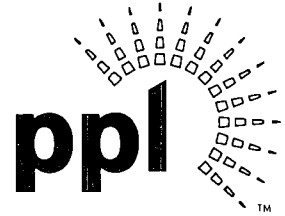


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JUL 19 2007

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop OP1-17
Washington, DC 20555

**SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 50-387/2007-001-00
PLA-6239**

**Docket Nos. 50-387
and 50-388**

Attached is Licensee Event Report 50-387/2007-001-00. This event was determined to be reportable, per 10 CFR 50.73(a)(2)(iv)(A), as an event that resulted in an unplanned automatic actuation of an emergency service water (ESW) pump. On May 24, 2007 at 1125 hours, the 'C' ESW pump started as a result of a manual start of the 'E' emergency diesel generator (EDG). The pump, which should have been manually started prior to the EDG start, automatically started as designed. All plant equipment, including the 'C' ESW pump, operated as expected.

This event resulted in no actual adverse consequences to the health and safety of the public.

There are no commitments associated with this Licensee Event Report.

A handwritten signature in black ink, appearing to be "CJ Gannon", written over a horizontal line.

C. J. Gannon
Vice President – Nuclear Operations

Attachment

cc: Mr. A. J. Blamey, NRC Sr. Resident Inspector
Mr. R. V. Guzman, NRC Sr. Project Manager
Mr. R. R. Janati, DEP/BRP
Mr. R. Osborne, Allegheny Electric

JE22

NRC

**U.S. NUCLEAR REGULATORY
COMMISSION**

LICENSEE EVENT REPORT (LER)

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

APPROVED BY OMB: NO. 3150-0104
Estimated burden per response to comply with this mandatory collection request:
50 hours. Reported lessons learned are incorporated into the licensing process
and fed back to industry. Send comments regarding burden estimate to the
Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory
Commission, Washington, DC 20555-0001, or by internet e-mail to
infocollects@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.

EXPIRES: 06/30/2007

1. FACILITY NAME Susquehanna Steam Electric Station – Unit 1

2. DOCKET NUMBER
05000387

3. PAGE
1 OF 3

4. TITLE Automatic Actuation of 'C' Emergency Service Water Pump Due to Improper Alignment During Emergency Diesel Generator 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
05	24	2007	2007	001	00	07	19	2007	Susquehanna Unit 2	05000388
									FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE
1

10. POWER LEVEL
100%

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)(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)
<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 checked="" 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 Voluntary Report
<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

FACILITY NAME
C. E. Manges, Jr. – Nuclear Regulatory Affairs

TELEPHONE NUMBER (Include Area Code)
570-542-3089

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

☐ 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)

At 1125 on May 24, 2007, with Unit 1 in Mode 1 at 100% power and Unit 2 in Mode 1 at 100% power, the 'C' emergency service water (ESW) pump automatically started when the 'E' emergency diesel generator (EDG) was manually started to perform testing. At the time of the event, the 'E' EDG was aligned as a substitute for the 'C' EDG and the 'A' and 'B' ESW pumps were running. The 'C' ESW pump started, as designed, and all plant equipment, including the 'C' ESW pump, operated as expected. Plant procedures specify ensuring proper ESW system alignment when an EDG is started. The 'C' ESW pump should have been manually started prior to the 'E' EDG start to prevent the automatic pump start; however, the operator performing the testing failed to recognize that the ESW alignment that existed at the time of the event would result in a pump automatic start. This event is attributed to a human performance error in that a procedure prerequisite for ensuring proper ESW alignment was marked complete but not implemented as intended. Causal factors included failure to perform a formal pre-job brief, failure to utilize peer checking, and less than adequate management oversight. Corrective actions taken included coaching and counseling the operators involved in the event and issuing a communication to on-shift Operations personnel that discussed the event and reinforced expectations for procedure compliance. In addition, training will be provided to appropriate Operations personnel regarding this event and will include emphasis on the expectations that were not met. This event is reportable as an event that resulted in an unplanned automatic actuation of an ESW system per 10 CFR 50.73(a)(2)(iv)(A). There were no consequences to the health and safety of the public as a result of this event since the event does not represent a degraded condition and all station equipment responded as designed during the event.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Susquehanna Steam Electric Station – Unit 1	05000387	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		2007	- 001	- 00	

17. NARRATIVE (If more space is required, use additional copies of NRC Form 366A)

EVENT DESCRIPTION

At 1125 on May 24, 2007, the 'C' Emergency Service Water (ESW; EIS Code: BI) pump automatically started when the 'E' Diesel Generator (DG; EIS Code EK) was manually started to perform testing following alignment as a substitute for the 'C' DG. The event occurred with Unit 1 in Mode 1 at 100% power and Unit 2 in Mode 1 at 100% power. No structures, systems, or components were inoperable at the beginning of the event that contributed to the event.

Susquehanna has a total of five DGs that are common to Units 1 and 2. The 'A' through 'D' DGs are normally aligned for standby service, and any aligned DG can supply its respective engineered safeguards bus in both units. The fifth DG ('E' DG) can be aligned as a replacement for any one of the four normally aligned DGs to facilitate maintenance. No ESW pump automatic start signals are generated during operation of the 'E' DG in an unaligned condition. With the 'E' DG aligned as a substitute for one of the normally aligned DGs, a start signal for the associated ESW pump would be generated following a start of the 'E' DG. During the event, the 'E' DG was aligned as a substitute for the 'C' DG. With the plant aligned in this manner, the 'C' ESW pump would be expected to start (if not already running) following a start of the 'E' DG, and the pump start was therefore in accordance with plant design. All plant equipment operated as designed.

On the day prior to the event, the 'A' and 'B' ESW pumps were placed in service to support surveillance testing of the 'A' DG. These pumps remained in service to support the testing of the 'E' DG that was being performed prior to substituting the 'E' DG for the 'C' DG. The 'E' DG testing was performed with the DG unaligned (i.e., not substituting for any of the normal DGs). Following completion of the unaligned testing, a plant operator (licensed, utility) was assigned to align the 'E' DG as a substitute for the 'C' DG in anticipation of removing the 'C' DG from service for maintenance. The operator worked through the procedure steps for an aligned operability test of the 'E' DG using the appropriate surveillance procedure. The prerequisites in the procedure require ESW be aligned and include a note that indicates the associated ESW pump is preferred due to the pump receiving a start signal. This note was overlooked by the operator when he verified and checked the procedure step indicating adequate ESW flow to support the 'E' DG test. The operator was in a mindset that proper ESW flow existed to support the test since the same pumps ('A' and 'B') supported the previous unaligned 'E' DG runs. An informal discussion between the operator and a supporting operator (non-licensed, utility) was conducted in lieu of a formal pre-job brief, and consequently, the pre-job brief database that provided a caution for starting the associated ESW pump was not used. A peer check was not performed for the 'E' DG start contrary to the Operations standard for starting large equipment and management oversight for the activity was not adequate.

Following the 'C' ESW pump start, the 'A' ESW pump was shutdown and the 'C' ESW pump was verified to be operating normally.

CAUSE OF EVENT

The start of the 'C' ESW pump is attributed to a human performance error in that a procedure prerequisite for ensuring proper ESW alignment was marked complete but not implemented as intended. Causal factors included failure to perform a formal pre-job brief, failure to utilize peer checking, and less than adequate management oversight in that management expectations for pre-job briefs and peer checking were not enforced.

LICENSEE EVENT REPORT (LER)

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
		2007	- 001	- 00	

17. **NARRATIVE** (If more space is required, use additional copies of NRC Form 366A)

ANALYSIS / SAFETY SIGNIFICANCE

This event is reportable as an event that resulted in an unplanned automatic actuation of an ESW system per 10 CFR 50.73(a)(2)(iv)(A).

There were no actual or potential consequences as a result of the automatic start of the 'C' ESW pump. The event does not represent a degraded condition but rather an unexpected start of a pump designed to automatically start. Although the pump started as designed, the start was not anticipated by Operations. The 'A' and 'B' ESW pumps were already running and provided the necessary cooling to the 'E' DG that had just started. The preferred pump alignment is to have one pump in each loop running to ensure optimal performance relative to the pump curve, but the system design provides a sufficient flow path to support having all four ESW pumps operating. The significance of the event is limited to an unnecessary actuation of a system provided to mitigate the consequences of a significant event.

CORRECTIVE ACTIONS

1. The operators involved in the event have been coached and counseled.
2. A communication to on-shift Operations personnel was issued that discussed the event and reinforced expectations for procedure compliance.
3. Training will be provided to on-shift and work control center Operations personnel regarding this event and will include emphasis on the human performance and supervisory oversight expectations that were not met during the event.

ADDITIONAL INFORMATION

Past Similar Events: LER 2004-001-00, Docket No. 387/License No. NPF-14

Failed Component: None