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REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9309170085 DOC. DATE: 93/09/13 NOTARIZED: NO DOCKET #
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylv 05000387
 AUTH. NAME AUTHOR AFFILIATION
 LLOYD, H. Pennsylvania Power & Light Co.
 STANLEY, H.G. Pennsylvania Power & Light Co.
 RECIPIENT NAME RECIPIENT AFFILIATION

SUBJECT: LER 93-010-00: on 930816, fire detection/suppression sys loss
 due to lightning strike disabling transponder card in
 Simplex sys. Failed transponder card replaced & sys
 operability restored. W/930913 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:

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	AEOD/ROAB/DSP	2 2	NRR/DE/EELB	1 1	
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EXTERNAL:	EG&G BRYCE, J.H	2 2	L ST LOBBY WARD	1 1	R
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Pennsylvania Power & Light Company

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September 13, 1993

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 93-010-00
FILE R41-2
PLAS - 573

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

Attached is Licensee Event Report 93-010-00. This report is being made pursuant to 10CFR50.73(a)(2)(i)(B), in that an operation prohibited by the Technical Specifications existed when continuous firewatches were not established within one hour to meet action statements due to inoperable fire detection equipment.


H.G. Stanley
VP - Nuclear Operations

HL/mkf

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9309170085 930913
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LICENSEE EVENT REPORT (LER)

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-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 1		DOCKET NUMBER (2) 0 5 0 0 0 3 8 7	PAGE (3) 1 OF 0 3
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TITLE (4)
LOSS OF FIRE DETECTION/SUPPRESSION - OPERATION PROHIBITED BY TECHNICAL SPECIFICATIONS

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)
08	16	93	93	010	00	09	13	93	SSES - UNIT 2		0 5 0 0 0 3 8 8
											0 5 0 0 0

OPERATING MODE (9) 4

POWER LEVEL (10) 0 | 0 | 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

20.402(b)	20.405(c)	60.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	50.38(c)(1)	60.73(a)(2)(v)	73.71(c)
20.405(a)(1)(ii)	50.38(c)(2)	60.73(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)	60.73(a)(2)(viii)(A)	
20.405(a)(1)(iv)	60.73(a)(2)(ii)	60.73(a)(2)(viii)(B)	
20.405(a)(1)(v)	50.73(a)(2)(iii)	60.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME HARRISON LLOYD, JR. - POWER PRODUCTION ENGINEER	TELEPHONE NUMBER AREA CODE 7 1 7 5 4 2 - 3 9 1 7
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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
C	I C	E C B D	S 2 2 6	N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

On August 16, 1993, a severe lightning storm in the area of the site caused numerous spurious alarms in the Simplex Fire Protection System and disabled a transponder which locked in two alarms and rendered the fire suppression system in two areas inoperable. With fire barriers already inoperable due to Thermo-lag fire rating issue (LER 92-015-00), continuous fire watches were required. Sufficient manpower was not available for all affected areas within one hour; thus, all available firewatch personnel were assigned roving fire watch duties. The cause of the event was an apparent lightning strike disabling a transponder card in the Simplex system. This event was determined to be reportable per 10CFR50.73 (a)(2)(i)(B) as a condition prohibited by Technical Specifications in that the required action of establishing a continuous fire watch was not accomplished within one hour as required. The failed transponder card was replaced and system operability restored. Previous improvements to the system to minimize the effects of surges from lightning strikes have proven to be adequate since no similar events have occurred in the past several years.

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-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3160-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) SUSQUEHANNA STEAM ELECTRIC STATION - UNIT 1	DOCKET NUMBER (2) 0 5 0 0 0 3 8 7	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 3	- 0 1 0	- 0 0	0 2	OF	0 3

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

DESCRIPTION OF EVENT

On August 16, 1993, with Unit 1 in Condition 4 at 0% power, and Unit 2 in Condition 1 at 100% power, a severe lightning storm in the area of the site caused numerous spurious alarms in channel 1 of the Simplex Fire Protection alarm panel (EIS Code: IC). Because of uncertainty in the operability of channel 1 of Simplex, it was declared inoperable and the Limiting Condition for Operation action statements for Technical Specification 3.7.7 and 3.3.7.9 were entered. With the fire barriers already inoperable (LER 92-015-00) due to the fire rating issue of Thermo-lag, continuous fire watches were required to be established within one hour once the detection system became inoperable. Continuous fire watches could not be established for all affected areas within the required one hour. All available personnel were assigned roving fire watch duties in the affected areas.

CAUSE OF EVENT

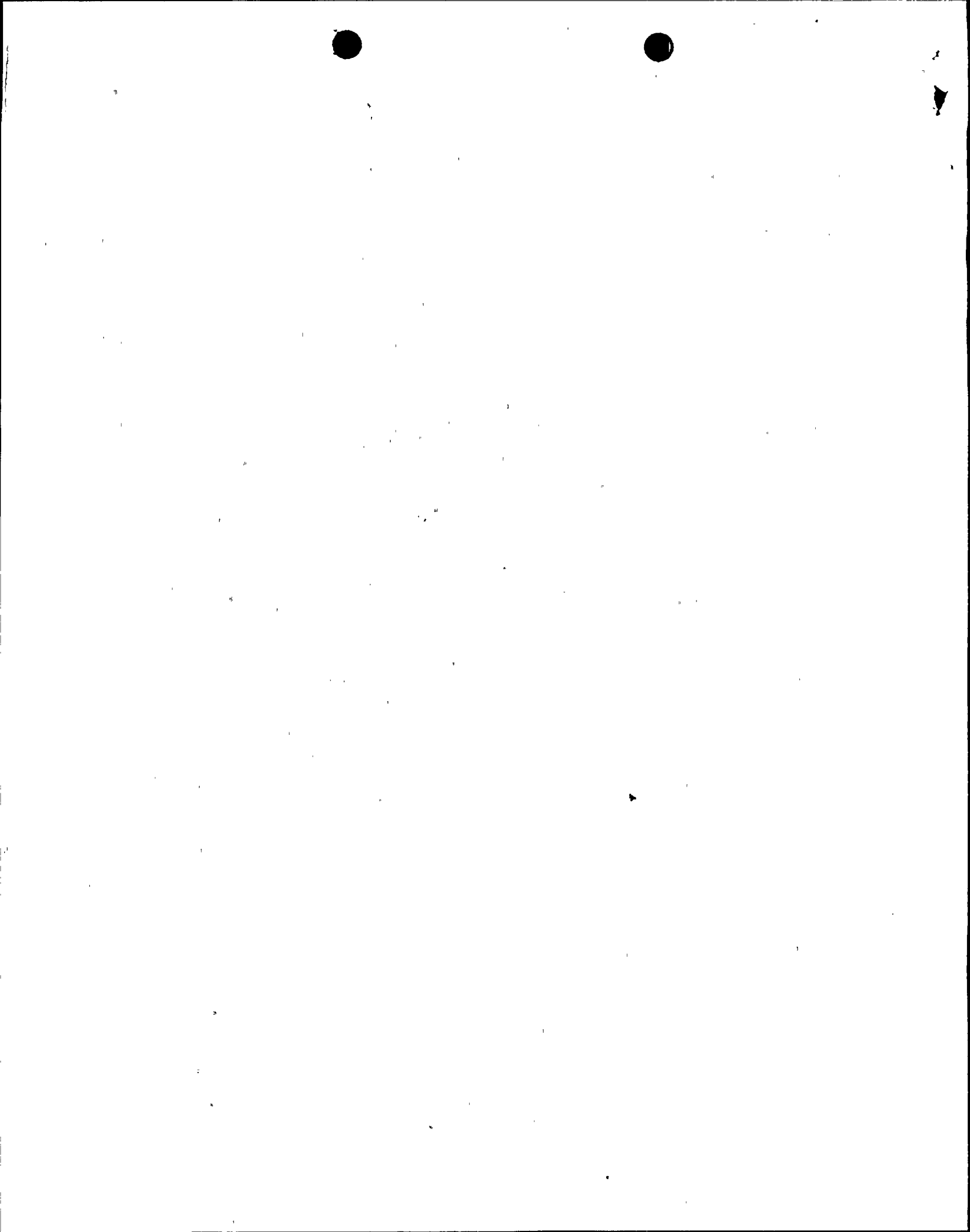
The cause of this event was an apparent lightning strike on site which disabled a card for transponder 116 and caused multiple spurious alarms on channel 1 of the Simplex system. Channel 1 was later determined not to be inoperable; however, sufficient alarms were received to call into question its operability until trouble-shooting could be completed. Most of the alarms cleared within a few minutes. However, the primary and secondary communication for one transponder were locked in for one hour and thirty-four minutes. When the communication alarms cleared, fire detection alarms 116-105 and 116-108 locked in. These alarms are for detection in the lower elevation of the 'A' and 'D' Diesel Generators. The locked in alarms rendered the automatic suppression system for these areas inoperable.

The cause of failure to establish continuous fire watches in the affected areas within one hour was that all fire wrap was already inoperable and sufficient manpower was not available to man all areas once fire detection became inoperable. It is impractical to maintain adequate firewatch personnel on site around the clock in anticipation of this condition nor is it considered necessary based on past performance of the system.

REPORTABILITY/ANALYSIS

This event was determined reportable per 10CFR50.73(a)(2)(i)(B), as a condition prohibited by Technical Specifications in that the required action of establishing a continuous fire watch per Technical Specification 3.7.7, action a, and 3.7.6.2, action a, were not accomplished within one hour as required.

The fire detection system provides early warning of a fire. With hourly roving firewatches in place in most areas and the ability to manually initiate the fire suppression system, it is highly unlikely that a fire would last long enough to cause significant damage. Therefore, there were no safety consequences and minimal safety compromises to the health and safety of the



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-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.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 3	- 0 1 0	- 0 0	0 3	OF	0 3

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

public and/or plant personnel. This event would not have been more severe at any other initial operating condition.

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 9/15/93.

CORRECTIVE ACTION

The failed transponder card was replaced and system operability was restored. Previous improvements to the system to minimize the effects of surges from lightning strikes have proven to be adequate since no similar events have occurred in the past several years and this occurrence is considered an isolated event.

ADDITIONAL INFORMATION

Failed Component Identification: ECBD*

Previous Similar Reported Events: Docket No. 50-387, LER 88-015-00, Loss of Fire Detection Due to Thunderstorm Activity.

* The components which failed within the Simplex 2120 Central Alarm Station are not specifically identified.

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