

**PRIORITY 1**  
(ACCELERATED RIDS PROCESSING)

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9407110125      DOC.DATE: 94/07/06      NOTARIZED: NO      DOCKET #  
 FACIL:50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylv      05000387  
 AUTH.NAME      AUTHOR AFFILIATION  
 METER,J.J.      Pennsylvania Power & Light Co.  
 STANLEY,H.G.      Pennsylvania Power & Light Co.  
 RECIP.NAME      RECIPIENT AFFILIATION

SUBJECT: LER 94-009-00:on 940607,determined that TS requirements for time testing not completed.Applicable time response testing SPs incorrectly interpreted associated trip channels as redundant.Subj procedures revised.W/940706 ltr.

DISTRIBUTION CODE: IE22T      COPIES RECEIVED:LTR 1 ENCL 1 SIZE: S  
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT ID CODE/NAME PD1-2 PD	COPIES LTR ENCL 1 1	RECIPIENT ID CODE/NAME POSLUSNY,C	COPIES LTR ENCL 1 1
INTERNAL:	ACRS	1 1	AEOD/DSP/TPAB	1 1
	AEOD/ROAB/DSP	2 2	NRR/DE/EELB	1 1
	NRR/DE/EMEB	1 1	NRR/DORS/OEAB	1 1
	NRR/DRCH/HHFB	1 1	NRR/DRCH/HICB	1 1
	NRR/DRCH/HOLB	1 1	NRR/DRSS/PRPB	2 2
	NRR/DSSA/SPLB	1 1	NRR/DSSA/SRXB	1 1
	NRR/PMAS/IRCB-E	1 1	<u>REG FILE</u> 02	1 1
	RES/DSIR/EIB	1 1	RGNI FILE 01	1 1
EXTERNAL:	EG&G BRYCE,J.H	2 2	L ST LOBBY WARD	1 1
	NRC PDR	1 1	NSIC MURPHY,G.A	1 1
	NSIC POORE,W.	1 1	NUDOCS FULL TXT	1 1

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL  
 DESK, ROOM P1-37 (EXT. 504-2083 ) TO ELIMINATE YOUR NAME FROM  
 DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

FULL TEXT CONVERSION REQUIRED  
 TOTAL NUMBER OF COPIES REQUIRED: LTR 27 ENCL 27

P  
R  
I  
O  
R  
I  
T  
Y  
  
1  
D  
O  
C  
U  
M  
E  
N  
T



Pennsylvania Power & Light Company

Two North Ninth Street • Allentown, PA 18101 • 215 / 770-5151

July 6, 1994

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

SUSQUEHANNA STEAM ELECTRIC STATION  
LICENSEE EVENT REPORT 94-009-00  
FILE R41-2  
PLAS -607

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

Attached is Licensee Event Report 94-009-00. This report is being made pursuant to 10CFR50.73(a)(2)(i)(B), in that Susquehanna Units 1 and 2 had been in a condition prohibited by the Technical Specifications when Surveillance Requirement 4.3.2.3 was not met as specified. It was discovered that the Isolation System Response Time tests for several isolation trip functions were incorrectly utilizing the allowance to test redundant channels every other refueling outage. The condition has subsequently been corrected.

H.G. Stanley  
VP - Nuclear Operations

JJM/mjm

cc: Mr. T. T. Martin  
Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

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

9407110125 940706  
PDR ADOCK 05000387  
S PDR



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), 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) <b>Susquehanna Steam Electric Station - Unit 1</b>		DOCKET NUMBER (2) <b>0 5 0 0 0 3 18 17</b>	PAGE (3) <b>1 OF 0 4</b>
---	--	---	-----------------------------

TITLE (4)  
**Technical Specification Requirements For Time Response Testing Not Completed**

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	0 7	9 4	9 4	0 0 9	0 0	0 7	0 6	9 4	<b>Susquehanna - Unit 2</b>		<b>0 5 0 0 0 3 18 18</b>

OPERATING MODE (9) <b>1</b>	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)										
POWER LEVEL (10) <b>1 0 0</b>	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)							
	<input type="checkbox"/> 20.406(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"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)							
	<input type="checkbox"/> 20.406(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)								
	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)								
<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)									

LICENSEE CONTACT FOR THIS LER (12)

NAME <b>Joseph J. Meter - Power Production Engineer</b>	TELEPHONE NUMBER AREA CODE <b>71 1 7 51 41 21 - 1 1 8 1 7 1 3</b>
--	---

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
				N					

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)

On June 7, 1994, at 1700 hours with Unit 1 in Condition 1 at 100% power and Unit 2 in Condition 4 at 0% power, it was determined that the Technical Specification surveillance test requirements for Section 4.3.2.3 were not being totally satisfied and is reportable per 10CFR50.73(a)(2)(i)(B), in that Units 1 and 2 had been in a condition prohibited by the Technical Specifications. A review of an 18 month Time Response Test of the Reactor Vessel Water Level and High Drywell Pressure switches showed that the test was not in compliance with the requirements of Technical Specification 4.3.2.3 to test the channels every 18 months. The Technical Specification surveillance requirement allows for testing "redundant" channels every other refueling outage; however, Technical Specification 4.3.2.3 Table 3.3.2-1, trip functions 1.a.1 and 7.a. and trip functions 1.b and 7.e did not have "redundant" channels and should have been tested every 18 months. The cause for this event was the applicable Time Response Testing surveillance procedures incorrectly interpreted the associated trip channels as "redundant" within a trip system. Although the switches were not Time Response Tested on an 18 month cycle, the additional time between tests did not negatively impact the applicable systems. The condition did not create a significant degradation in the Station's ability to protect the health and safety of the public and/or plant personnel. The applicable Time Response Test Procedures have subsequently been revised and reperformed. Additional Time Response Tests that utilize the "redundant" channel allowance have been reviewed and were found to be satisfactory.

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-530), 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   4	SEQUENTIAL NUMBER -   0   0   9	REVISION NUMBER -   0   0	0   2	OF 0   4

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

DESCRIPTION OF EVENT

On June 7, 1994, at 1700 hours with Unit 1 in Condition 1 at 100% power and Unit 2 in Condition 4 at 0% power, it was determined that the Technical Specification surveillance test requirements for Section 4.3.2.3 were not being totally satisfied. On 06/06/94 an Instrumentation and Controls (I&C) Engineer (non-licensed, utility) was performing a review of the 18 month Time Response Test of the Reactor Vessel Water Level Switches (SI-280-425) and noted that the test may not be complying with the requirements of Technical Specification 4.3.2.3. The Technical Specification surveillance requirement for Isolation System Response Time for this function states that each isolation trip function shall be demonstrated to be within its limit at least once per 18 months and shall include at least one channel per trip system such that all channels are tested at least once every N times 18 months, where N is the total number of "redundant" channels in a specific isolation trip system. The I&C review of the isolation logic drawings for the Transverse In-Core Probe (TIP, EIIS Code: IG) Ball Valve isolation function showed that although the instruments were wired in parallel, both channels in a trip system are needed to actuate in order complete the isolation function. The applicable test procedures however, were testing the channels within the same TIP Ball Valve trip system on an every other refueling outage basis, i.e. utilizing the "redundant" channel statement in Technical specification 4.3.2.3. Therefore, I&C concluded that the channels in the trip systems for the TIP Ball Valve isolation were not "redundant" and both channels in the same trip system should be tested every 18 months. The I&C review also identified that the above mentioned pressure and level switches are part of the Residual Heat Removal (RHR, EIIS Code: BP) Head Spray and Shutdown Cooling isolation logics and should have been Time Response Tested every 18 months for these functions also.

I&C then contacted a Compliance Engineer (non-licensed, utility) to review the above mentioned issues to ensure that their review was accurate. This review was completed on 06/07/94 and it was concluded that the Reactor Vessel Water Level Low Level 3 switches were not Time Response Tested on an 18 month cycle as required by Technical Specification 4.3.2.3 Table 3.3.2-1, trip functions 1.a.1 and 7.a. and the High Drywell Pressure Switches were not tested as required by Table 3.3.2-1, trip functions 1.b and 7.e. The condition was applicable to the TIP Ball Valve isolation and the RHR Head Spray and Shutdown Cooling isolation functions only. This condition was found to be applicable to both Units 1 and 2.

A review of the applicable Time Response Tests showed the Unit 2 Technical Specification requirements were current within the allowable grace periods when requiring both channels in the trip system to be tested every 18 months. The Unit 1 Technical Specification requirements were not current prior to 6/6/94 when requiring both channels in a trip system to be tested every 18 months. The Unit 1 tests were performed on third shift of 6/6/94 - 6/7/94 as a conservative approach by I&C management for the potentially deficient Time Response Tests. This condition was found to be applicable to both Units 1 and 2 and was determined to be reportable per 10CFR50.73(a)(2)(i)(B), in that Susquehanna Units 1 and 2 had been in a condition prohibited by the Technical Specifications when surveillance requirement 4.3.2.3 was not met as specified.



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-530), 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 (8)			PAGE (3)		
		YEAR 9 4	SEQUENTIAL NUMBER - 0   0   9	REVISION NUMBER - 0   0			

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

CAUSE OF EVENT

The cause for this event was the applicable Time Response Testing surveillance procedures which implement the requirements of Technical Specification 4.3.2.3 Table 3.3.2-1, trip functions 1.a.1 and 7.a. and Table 3.3.2-1, trip functions 1.b and 7.e, incorrectly interpreted the associated trip channels as "redundant" within a trip system. The trip channels were then tested every other refueling outage as allowed by Technical Specification 4.3.2.3 for those channels that are "redundant". The current procedure format for these Time Response Testing procedures was implemented in 1989 in order to more efficiently perform Time Response Testing at the station. It was during this format change that the applicable trip channels were determined to be "redundant". Prior to the format change, the applicable channels were tested every 18 months. The reason for this determination could not be definitively established.

REPORTABILITY / ANALYSIS

This event was determined to be reportable per 10CFR50.73(a)(2)(i)(B), as a condition prohibited by the plant's Technical Specifications in that Technical specification 4.3.2.3 Table 3.3.2-1, trip functions 1.a.1 and 7.a. and Table 3.3.2-1, trip functions 1.b and 7.e were not completely Time Response Tested every 18 months. Although the Reactor Vessel Water Level Low Level 3 and Drywell High Pressure switches were not Time Response Tested on an 18 month cycle for the functions mentioned, the additional time between tests did not negatively impact the applicable systems. The Time Response Tests that were performed were reviewed and it was found that all of the switches passed the Time Response acceptance criteria on a 36 month cycle which indicates that the switches did not significantly degrade.

Additionally, NUREG - 1366 entitled "Improvements to Technical Specification Surveillance Requirements" provides guidance in which the Time Response Testing described previously could be deleted from the Station's Technical Specifications. Section 5.9 of this NUREG assesses the necessity of Time Response Testing of Isolation Actuation Instrumentation when the plant's safety analysis assumes that instrument channel actuation occurs simultaneously with Emergency Diesel Generator (EIGS Code: EK) start times. This is the case for the above mentioned Reactor Vessel Level Low Level 3 and Drywell High Pressure switches. The NUREG states that the chance is remote that a channel's response time would degrade to the point where it exceeds the diesel start time without a failure that would be noticeable in other ways. The NUREG also recommends eliminating time response testing of isolation actuation instrumentation where the required response time corresponds to the diesel start time.

Therefore, the condition of testing the switches on a 36 month cycle versus an 18 month cycle did not create a significant degradation in the Station's ability to protect the health and safety of the public and / or plant personnel.

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-530), 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	SEQUENTIAL NUMBER	REVISION NUMBER		
		9   4	-   0   0   9	-   0   0	4	OF 0   4

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

CORRECTIVE ACTIONS

The Unit 1 tests were performed on third shift of 6/6/94 - 6/7/94 as a conservative approach by I&C management while the potentially deficient Time Response Tests were reviewed to confirm that the channels were not being tested as required. The Unit 2 tests were reviewed on 6/7/94 and found to be current within their allowable grace period. The Unit 2 tests have subsequently been reperformed. The applicable Time Response Tests have been revised. Additional Time Response Tests that utilize the "redundant" channel allowance have been reviewed and were found to be satisfactory.

ADDITIONAL INFORMATION

Failed Component Identification: Not Applicable

Past Similar Events:

A review of past Licensee Event Reports (LERs) for the station identified that there were no previous events in which Time Response Testing was not completed as required.