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**SEP 20 2005**

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

**SUSQUEHANNA STEAM ELECTRIC STATION  
LICENSEE EVENT REPORT 50-387/2005-001-01  
PLA-5938**

**Docket 50-387**

*Reference: Susquehanna Steam Electric Station – Licensee Event Report 50-387/2005-001-00,  
dated, January 20, 2005*

*Susquehanna Steam Electric Station – NRC Integrated Inspection Report  
05000387/2004005 and 05000388/2004005, dated, January 28, 2005*

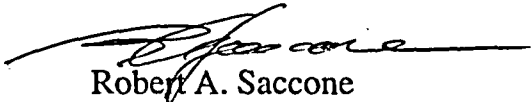
Attached is Licensee Event Report 50-387/2005-001-01. This report supplements the referenced Licensee Event Report which identified that primary containment instrument lines found penetrating the Unit 1 Reactor Building's Railroad Bay (an area not normally maintained within Secondary Containment) could prevent structures or systems needed to control the release of radioactive material from fulfilling their safety function. Accordingly, this event was reported in accordance with 10 CFR 50.73(a)(2)(v)(C).

By virtue of Susquehanna's ventilation system design, PPL was able to eliminate the non-conforming condition by reconfiguring Secondary Containment in a manner that encompassed the Railroad Bay. On four occasions, however, as noted in the Inspection Report referenced above, PPL temporarily returned the Railroad Bay to its normal configuration (e.g., ventilation outside of secondary containment) to support plant maintenance activities. A misinterpretation of Generic Letter 91-18 guidance, and PPL's belief that the Secondary Containment function was not affected by returning the plant to its normal and customary ventilation alignment, caused PPL to complete the reconfiguration without entering the Secondary Containment LCO 3.6.4.1. Because the Secondary Containment was not restored within LCO Required Action completion times, this situation also constitutes an operation prohibited by the plant's Technical Specifications and is reportable per 10 CFR 50.73(a)(2)(i)(B).

IE22

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.



Robert A. Saccone  
Vice President - Nuclear Operations

Attachment

cc: Mr. S. J. Collins  
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U. S. Nuclear Regulatory Commission  
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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

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](mailto: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.

1. FACILITY NAME Susquehanna Steam Electric Station – Unit 1

2. DOCKET NUMBER

05000387

3. PAGE

1 OF 3

4. TITLE Primary Containment Instrument Lines Located Outside Secondary Containment

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
11	22	2004	2005	001	01	09	20	2005	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)

☐ 20.2201(b)☐ 20.2203(a)(3)(i)☐ 50.73(a)(2)(i)(C)☐ 50.73(a)(2)(vii)☐ 20.2201(d)☐ 20.2203(a)(3)(ii)☐ 50.73(a)(2)(ii)(A)☐ 50.73(a)(2)(viii)(A)☐ 20.2203(a)(1)☐ 20.2203(a)(4)☐ 50.73(a)(2)(ii)(B)☐ 50.73(a)(2)(viii)(B)☐ 20.2203(a)(2)(i)☐ 50.36(c)(1)(i)(A)☐ 50.73(a)(2)(iii)☐ 50.73(a)(2)(ix)(A)☐ 20.2203(a)(2)(ii)☐ 50.36(c)(1)(ii)(A)☐ 50.73(a)(2)(iv)(A)☐ 50.73(a)(2)(x)☐ 20.2203(a)(2)(iii)☐ 50.36(c)(2)☐ 50.73(a)(2)(v)(A)☐ 73.71(a)(4)☐ 20.2203(a)(2)(iv)☐ 50.46(a)(3)(ii)☐ 50.73(a)(2)(v)(B)☐ 73.71(a)(5)☐ 20.2203(a)(2)(v)☐ 50.73(a)(2)(i)(A)☒ 50.73(a)(2)(v)(C)☐ OTHER  
Specify in Abstract below  
or in NRC Form 366A☐ 20.2203(a)(2)(vi)☒ 50.73(a)(2)(i)(B)☐ 50.73(a)(2)(v)(D)

## 12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME

Eric J. Miller – Nuclear Regulatory Affairs

TELEPHONE NUMBER (Include Area Code)

570-542-3321

## 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) ☒ NO15. EXPECTED  
SUBMISSION  
DATE

MONTH	DAY	YEAR

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

On 11/22/2004, it was identified that six Primary Containment instrument lines penetrated the Unit 1 Reactor Building's Railroad Bay. Although the area can be aligned to Secondary Containment, it has not normally been maintained in this configuration. The instrument lines that are located in the Railroad Bay, and have been typically located outside Secondary Containment due to ventilation system alignment practices, are not consistent with assumptions currently found in station licensing documents. This situation was reported in accordance with 10 CFR 50.73(a)(2)(v)(C) as a condition that could have prevented structures or systems needed to control the release of radioactive material from fulfilling their safety function. PPL was able to eliminate the non-conforming condition by reconfiguring Secondary Containment in a manner that encompassed the Railroad Bay. On four occasions, however, as noted in the referenced NRC Integrated Inspection Report, PPL temporarily returned the Railroad Bay to its normal configuration (e.g., ventilation outside of secondary containment) to support plant maintenance activities. A misinterpretation of GL 91-18 guidance and PPL's belief that the Secondary Containment function was not affected by returning the plant to its normal and customary ventilation alignment caused PPL to complete the reconfiguration without entering the Secondary Containment LCO 3.6.4.1. Because the Secondary Containment was not restored within LCO Required Action completion times, this situation also constitutes an operation prohibited by the plant's Technical Specifications and is reportable per 10CFR50.73(a)(2)(i)(B). Administrative controls have since been enacted to ensure the Railroad Bay is aligned to Secondary Containment when the Railroad Bay door is not open. The appropriate Tech Spec LCO is being entered when the door must be opened. PPL is planning a modification that will place the instrument lines inside Secondary Containment at all times. There were no adverse consequences to the health and safety of the public as a result of this situation.

(1-2001)

**LICENSEE EVENT REPORT (LER)**

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		2005	- 001	- 01	

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

**EVENT DESCRIPTION**

On 11/22/2004, it was identified that six Primary Containment (EIS Code: NH) instrument lines penetrated the Unit 1 Reactor Building's Railroad Bay (EIS Code: NG). Two of the instrument lines are associated with the Unit 1 Reactor Recirculation system (EIS Code: AD) while the remaining four are associated with the Unit 1 Residual Heat Removal system (EIS Code: BO). These instrument lines have been located in the Railroad Bay since plant startup. Although the area can be aligned to Secondary Containment (EIS Code: NH), it has not normally been configured as such since 1995. The original Safety Analysis Report (SAR) did not rely upon instrument lines being located within Secondary Containment. The SAR was, however, changed in 1998 to credit Secondary Containment in the SAR accident analysis. The instrument lines that are located in the Railroad Bay, and thus, have been typically located outside Secondary Containment, are not then consistent with assumptions currently found in station licensing documents. This non-compliance was reported in accordance with 10 CFR 50.73(a)(2)(v)(C) as a condition that could have prevented structures or systems needed to control the release of radioactive material from fulfilling their safety function.

By virtue of Susquehanna's ventilation system design, PPL was able to eliminate the non-conforming condition by reconfiguring Secondary Containment in a manner that encompassed the Railroad Bay. On four occasions, however, as noted in the referenced NRC Integrated Inspection Report, PPL temporarily returned the Railroad Bay to its normal configuration (e.g., ventilation outside of secondary containment) to support plant maintenance activities. Although this action was supported by an assessment that concluded the Secondary Containment function remained operable in its normal configuration even with the identified non-conformance, it later became apparent that 10 CFR 50.59 should have been applied before ventilation of the Unit 1 Railroad Bay was changed from an area within the Secondary Containment, as described in the SAR, to an area outside the Secondary Containment. PPL believed that, until final resolution of the non-conformance could be established via the corrective action process, Railroad Bay alignment to the normal configuration was consistent with, and solely governed by, the NRC Generic Letter 91-18 process for addressing non-conforming but operable conditions. This misinterpretation of Generic Letter 91-18 guidance, and PPL's belief that the Secondary Containment function was not affected by returning the plant to its normal and customary ventilation alignment, caused PPL to complete the reconfiguration without entering the Secondary Containment LCO 3.6.4.1. Because the Railroad Bay was not restored to the Secondary Containment configuration within LCO Required Action completion times, this situation also constitutes an operation prohibited by the plant's Technical Specifications and is reportable per 10 CFR 50.73(a)(2)(i)(B).

**CAUSE OF EVENT**

The principal causes for the non-compliance with the licensing basis were the changes made to the accident analysis that credited Secondary Containment and the change in 1995 that established normal alignment of the Railroad Bay outside Secondary Containment.

A misinterpretation of Generic Letter 91-18 guidance led to the operation prohibited by the plant's Technical Specifications. PPL failed to recognize the potential 10 CFR 50.59 implications created by the unique ability, through plant ventilation design, to restore a non-conforming condition to a configuration consistent with the plant's SAR accident analysis. In the absence of a 10 CFR 50.59 evaluation addressing a change to the facility as described in the SAR, the station's Technical Specifications should have been applied to any action that re-established the non-conformance.

**ANALYSIS / SAFETY SIGNIFICANCE**

Analysis of Secondary Containment bypass leakage has concluded that the postulated leakage from these lines is within the margin available in the LOCA dose analysis for Secondary Containment Bypass Leakage. Further, the analysis indicates that the instrument lines, if cracked or broken, will not introduce radiological consequences that exceed those presented in the SAR for a break outside of Secondary Containment.

# LICENSEE EVENT REPORT (LER)

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		2005	- 001	- 01	

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

## CORRECTIVE ACTIONS

The following corrective actions have been completed:

- Administrative controls have been enacted to align the Railroad Bay to the Secondary Containment Zone III when the Railroad Bay door is not open. PPL is controlling and limiting the time that the Railroad Bay ventilation is aligned outside of Secondary Containment by entering and adhering to the Technical Specification LCO that governs Secondary Containment operability when the Railroad Bay door must be opened.
- A review of the Technical Specification and Technical Requirement Bases documents did not identify other situations where restoration of a non-conforming condition would likely cause a misinterpretation similar to the one described in this report.

The following corrective actions are planned:

- A plant modification will be implemented which will locate the subject instrument lines to within Secondary Containment.
- The SAR accident analysis of potential instrument lines breaks will be evaluated and modified as appropriate.

## ADDITIONAL INFORMATION

None