NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES 8/31/85

LICENSEE EVENT REPORT (LEP)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Susquehanna Steam Electric Station - Unit 1	0 5 0 0 0 3 8 7	1 OF 0 2

TITLE (4)

Rod Scram Time Measurements.

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 6	1 3	8 4	8 4	0 4 4	0 1	1 1	0 8	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
1		20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
1 0 0		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
T.N. Creasy	7 1 7 5 4 2 - 3 2 4 2

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

During the performance of surveillance procedure SR-155-003, 'Scram Time Measurement of Rods Every 120 Days', following the Reactor Scram of June 13, 1984, the average scram insertion time required per Technical Specification 3.1.3.4 was not met for the insertion of the three (3) fastest rods in the following 2x2 array to position 45 (Rods: 38-39, 38-43, 42-39, and 42-43). Due to an oversight during the review of the computer analysis results, one group of four (4) control rods out of 2,496 analyzed exceeded the limit of Technical Specification 3.1.3.4 by .012 seconds.

All other Acceptance Criteria for SR-155-003 for the June 13, 1984 scram was met. When procedures SR-155-003 was performed on July 15, 1984, all control rods scrammed within Technical Specification Limitations, including the 2x2 array which failed the June surveillance.

To prevent recurrence, these actions have been taken:

1) Each Control Rod Scram Pilot Valve has been examined and modified to improve reliability.
2) Following modifications, each Control Rod on both units has been scram tested and found to be within the required scram time specifications.
3) Procedure SR-155-003 and the computer print out used with this procedure have been revised to more clearly identify Technical Specification limits.
4) The Reactor Engineering Group has attended training on this incident.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Susquehanna Steam Electric Station Unit 1	0 5 0 0 0 3 8 7	8 4	— 0 4 4	— 0 1	0 2 OF 0 2

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

During the performance of surveillance procedure SR-155-003, 'Scram Time Measurement of Rods Every 120 Days', following the Reactor Scram of June 13, 1984, the average scram insertion time required per Technical Specification 3.1.3.4 was not met for the insertion of the three (3) fastest rods in the following 2x2 array to position 45 (Rods: 38-39, 38-43, 42-39, and 42-43). Due to an oversight during the review of the computer analysis results, one group of four (4) control rods out of 2,496 analyzed exceeded Technical Specification 3.1.3.4 Limits by .012 seconds, .462 seconds vs. .450 seconds as required by Acceptance Criteria.

Technical Specification 3.1.3.2, 'Individual Scram Insertion Speeds to Position 05', and Technical Specification 3.1.3.3, 'Average Rod Insertion Speeds to Position 05, 25, 39, and 45', were in full compliance for each of the 185 control rods analyzed.

Had the insertion speeds to position 45 for the above four (4) control rods been identified in June, retesting would have been performed immediately. Based on 10/6/84 data, the root cause of the slower than allowed control rod scram times was identified to be the sticking of the disc in the scram pilot valves. Therefore, due to the nature of the failure mechanism, even if the slow rod scram times had been identified, an immediate retest would have been within the Technical Specification Limits. Additionally, during the reactor scram of July 15, 1984, SR-155-003 was performed and all control rods parameters were within Technical Specification Limitations, including the 2x2 array which failed the June surveillance.

Since the average scram insertion speeds to position 39 were within specifications on 6/13/84, the value τ (Tau) used in the determination of the Minimum Critical Power Ratio per Technical Specification 3.4.2.3 was not affected.

To prevent recurrence, these actions have been taken:

1) Each Control Rod Scram Pilot Valve has been examined, and modified to improve reliability by replacement of the polyurethane disc holder sub-assembly with one made of Viton, which is a more resilient material.
2) Each control rod on both units has been scram tested and found to be within the required scram time specifications during the plant startups following modifications.
3) The Scram Analysis Computer Program has been modified to specify all Technical Specifications violations on page one (1) of the print out.
4) The Reactor Engineering Group has attended training on this incident to review the causes and corrective actions.
5) The Reactor Engineering Group has attended training to review each engineers responsibilities during the performance of surveillances.
6) All Reactor Engineering Surveillances have been reviewed and revised as necessary to include a column for recording 'AS FOUND'data for each acceptance criteria.

PP&L Pennsylvania Power & Light Company
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November 8, 1985

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

50-387

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 84-044-01
ER 100450 FILE 841-23
PLAS- 129

Docket No. 50-387
License No. NPF-14

Attached is updated Licensee Event Report 84-044-01. This event was determined reportable per 10CFR50.73(a)(2)(i), in that a Technical Specification Limit was exceeded. All corrective actions to prevent recurrence have been completed.

T.M. Crimmins, Jr.
Superintendent of Plant-Susquehanna

TMC/pjg

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