

LICENSEE EVENT REPORT (LER)

(See reverse for required number of
digits/characters for each block)ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS
MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS.
REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE
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COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION
AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR
REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND
TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF
MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

Susquehanna Steam Electric Station - Unit 1

DOCKET NUMBER (2)

05000387

PAGE (3)

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TITLE (4)

Technical Specification Required Shutdown

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 NAME	DOCKET NUMBER
7	8	98	98	-- 014	-- 01	5	24	99	FACILITY NAME	DOCKET NUMBER
										05000
										05000
OPERATING MODE (9)		4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)		000	20.2201(b)		20.2203(a)(2)(v)		X	50.73(a)(2)(i)		50.73(a)(2)(viii)
			20.2203(a)(1)		20.2203(a)(3)(i)			50.73(a)(2)(ii)		50.73(a)(2)(x)
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)			50.73(a)(2)(iii)		73.71
			20.2203(a)(2)(ii)		20.2203(a)(4)			50.73(a)(2)(iv)		OTHER
			20.2203(a)(2)(iii)		50.36(c)(1)			50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
			20.2203(a)(2)(iv)		50.36(c)(2)			50.73(a)(2)(vi)		

LICENSEE CONTACT FOR THIS LER (12)

NAME

Cornelius T. Coddington - Senior Engineer, Licensing

TELEPHONE NUMBER (Include Area Code)

610 / 774-4019

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
X	SB	CNV	T068	N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On July 8, 1998, Susquehanna SES Unit 1 completed a required Technical Specification shutdown due to an inoperable acoustic monitor for the 'S' Main Steam Safety/Relief Valve (SRV). On July 6, 1998, at 0539 hours, the acoustic monitor lights for the 'S' SRV illuminated, indicating the SRV was open. The off-normal procedure was immediately performed and alternate control room indications were used to confirm that the SRV was closed. The SRV tailpipe temperature indication did not change and reactor pressure remained steady. The acoustic monitor was declared inoperable and Technical Specification 3.3.7.5, ACTION 80b was entered. Repair of the monitor required a primary containment entry. The shutdown of the unit is reportable per 10CFR50.73(a)(2)(i) in that the Susquehanna SES Unit 1 completed a reactor shutdown as required by the unit's Technical Specifications. The cause of the unit shutdown was the failure of the acoustic monitor for the 'S' Main Steam Safety/Relief Valve which required a containment entry to correct. The cause of the failure of the acoustic monitor for the 'S' Main Steam Safety/Relief Valve has been determined to be due to degradation of the charge converter components due to aging. Completed corrective actions include: (1) completion of failure analysis of the failed acoustic monitor, (2) development and implementation of a plan to improve the Nuclear Department's response to corrective actions resulting from significant Condition Reports and from Notices of Enforcement Discretion, and (3) replacement of all sixteen acoustic monitoring channels components located inside containment in both Unit 1 and Unit 2. There were no consequences to the health and safety of the public from the loss of the acoustic monitor since the acoustic monitor does not affect the functioning of the SRV.

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

EVENT DESCRIPTION

On July 8, 1998, Susquehanna SES Unit 1 completed a required Technical Specification shutdown due to an inoperable acoustic monitor for the 'S' Main Steam Safety/Relief Valve (SRV) (EIS Code: SB). On July 6, 1998, at 0539 hours with Unit 1 in Condition 1 (Power Operation) at 100% power, the acoustic monitor light for the 'S' SRV illuminated, indicating the SRV was open. The off-normal procedure was immediately performed and alternate control room indications were used to confirm that the SRV was closed. The SRV tailpipe temperature indication did not change and reactor pressure remained steady. The acoustic monitor was declared inoperable and Technical Specification 3.3.7.5, ACTION 80b was entered.

Repair of the monitor required a primary containment entry; therefore, the unit was manually scrammed on July 8, 1998, at 0203 hours. All rods inserted fully. There were no ECCS injections or diesel generator starts as a result of the manual scram. All systems functioned as designed. The shutdown of the unit is reportable per 10CFR50.73(a)(2)(i) in that the Susquehanna SES Unit 1 completed a reactor shutdown as required by the unit's Technical Specifications.

CAUSE OF EVENT

The cause of the unit shutdown was the failure of the acoustic monitor for the 'S' Main Steam Safety/Relief Valve, which required a containment entry to correct. The cause of the failure of the acoustic monitor for the 'S' Main Steam Safety/Relief Valve has been determined to be degradation of the charge converter components due to aging. A related cause is ineffective corrective actions from previous acoustic monitor failures in that modifications installed did not completely correct the problem. Also, additional modifications to the acoustic monitoring system were not aggressively pursued.

REPORTABILITY/ANALYSIS

This event was determined to be reportable per 10CFR50.73(a)(2)(i) in that the Susquehanna SES Unit 1 completed a reactor shutdown as required by the unit's Technical Specifications. Technical Specification 3.3.7.5 requires all Main Steam Safety/Relief Valve acoustic monitors to be operable in Operational Conditions 1 and 2. Since the acoustic monitor could not be restored to operable status within the time frame specified in the Technical Specifications, the unit was shutdown as required by the Technical Specifications.

The failure of the acoustic monitor does not affect the safety function of the SRV. The position of the SRV can be confirmed by indications other than the acoustic monitor. These indications include SRV tailpipe temperature and reactor pressure. The SRV was determined to be closed by checking of basic safety system parameters, which were independent of the alarm. As such, there were no consequences or compromises to the health and safety of the public from the loss of the acoustic monitor.

In accordance with the guidelines provided in NUREG-1022, Revision 1, Section 5.1.1, the required submission date for the original report was determined to be August 7, 1998.

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

CORRECTIVE ACTIONS

The following corrective actions have been completed:

- Replaced MSRV acoustic monitor components inside containment in both Unit 1 and Unit 2 with improved models.
- Developed and implemented a plan to improve the Nuclear Department's response to corrective actions resulting from significant Condition Reports and Notices of Enforcement Discretion.
- Completed failure analysis of the failed acoustic monitor.
- Assessed all Maintenance Rule System Improvement plans to ensure adequacy.

ADDITIONAL INFORMATION

Past Similar Events: Docket No. 50-387 LER 96-014-00
50-388 LER 95-014-00
LER 97-020-00

Failed Component: Charge Converter Components

