Cooler in the Unit 1 Division 2 Core Spray room without seismically restraining the equipment. This resulted in a condition prohibited by Technical Specifications and has been determined to be reportable pursuant to 10 CFR 50.73(a)(2)(i)(B).

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.

B. Berryman

Attachment: LER 50-387/2017-008-00

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

NRC FORM 366 (02-2018) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 03/31/2020

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/)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Susquehanna Steam Electric Station Unit 1	05000387	1 OF 3

4. TITLE Core Spray Inoperable due to not meeting Seismic requirements as a result of a Human Performance Error

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
										05000
12	03	2017	2017	- 008	- 00	04	02	2018	FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*			
1	☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
	☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
	☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
	☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
10. POWER LEVEL	☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
100	☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(C)	☐ 73.77(a)(1)
	☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(i)
	☐ 20.2203(a)(2)(vi)	☒ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(ii)
		☐ 50.73(a)(2)(i)(C)	☐ OTHER Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT	TELEPHONE NUMBER *(Include Area Code)*
Melisa Krick – Senior Engineer - Nuclear Regulatory Affairs	(570) 542-1818

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO ICES	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO ICES

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☒ NO

15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR

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

On December 3, 2017, at approximately 1030, Operations identified materials staged in the Susquehanna Steam Electric Station (SSES) Unit 1 Division 2 Core Spray Room near the "B" Core Spray Pump Room Unit Cooler. The replacement piping materials were located on pipe roller stands approximately 6 inches from the unit cooler and were not seismically restrained. At the time of this condition, the SSES Unit 1 Division 2 Residual Heat Removal (RHR) Low Pressure Core Spray (LPCI) Swing Bus MG voltage regulator was being replaced. As such, Unit 1 Technical Specification 3.5.1 condition A for the voltage regulator replacement had already been entered. With the U1 "B" Core Spray Unit Cooler inoperable due to the presence of the improperly stored materials, this would have required entry into TS 3.5.1 condition I which requires entry into TS LCO 3.0.3 immediately.

The cause of the condition was determined to be less than adequate procedure use and adherence. The staged piping was removed immediately and a communication was performed with site personnel on this issue.

This condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications. There were no actual consequences to the health and safety of the public as a result of this event.

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Susquehanna Steam Electric Station Unit 1	05000387	2017	- 008	- 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

There were no structures, systems, or components that were inoperable at the start of the event that contributed to the event.

EVENT DESCRIPTION

On December 3, 2017, Operations identified materials staged in the Susquehanna Steam Electric Station (SSES) Unit 1 Division 2 Core Spray [EIIS: BG] Room near the "B" Core Spray Pump Room Unit Cooler [IEEE: CLR]. The replacement piping materials were located on pipe roller stands approximately 6 inches from the unit cooler and were not seismically restrained. At the time of this condition, the Unit 1 Division 2 Residual Heat Removal (RHR) Low Pressure Core Spray (LPCI) [EIS: BO] Swing Bus MG voltage regulator [IEEE: RG] was being replaced. As such, Unit 1 Technical Specification (TS) 3.5.1 condition A for the voltage regulator replacement had already been entered. The following timeline demonstrates the sequence of events:

12/1/17 ~1300: Supplemental work force improperly staged replacement piping for upcoming work in the Unit 1 Division 2 Core Spray Room near the "B" Core Spray Pump Room Unit Cooler.

12/2/17 ~ 0748: Unit 1 TS 3.5.1 condition A was entered in support of the Division 2 RHR Low Pressure Core Spray Swing Bus MG voltage regulator replacement.

12/3/17 ~1030: Operations identified the unrestrained replacement piping staged in the Unit 1 Division 2 Core Spray Room. A condition report was generated and Engineering was contacted.

12/3/17 ~1335: Unit 1 TS 3.5.1 condition A was exited upon completion of the Division 2 RHR Low Pressure Core Spray Swing Bus MG voltage regulator replacement.

12/3/17 ~1600: Maintenance removed the unrestrained replacement piping from the Core Spray Room.

Based on Engineering review of the information available with respect to the positioning of the materials staged in the Core Spray Room, it was determined that under a seismic event, the piping could potentially make contact with the Core Spray Pump Room Unit Cooler conduit resulting in a loss of power to the cooler and inoperability of one of the Core Spray Pumps in the room. With the U1 "B" Core Spray Unit Cooler inoperable due to the presence of the improperly stored materials, this would have required entry into TS 3.5.1 condition I which requires entry into TS LCO 3.0.3 immediately.

This condition is being reported in accorance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications. There were no actual consequences to the health and safety of the public as a result of this event.

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
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Susquehanna Steam Electric Station Unit 1	05000387	2017	- 008	- 00

CAUSE OF EVENT

The cause of the event was determined to be less than adequate procedure use and adherence. The workers did not stage the material in accordance with station procedures which require storage of transient equipment in accordance with identified seismic requirements, including proper spacing from plant equipment and proper restraint.

ANALYSIS/SAFETY SIGNIFICANCE

The safety significance of a potential failure of the Core Spray Room Unit Cooler as a result of impact from the staged materials in a seismic event was completed by Engineering. Based on review of calculations associated with the temperature response of the core spray pump room with one core spray room cooler inoperable, it was determined that with one core spray cooler inoperable, the room temperatures would be maintained within the limiting qualified temperatures. Additionally, the actual Emergency Service Water (ESW) supply temperatures in winter are lower than summer which will dramatically increase the cooling capability of the remaining room cooler as well. Even neglecting this effect the results are acceptable. Therefore, the Core Spray system would have performed its safety function with one unit cooler operable.

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

With respect to addressing the cause, the Maintenance department has reinforced the procedure requirements for staging equipment with the crews and the entire station. Additionally, the station will evaluate whether training is required with respect to properly staging materials at the station.

PREVIOUS SIMILAR EVENTS

No previous similar events could be found.