

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9010300310 DOC. DATE: 90/10/19 NOTARIZED: NO DOCKET #
 FACIL: 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylvania 05000388
 AUTH. NAME AUTHOR AFFILIATION
 RYDER, T.S. Pennsylvania Power & Light Co.
 STANLEY, H.G. Pennsylvania Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-009-00: on 900919, HPCI & RCIC steam supply pressure low response time testing not performed within time limit.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES: LPDR 1 cy Transcripts. 05000388

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD1-2 LA	1 1	PD1-2 PD	1 1
	THADANI, M	1 1		
INTERNAL:	ACNW	2 2	ACRS	2 2
	AEOD/DOA	1 1	AEOD/DSP/TPAB	1 1
	AEOD/ROAB/DSP	2 2	NRR/DET/ECMB 9H	1 1
	NRR/DET/EMEB 7E	1 1	NRR/DLPQ/LHFB11	1 1
	NRR/DLPQ/LPEB10	1 1	NRR/DREP/PRPB11	2 2
	NRR/DST/SELB 8D	1 1	NRR/DST/SICB 7E	1 1
	NRR/DST/SPLB8D1	1 1	NRR/DST/SRXB 8E	1 1
	REG FILE 02	1 1	RES/DSIR/EIB	1 1
	RGNI FILE 01	1 1		
EXTERNAL:	EG&G BRYCE, J.H	3 3	L ST LOBBY WARD	1 1
	NRC PDR	1 1	NSIC MAYS, G	1 1
	NSIC MURPHY, G.A	1 1	NUDOCS FULL TXT	1 1
NOTES:		2 2		

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

FULL TEXT CONVERSION REQUIRED
 TOTAL NUMBER OF COPIES REQUIRED: LTR 34 ENCL 34

Algo-ent

R
I
D
S
/
A
D
D
S
/
A
D
D
S





Pennsylvania Power & Light Company

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

October 19, 1990

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 90-009-00
FILE R41-2
PLAS - 448

Docket No. 50-388
License No. NPF-22

Attached is Licensee Event Report 90-009-00. This report is being made pursuant to 10CFR50.73(a)(2)(i) in that a condition prohibited by Technical Specifications existed when HPCI and RCIC steam supply low pressure instruments were not response time tested within the required 18 month surveillance interval.


H.G. Stanley
Superintendent of Plant - Susquehanna

TSR/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

9010300310 901019
PDR ADOCK 05000388
S PDC

IE22
11

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

TITLE (4) **HPCI & RCIC Steam Supply Pressure Low Response Time Testing Not Performed Within Required Time Interval**

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 9	1 9	9 0	9 0	0 0 9	0 0 1	0 1	0 1	9 9 0			0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10) 1 0 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.38(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.38(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
<input type="checkbox"/> 20.405(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 T.S. Ryder - Power Production Engineer	TELEPHONE NUMBER AREA CODE: 7 1 7 NUMBER: 5 4 2 - 3 2 3 5

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

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

On September 19, 1990 with Unit 2 in Condition 1 at 100% power, it was discovered that time response testing for HPCI and RCIC steam supply low pressure instrumentation was not completed within the required 18 month surveillance interval specified by Technical Specifications. The cause of the event was due to an incorrect determination of the required testing frequency of each channel of the affected instrumentation during a review in 1989. This resulted in procedural revisions which allowed testing at a lesser than allowable frequency. This event was determined reportable per 10CFR50.73(a)(2)(i)(B) in that not completing surveillances within the required frequency represented a condition prohibited by the plant's Technical Specifications. There were no safety consequences or compromise to the public health or safety as a result of this event. As an immediate corrective action, the affected HPCI and RCIC instruments were response time tested with satisfactory results. Applicable Unit 1 and 2 response time testing surveillance procedures were reviewed by I&C engineering personnel for correct testing frequencies. The Unit 1 and 2 HPCI and RCIC steam supply low pressure instrument surveillances were the only procedures found to be impacted and these were revised. This LER is not expected to be updated.

**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-830), 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 2 Susquehanna Steam Electric Station	DOCKET NUMBER (2) 0 5 0 0 0 3 8 8	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 0	- 0 0 9	- 0 0	0 2	OF	0 3

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

DESCRIPTION OF EVENT

On September 19, 1990 with Unit 2 in Condition 1 at 100% power, it was discovered that response time testing for the 'C' and 'D' channels of both the High Pressure Coolant Injection (HPCI, EIIS Code: BJ) and Reactor Core Isolation Cooling (RCIC, EIIS Code: BN) systems' steam supply low pressure instruments had not been performed within the required 18 month surveillance interval specified by Technical Specification 4.3.2.3. The elapsed time interval between testing PSL-E41-2N001C&D (HPCI low pressure instruments) and PSL-E51-2N019 C&D (RCIC steam supply low pressure instruments) was approximately 30½ months between March 8, 1988 and September 19, 1990. The maximum time interval allowed for an 18 month surveillance including grace period is 22½ months.

CAUSE OF EVENT

The cause of this event was due to an incorrect determination made in 1989 during a review of the elementary diagrams for the RCIC and HPCI steam supply low pressure isolation trip systems. These systems are comprised of two divisions consisting of the 'A' and 'C' channels for one division and the 'B' and 'D' channels for the other division. During the review, Instrumentation and Controls (I&C) engineering contractor and utility non-licensed personnel mistakenly concluded that the 'C' channel was redundant to the 'A' channel and the 'D' channel was redundant to the 'B' channel. This improper conclusion has been categorized as a cognitive human error on the part of the I&C engineering personnel. In actuality there were portions of the logic in which there was no redundancy between channels in each individual division of the steam supply low pressure isolation trip function for HPCI and RCIC. For example, both channels in a division are required to close a steam admission valve. According to Technical Specification 4.3.2.3, the isolation system response time shall be demonstrated to be within its limit at least once per 18 months. All channels shall be tested at least once every N times 18 months, where N is the total number of redundant channels in the isolation trip system. Because it was concluded there were two redundant channels, the determination was made that N=2 and that each channel was required to be tested at an interval of 2 times 18 months, or once every 36 months. The Unit 1 and 2 response time testing surveillance procedures for HPCI and RCIC steam supply low pressure instruments were revised inappropriately such that all of the four channels would be tested once per 36 months.

REPORTABILITY/ANALYSIS

This event was determined reportable per 10CFR50.73(a)(2)(i)(B) in that response time testing for PSL-E41-2N001C&D and PSL-E51-2N019C&D was not performed within the required 18 month surveillance interval specified by Technical Specification 4.3.2.3. Per Technical Specifications Bases 4.0.3,

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 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 2 Susquehanna Steam Electric Station	DOCKET NUMBER (2) 0 5 0 0 0 3 8 8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 0	- 0 0 9	- 0 0	0 3	OF 0 3

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

this represented a condition prohibited by the plant's Technical Specifications. There were no safety consequences or compromise to the public health or safety as a result of this event. Although the surveillance intervals for the instruments were exceeded, other surveillance testing had been performed satisfactorily during this time period. These tests consisted of monthly channel functional tests and quarterly calibrations for the HPCI and RCIC steam supply low pressure sensors. Additionally, the pressure instruments were surveilled as an immediate corrective action for this event and the response times were found to be within the Technical Specification response time limit. These factors provide confidence that the steam supply pressure switches for HPCI and RCIC would have performed their safety function if called upon.

In accordance with the guidance provided in NUREG 1022 Supplement 1 Item 14.1, the required submission date for this report was determined to be October 19, 1990.

CORRECTIVE ACTIONS

Response time testing was performed on September 19, 1990 for PSL-E41-2N001 C&D and PSL-E51-2N019 C&D and the results were acceptable for each channel. The testing was accomplished within the 24 hour allowance of Technical Specification 4.0.3. Surveillances where the N times 18 approach to testing frequency is applied are limited to I&C 18 month response time testing procedures. Applicable Unit 1 and Unit 2 response time testing surveillance procedures were reviewed by I&C engineering personnel for correct testing frequencies. Four procedures were identified as being impacted and on September 20, 1990 each of these procedures were revised to ensure that the 18 month surveillance time interval specified in Technical Specifications is not exceeded. The impacted procedures were the 18 month time response tests for the Unit 1 and Unit 2 HPCI and RCIC steam supply low pressure switches. I&C engineering personnel verified that no violation of Technical Specifications had occurred on the Unit 1 HPCI and RCIC pressure instruments.

ADDITIONAL INFORMATION

Failed Component Identification: Not applicable

Previous Similar Events: Only one event, LER 88-003 (Docket 387), was identified as being a previous similar event in that it resulted from surveillance testing being scheduled for incorrect time intervals.

