

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 FACIL:50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylv      05000387  
 AUTH.NAME      AUTHOR AFFILIATION  
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 STANLEY,H.G.      Pennsylvania Power & Light Co.  
 RECIP.NAME      RECIPIENT AFFILIATION

SUBJECT: LER 95-006-00:on 950401,MSL penetration leakage rate exceeded TS limit due to combined performance of MSIVs.No definitive cause attributed to high as found leakage rate.A, C & D inboard & D outboard MSL MSIVs stroked.W/950428 ltr.

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NOTES: 05000387

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U7.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) <b>Susquehanna Steam Electric Station - Unit 1</b>						DOCKET NUMBER(2) <b>0 5 0 0 0 3 8 7 1</b>			PAGE (3) <b>OF 0 3</b>		
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TITLE (4)  
**Main Steam Line Penetration Leakage Rate Exceeds Technical Specification Limit**

EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)			
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)		
0 4	0 1	9 5	9 5	0 0 6	0 0	0 4	2 8	9 5			0 5 0 0 0		

OPERATING MODE (9) <b>5</b>		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5 : (Check one or more of the following) (11)									
POWER LEVEL (10) <b>0 0 0</b>	<input type="checkbox"/>	20.402(b)	<input type="checkbox"/>	20.405(c)	<input type="checkbox"/>	50.73(a)(2)(v)	<input type="checkbox"/>	73.71(b)			
	<input type="checkbox"/>	20.405(a)(1)(i)	<input type="checkbox"/>	50.36(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	<input type="checkbox"/>	73.71(c)			
	<input type="checkbox"/>	20.405(a)(1)(f)	<input type="checkbox"/>	50.36(c)(2)	<input type="checkbox"/>	50.73(a)(2)(v)	<input type="checkbox"/>	OTHER (Specify in Abstract below and in Text, NRC Form 366A)			
	<input type="checkbox"/>	20.405(a)(1)(u)	<input type="checkbox"/>	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(v)(A)					
	<input type="checkbox"/>	20.405(a)(1)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(l)	<input type="checkbox"/>	50.73(1)(2)(v)(B)					
<input type="checkbox"/>	20.405(a)(1)(y)	<input type="checkbox"/>	50.73(a)(2)(w)	<input type="checkbox"/>	50.73(a)(2)(x)						

(LICENSEE CONTACT FOR THIS LER (12))

NAME <b>Robert D. Kichline - Project Licensing Specialist - Licensing</b>						TELEPHONE NUMBER					
			AREA CODE								
			<b>7 1 7</b>			<b>5 4 2</b>			<b>- 3 2 8 9</b>		

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	
X	S   B	I   S   V	A   5   8   5	Y							

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

At 1430 hours on April 1, 1995, with Unit 1 in its eighth refueling and inspection outage, an evaluation of data from the scheduled Main Steam Line (MSL) penetration Local Leak Rate Tests (LLRTs) determined that the "as found" leakage through both the inboard and outboard Main Steam Isolation Valves (MSIVs) was in excess of the limit of Technical Specification 3.6.1.2.c for the total MSL containment penetration leakage of 21.7 standard liters per minute (slm) (46.0 SCFH). The total "as found" minimum pathway leakage rate was 25.0 slm (52.9 SCFH). The evaluation determined that the MSIV LLRT excess leakage was reportable pursuant to 10CFR50.72(b)(2)(i) and 10CFR50.73(a)(2)(ii).

The "A", "C", and "D" inboard and the "D" outboard MSL MSIV's were stroked and the MSIV LLRT reperformed. The total "as left" containment MSL penetration minimum pathway leakage was satisfactorily reduced to 10.1 slm. No definitive cause could be attributed to the high "as found" leakage rate.

Offsite and Control Room doses remained within 10CFR100 and 10CFR50 limits, as determined by an assessment of previous similar events. These doses are also bounded by the analysis that supports PP&L's request to delete the MSIV Leakage Control System (LCS). Therefore, there was no safety significance from this event, nor was there any risk to the health and safety of the public.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Unit 1 Susquehanna Steam Electric Station	DOCKET NUMBER (2) 0   5   0   0   0   3   8   7	LER NUMBER (6)			PAGE (3)	
		YEAR 9   5	SEQUENTIAL NUMBER -   0   0   6	REVISION NUMBER -   0   0	0   2	OF 0   3

TEXT (If more space is required, use additional NRC Form 368A's) (17)

**EVENT DESCRIPTION**

At 1430 hours on April 1, 1995, with Unit 1 in its eighth refueling and inspection outage (Condition 5, Refueling, 0% power), evaluation of data from the scheduled Main Steam Line (MSL, EISS Code: SB) penetration Local Leak Rate Tests (LLRT's) determined that the "as found" leakage through both the inboard and outboard Main Steam Isolation Valves (MSIV's, EISS Code: BD) was in excess of the limit of Technical Specification 3.6.1.2.c for the total MSL containment penetration leakage of 21.7 slm (46.0 SCFH). The total "as found" minimum pathway leakage rate was 25.0 slm (52.9 SCFH). The evaluation determined that the MSIV LLRT.excess leakage was reportable pursuant to 10CFR50.72(b)(2)(i) and 10CFR50.73(a)(2)(ii).

**CAUSE OF EVENT**

The high leakage rate was attributed to the combined performance of the MSIV's; however, no definitive cause of the high leakage rate could be determined. Unlike prior similar events, valve stroking was the only form of "rework" necessary. It is theorized that material on the seat or disc was dislodged by stroking.

**REPORTABILITY/ANALYSIS**

This event was determined to be reportable under 10CFR50.72(b)(2)(i), as a condition found while the reactor was shut down, and 10CFR50.73(a)(2)(ii) in that MSL containment penetration leakage through both the inboard and outboard MSIV's was in excess of Technical Specification limits.

Based on an assessment of the safety consequences of previous similar events, performed by Nuclear Engineering, offsite and Control Rooms doses remained within 10CFR100 and 10CFR50 limits. This assessment took into account the availability of the MSIV Leakage Control System (MSIV-LCS, EISS Code: BD). The MSIV-LCS is designed to control and minimize the possible release of radioactive gases which could leak through the closed MSIV's following a Loss of

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

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		YEAR 9   5	SEQUENTIAL NUMBER —   0   0   6	REVISION NUMBER —   0   0	0   3	OF 0   3

TEXT (If more space is required, use additional NRC Form 366A's) (17)

Cooling Accident (LOCA). Additionally, this leakage is also bounded by PP&L's analysis that supports our request to delete the MSIV-LCS. The MSIV-LCS deletion submittal states in part that "The analysis results demonstrate that dose contributors from the proposed MSIV leakage rate limit of 100 SCFH per steam line, not to exceed a total of 300 SCFH for all four main steam lines, along with the proposed deletion of the Leakage Control System (LCS), result in an insignificant increase to the LOCA doses previously evaluated against the regulatory limits for the off-site doses and control room doses contained in 10CFR100 and 10CFR50, Appendix A, General Design Criterion (GDC) 19, respectively." Therefore, this event had no safety significance nor was there any risk to the health and safety of the public.

In accordance with the guidelines provided in NUREG-1022, Supplement 1, Item 14.1, the required submission date for this report was determined to be May 1, 1995.

**CORRECTIVE ACTIONS**

The "A", "C", and "D" inboard and the "D" outboard MSL MSIV's were stroked and the MSIV LLRT reperformed. The total "as left" containment MSL penetration minimum pathway leakage was satisfactorily reduced to 10.1 slm. No additional corrective actions were identified.

**ADDITIONAL INFORMATION**

Past Similar Events: LER 83-062-00, Docket No. 387/License No. NPF-14  
 LER 83-064-00, Docket No. 387/License No. NPF-14  
 LER 86-007-00, Docket No. 388/License No. NPF-22  
 LER 89-010-01, Docket No. 388/License No. NPF-22  
 LER 90-020-00, Docket No. 387/License No. NPF-14  
 LER 92-005-00, Docket No. 387/License No. NPF-14

Failed Component: MSIV's, HV-141F022A-D and HV-141F028A-D

Manufacturer: Atwood and Morrill Co., Inc.

Model: 21190-H

