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AUG 1 1 2014

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

**SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT # 387(388) 2014-008-00
UNIT 1 LICENSE NO. NPF-14
UNIT 2 LICENSE NO. NPF-22
PLA-7208**

**Docket No 50-387
50-388**

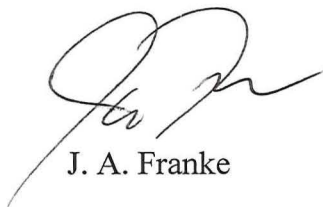
Attached is Licensee Event Report (LER) 50-387(388)/2014-008-00. The LER reports a condition in which both trains of Susquehanna Control Structure HVAC and Control Room Emergency Outside Air Supply were inoperable. The condition was determined to be reportable in accordance with 10 CFR 50.73(a)(2)(v)(D) as an event or condition that could have prevented the fulfillment of a safety function.

There were no actual consequences to the health and safety of the public as a result of this event.

No new regulatory commitments are contained in this letter.

If you have any questions, please contact Mr. John Tripoli, Manager Nuclear Regulatory Affairs at (570) 542-3100.

Sincerely,



J. A. Franke

copy: NRC Region I
Mr. J. E. Greives, NRC Sr. Resident Inspector
Mr. J. A. Whited, NRC Project Manager
Mr. L. J. Winker, 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 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

05000 387

3. PAGE

1 OF 3

4. TITLE

Loss of Both Trains of Control Structure Chilled Water due to Personnel 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 | |
| 06 | 12 | 2014 | 2014 | 008 | 00 | 08 | 11 | 2014 | Susquehanna Unit 2 | 05000 388 | |
| | | | | | | | | | 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 | | | <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)(vii)(A) | |
| | | | <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)(vii)(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) | |
| 10. POWER LEVEL 100 | | | <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 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 checked="" 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

S. M. Jurek, Engineer - Nuclear Regulatory Affairs

TELEPHONE NUMBER (Include Area Code)

(570) 542-3407

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 |
|-------|--------|-----------|---------------|--------------------|-------|--------|-----------|---------------|--------------------|
| A | KM | P | G200 | Yes | A | VI | CHU | C150 | Yes |

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 June 12, 2014 at 1444 hours, while restoring from a quarterly surveillance test, a Susquehanna Steam Electric Station (SSES) Plant Control Operator (PCO) manipulated a control switch for an OPERABLE Control Structure Chilled Water (CSCW) pump to the off position, which rendered a division of CSCW inoperable. The redundant division of CSCW was previously taken out of service to perform the surveillance test. Upon rendering both trains of CSCW inoperable, Limiting Condition for Operation (LCO) 3.0.3, was entered at 1444 hours, and then exited at 1446 hours when the PCO recognized the incorrect switch had been manipulated and returned Division 1 of CSCW to service. The SSES Technical Specifications for Control Structure (CS) HVAC and Control Room Emergency Outside Air Supply (CREOAS) require both divisions of CSCW to be OPERABLE during normal plant operations. In accordance with 10 CFR 50.72(b)(3)(v)(D), an eight-hour ENS notification (# 50198) was made to the NRC for an event or condition that at the time of discovery, could have prevented the fulfillment of a safety function. The apparent cause was less than adequate use of Human Performance error prevention tools. The immediate corrective action taken was to issue operations directive to require a peer check by another licensed reactor operator for all manipulations performed in the control room. A key planned corrective action is to revise the surveillance procedure used during this event to require concurrent verification for all irreversible steps. There were no actual or potential consequences to the health and safety of the public as a result of this event.

**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 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 | 2. DOCKET | 6. LER NUMBER | | | 3. PAGE |
|--|-----------|---------------|----------------------|------------|---------|
| Susquehanna Steam Electric Station, Unit 1 | 05000 387 | YEAR | SEQUENTIAL NUMBER | REV NO. | 2 OF 3 |
| | | 2014 | - 008 | - 00 | |

NARRATIVE**CONDITIONS PRIOR TO THE EVENT**

Unit 1 – Mode 1, 100% Rated Thermal Power

Unit 2 – Mode 1, 100% Rated Thermal Power

In accordance with Step 5.1.3 of surveillance procedure SO-030-B03, "Quarterly Control Structure Chilled Water Flow Verification Loop B," CS Chiller B was taken out of service at 1344 hours for performance of the quarterly surveillance which required entry into LCOs 3.7.3 and 3.7.4. CS Chiller A was in service prior to the event.

EVENT DESCRIPTION

On June 12, 2014, at 1444 hours, a SSES PCO manipulated a wrong control switch in the control room. Step 5.1.43 of SO-030-B03 states, "Place CS Chilled Water Pump 0P162B (Pump B) control switch to STOP." The PCO incorrectly placed CS Chilled Water Pump 0P162A (Pump A) [EII: KM-P] control switch to STOP. The incorrect manipulation caused CS Chiller A [EII: VI-CHU] to be rendered inoperable while CS Chiller B was already out of service in order to conduct the quarterly surveillance. With both CS Chillers out of service, both trains of CS HVAC were declared inoperable. Entry into LCO 3.0.3 was required due to meeting LCO 3.7.3 Condition E and LCO 3.7.4 condition D.

Upon recognition of loss of the operating CS Chiller, the PCO restored the Pump A control switch to START. This action restarted CS Chiller A, and returned Division 1 of CS HVAC and CREOAS to OPERABLE. LCO 3.0.3 was exited at 1446 hours on June 12. LCOs 3.7.3 and 3.7.4 remained in effect until 1738 hours on June 12 when Division 2 of CSCW was restored.

CAUSE OF THE EVENT

The apparent cause of the event was determined to be less than adequate use of Human Performance error prevention tools. A causal factor was determined to be inadequate supervisory oversight during control room switch manipulation. Several Human Performance error prevention tools were either not used or used inadequately during this evolution, including self-check/peer-check, Pre-Job Brief (PJB), supervision/management, and flagging.

The PCO conducted a PJB with the personnel who would be performing the field manipulations prior to commencing the test. While performing the PJB, the PCO focused on the field operators, and did not identify critical steps in the control room. Additionally, the PCO did not use the PJB database, which identifies critical steps in the control room which require a peer check prior to completion.

While performing the surveillance, the Unit Supervisor observed peer-checking during the lineup of the Emergency Service Water System, but did not observe control manipulation in the control room during the event. Ongoing plant activities produced multiple alarms in the control room during the surveillance. Because of the alarms, the PCO did not request a peer check from the other operators in the control room prior to manipulating the control switch.

In accordance with station procedures, the PCO was evaluated for a Post-Event Fitness for Duty Assessment. The Fatigue Assessment determined that the individual was fatigued, however, work hour fatigue rules were not violated. The worker did not get enough sleep on his off hours to offset his work hours.

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

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|--|-----------|---------------|----------------------|------------|---------|
| Susquehanna Steam Electric Station, Unit 1 | 05000 387 | YEAR | SEQUENTIAL NUMBER | REV NO. | 3 OF 3 |
| | | 2014 | - 008 | - 00 | |

NARRATIVE

ANALYSIS/SAFETY SIGNIFICANCE

There were no actual or potential consequences to the health and safety of the public as a result of this event.

In accordance with NEI 99-02 Revision 7, engineering evaluated this event and determined CS HVAC and CREOAS were capable of performing their safety functions. As such, this event will not be counted as a Safety System Functional Failure for the NRC Reactor Oversight Process Performance Indicators.

CORRECTIVE ACTIONS

Immediate corrective actions include:

Operations Management issued OPS Directive 14-02 on June 12, 2014 which states, "All control room component manipulations shall be peer checked. The only exceptions to this directive are: 1) if specifically waived by Shift Supervision or 2) during off-normal or emergency conditions."

Planned corrective actions include:

Surveillance procedure SO-030-B03 will be revised to include a requirement for concurrent verification for all irreversible steps performed during the procedure.

PREVIOUS SIMILAR EVENTS

LER 50-387(388)/2012-010-01: Both Trains of Control Structure HVAC at Susquehanna were Rendered Inoperable