

R. L. Anderson
Vice President - Nuclear Operations

PPL Susquehanna, LLC
769 Salem Boulevard
Berwick, PA 18603
Tel. 570.542.3883 Fax 570.542-1504
rlanderson@pplweb.com



OCT 18 2004

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop OP1-17
Washington, DC 20555-0001

**SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 50-387/2004-004-00
PLA-5822**

Docket 50-387

Attached is Licensee Event Report 50-387/2004-004-00. This event was determined reportable per 10 CFR 50.73(a)(2)(v)(C) in that radiation monitors in the Unit 1 Railroad Access Shaft were disabled during transport of two Spent Fuel Storage Casks. The disabled monitors would not have initiated automatic re-alignment of the Reactor Building Ventilation System and automatic starts of both the Standby Gas Treatment System and the Control Room Emergency Outside Air Supply System in response to an actual high radiation condition in the Railroad Shaft. This constitutes a condition that could have prevented the fulfillment of safety functions needed to control the release of radioactive material. Jumpers that had defeated the radiation monitor actuation capability have since been removed. There were no actual consequences to the health and safety of the public as a result of this event.

No new regulatory commitments have been created through issuance of this report.

A handwritten signature in black ink that reads "Richard L. Anderson".

Richard L. Anderson
Vice President - Nuclear Operations

Attachment

IE22

cc: Mr. S. J. Collins
Regional Administrator
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19408

Mr. A. J. Blamey
Sr. Resident Inspector
U.S. Nuclear Regulatory Commission
P.O. Box 35
Berwick, PA 18603-0035

Mr. R. Osborne
Allegheny Electric Cooperative
P. O. Box 1266
Harrisburg, PA 17108-1266

Mr. R. R. Janati
Bureau of Radiation Protection
Rachel Carson State Office Building
P. O. Box 8469
Harrisburg, PA 17105-8469

**U.S. NUCLEAR REGULATORY
COMMISSION**

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 06/30/2007
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, 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.

LICENSEE EVENT REPORT (LER)

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

1. FACILITY NAME Susquehanna Steam Electric Station – Unit 1	2. DOCKET NUMBER 05000387	3. PAGE 1 OF 4
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4. TITLE Radiation Monitors Inoperable During Spent Fuel Cask Transport

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
08	20	2004	2004	- 004	- 00	10	18	2004	Susq. SES – Unit 2	05000388
									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)(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)(iii)(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)
10. POWER LEVEL 100	

Specify in abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME Eric J. Miller – Nuclear Regulatory Affairs	TELEPHONE NUMBER (Include Area Code) 570-542-3321
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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

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 8/20/2004, it was discovered that the Secondary Containment Zone III isolation relays of both process radiation monitors in the Railroad Access Shaft were disabled. Investigation determined that the instrumentation trip outputs had been bypassed on 7/16/2004 through inappropriate jumper installation. Contrary to Technical Specifications, two Dry Fuel Storage Casks containing irradiated fuel had been lowered from the Refueling Floor with the radiation monitors defeated. Had an actual high radiation condition occurred, the disabled monitors would not have initiated automatic re-alignment of the Reactor Building Zone III Ventilation System and automatic starts of both the Standby Gas Treatment System and the Control Room Emergency Outside Air Supply System. Less than adequate work practices and procedural direction have been cited as causes for this event. In response, human performance tools, techniques and work standards will be reaffirmed with affected plant personnel. Further, the controlling procedure for this evolution will be enhanced, as necessary, to prevent error during future evolutions. The inability of these systems to respond to radiological conditions in the Railroad Access Shaft constitutes a condition that could have prevented the fulfillment of safety functions needed to control the release of radioactive material and is reportable per 10 CFR 50.73(a)(2)(v)(C). Actual radiological conditions observed in the Railroad Shaft during movement of the casks did not approach levels necessary for system actuation. There were no actual adverse consequences to the fuel, any plant equipment, or to the health and safety of the public as a result of this event.

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		2004	- 004	- 00	

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

EVENT DESCRIPTION

On 8/20/2004, while performing a surveillance on the Railroad Access Shaft Radiation Monitors (EIIS Code: IL), Instrumentation & Control (I&C) technicians (Utility, Non-Licensed) discovered that the Secondary Containment Zone III isolation relays (EIIS Code: JM) of both process radiation monitors in the Railroad Access Shaft were disabled. Investigation determined that the instrumentation trip outputs had been bypassed on 7/16/2004 through inappropriate jumper installation. I&C technicians tasked to defeat the local audible alarm on a separate area radiation monitor mistakenly executed steps of a plant procedure that also defeated the trip outputs of the two process radiation monitors in question. This discovery was significant because two Spent Fuel Storage Casks (EIIS Code: DF) containing irradiated fuel had been lowered from the Refueling Floor during this period of time (8/2/2004 and 8/16/2004). Plant Technical Specifications (TS) 3.3.6.2 and 3.3.7.1 require the Railroad Access Shaft radiation monitors to be operable during movement of irradiated fuel assemblies within the Railroad Access Shaft. Because actual transfer times for both lifts were less than 1 hour, TS Required Action completion times were not exceeded. In the event of an actual radioactive material release, the disabled radiation monitors would not have, however, initiated automatic re-alignment of the Reactor Building Zone III Ventilation System (EIIS Code: VA), automatic start of the Standby Gas Treatment System (SGTS; EIIS Code: BH) and automatic start of the Control Room Emergency Outside Air Supply System (CREOASS; EIIS Code: VI). The inability of these systems to respond to radiological conditions in the Railroad Access Shaft constitutes a condition that could have prevented the fulfillment of safety functions needed to control the release of radioactive material and is reportable per 10 CFR 50.73(a)(2)(v)(C). Actual radiological conditions observed in the Railroad Shaft during movement of the casks did not approach levels necessary for system actuation. All other Reactor Building ventilation instrumentation capable of actuating these systems was operable as required by TS. The jumpers that defeated the actuation capability of the Railroad Access Shaft Process Radiation Monitors were removed on 8/20/2004. No radioactive releases resulted from this event.

CAUSE OF EVENT

Two root causes have been identified for this event:

- **Less-Than-Adequate Work Practices** – Bypass of the process radiation monitor trip functions was outside the scope and instructions of the work plan. Neither a pre-job walkdown nor a supervised pre-job briefing was conducted.
- **Less-Than-Adequate Procedural Direction** – The controlling procedure assumes that the local alarm horn on the area radiation monitor must be disabled during movement of the Spent Fuel Cask and incorporates a prerequisite to confirm task completion. This prerequisite is not confirmed by the work group that performs the task but by an operator (Utility, Licensed) who verifies work completion through status control logs. When work was performed beyond the intended work scope, the occurrence was not adequately captured in the status control log. Further, the need to bypass the local alarm is suspect as observations made during actual cask movement suggest that radiation levels do not approach the area radiation monitor alarm setpoint.

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

ANALYSIS / SAFETY SIGNIFICANCE

This event was determined to be reportable under 10 CFR 50.73(a)(2)(v)(C) in that safety functions needed to control the release of radioactive material would not have functioned automatically in response to radiological conditions in the Railroad Access Shaft.

Actual Safety Significance: Automatic isolation of the Railroad Access Shaft would not have occurred in response to radiation conditions in the shaft. The output trip signals of two radiation monitors were defeated during a plant evolution requiring their presence per Technical Specifications. No actual radiological challenge arose during the Spent Fuel Cask movement that necessitated automatic system response.

Potential Safety Significance: Defeating the auto initiation and isolation capability provided by the radiation monitors compromises the protection afforded to the general public in the event of an actual fuel handling accident.

CORRECTIVE ACTIONS

The following corrective actions have been completed:

- Individuals and supervisory personnel involved in this event were coached and counseled. Expectations were reviewed.

The following corrective actions are planned:

- Work standards related to this event will be reaffirmed with affected personnel.
- A maintenance stand-down, emphasizing human performance tools and lessons learned from this event, will be conducted.
- Maintenance workers will complete training on the station's Human Performance Simulator.
- The need to bypass the Area Radiation Monitor local alarm will be evaluated. If bypass is deemed necessary during future Dry Fuel Storage Cask transfer efforts, controls will be incorporated into the primary evolution procedure to ensure that the Area Radiation Monitor local alarm is the only function bypassed.

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

ADDITIONAL INFORMATION

Failed Component Information:

None

Previous Similar Events:

LER 2002-002-00, Docket No. 388 / License No. NPF-22, "Loss of Control Structure Safety Function When 4.16 kV Breakers Found Racked-Out"

LER 2003-003-00, Docket No. 387 / License No. NPF-14, "Both Trains of Standby Gas Treatment Inoperable Due to Inadequate Maintenance and Inadequate Operability Testing"