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ACCESSION NBR: 8903280091 DOC. DATE: 89/03/17 NOTARIZED: NO DOCKET #
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylvania 05000387
 AUTH. NAME AUTHOR AFFILIATION
 ERTMAN, J.S. Pennsylvania Power & Light Co.
 BYRAM, R.G. Pennsylvania Power & Light Co.
 RECIPIENT NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-007-00: on 890202, loss of fire detection, due to component failure.

W/8 ltr.

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 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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LICENSEE EVENT REPORT (LER)

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 Due to Component Failure

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	2	0	8	9	0	0	7	0	0	3	1	7	8	9	SSES - Unit 2	0 5 0 0 0 3 8 8
0	2	0	8	9	0	0	7	0	0	3	1	7	8	9		0 5 0 0 0 3 8 8

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	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)						
	20.405(a)(1)(i)	50.38(e)(1)	50.73(a)(2)(v)	73.71(c)						
	20.405(a)(1)(ii)	50.38(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 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)(ix)								

LICENSEE CONTACT FOR THIS LER (12)											
NAME J.S. Ertman - Fire Protection Engineer								TELEPHONE NUMBER			
								AREA CODE			
								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	
X	I	C	E	C	B	D	S	2	2	6	No

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 February 2, 1989 at 0234 hours Channel 1 of the plant Fire Protection Central Alarm System (Simplex 2120) was lost. This resulted in loss of detection in the Unit 1 Reactor Building and the common areas for approximately 10 hours. Hourly firewatches were already in place for all but one of the affected fire zones. Operations personnel reviewed Technical Specifications and determined that the existing hourly firewatches were adequate to meet the required LCO Action statement.

On February 17, 1989 the Site Fire Protection Engineer determined that the existing hourly firewatches were not adequate to meet all of the applicable Technical Specification Action Statements. Specifically, an additional fire zone should have been added to the hourly firewatch patrol as required by plant Technical Specification 3.3.7.9. and continuous firewatches should have been established in areas with inoperable suppression systems or fire barriers as required by Technical specifications 3.7.6.2 and 3.7.7.

This event was determined reportable due to not meeting the action statement for these Technical Specifications under 10CFR50.73(a)(2)(i)(B) as a condition prohibited by the plant Technical Specifications.

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PDR ADCK 05000387
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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Unit 1 Susquehanna Steam Electric Station	DOCKET NUMBER (2) 0 5 0 0 0 3 8 7 8 9 - 0 0 7 - 0 0	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

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

DESCRIPTION OF EVENT

On February 2, 1989 at 0234 hours, the Fire Protection System (EIIIS Code, IC) Simplex Central Alarm Station field transponder 102 failed; this resulted in the loss of communications for Simplex System Channel 1. Unit 1 and common area detection was lost as a result of the component failure. The failed transponder was replaced and functionally tested; the Simplex System Channel 1 was declared operable at 1230 hours of the same day.

Operations personnel reviewed Technical Specifications and determined that the existing hourly firewatches were adequate to meet the required ICO Action Statement. Additional firewatches described below should have been established.

CAUSE OF EVENT

Failure of a Fire Protection Central Alarm System transponder card caused the impairment of the Channel 1 detection. The failure to meet the Technical Specification Action Statements was due to lack of immediately useful system information in existing procedures. The procedures in place do not adequately aid operations personnel in determining the portions of the system inoperable when a specific transponder or channel fails. This information is needed immediately upon annunciation of a Central Alarm System Trouble or Alarm condition in order to determine the required compensatory measures and establish them within one hour.

REPORTABILITY/ANALYSIS

The loss of the Simplex Channel 1 detection required entry into the action statement of Technical Specifications 3.3.7.9, 3.7.6.2 and 3.7.7.

Technical Specification 3.3.7.9 requires establishing an hourly roving firewatch for areas with inoperable detection. An hourly firewatch was already in place for most areas where Simplex Channel 1 detection was lost. One area, Lab Hood Exhaust Filter Area (Fire Zone 0-22A), which is applicable to Technical Specification 3.3.7.9 should have had an hourly firewatch established; the local filter suppression systems and their associated detection was operable while the Simplex Channel 1 early warning detection in this area was inoperable.

Technical Specification 3.7.6.2 requires establishing a continuous firewatch within one hour for those areas in which redundant systems or components could be damaged. Six (6) Reactor Building and Control Structure Preaction Suppression Systems utilize Simplex Channel 1 detection to provide an Alarm input to actuate the system; the automatic initiation function of these systems is not available without the Simplex detection. Continuous firewatches should have been established in areas protected by the suppression systems; however, only the existing roving firewatch was in place in these areas.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

Technical Specifications 3.7.7(a) requires an hourly firewatch with operable detection or a continuous firewatch when detection is inoperable in the vicinity of inoperable fire barriers. Penetration work was in progress in several areas of the plant serviced by Simplex Channel 1 detection. Continuous firewatches should have been established; however, only the existing roving firewatches were in place in these areas.

The roving firewatch compensatory measures in place and the local suppression systems that were operable in the affected areas provided minimum early warning detection and selected suppression capabilities. The preaction suppression systems that utilize Simplex Channel 1 detection for automatic initiation were still available for manual initiation, if required. Therefore, the ability to achieve and maintain safe shutdown in the event of a fire was not affected by the detection impairment.

Due to not meeting the Action Statements for 3.3.7.9, 3.7.6.2 and 3.7.6 this event was determined to be reportable under 10CFR50.73(a) (2) (i) (B) as a condition prohibited by the plant Technical Specifications.

CORRECTIVE ACTIONS

Procedures will be enhanced/developed to provide Operations Personnel adequate information on specific Central Alarm System Trouble or Alarm conditions to determine operability and compensatory measures in a timely manner.

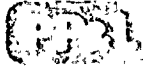
ADDITIONAL INFORMATION

Failed Component Identification ECBD *

System Code: IC

Previous LERs from both units were reviewed to identify past similar events; LER 88-015 (Unit 1) was identified as being similar (Failure of Simplex transponder card).

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



Pennsylvania Power & Light Company

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

March 17, 1989

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 89-007-00
FILE R41-2
PLAS - 357

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

Attached is Licensee Event Report 89-007-00. This event was determined reportable per 10CFR50.73(a)(2)(i)(B) due to failure to meet the required action statements per Plant Technical Specifications following the loss of Simplex Channel 1 Fire Detection on Unit 1.

R.G. Byram
Superintendent of Plant - Susquehanna

JSE/mjm

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

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

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