

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8808250120 DOC.DATE: 88/08/17 NOTARIZED: NO DOCKET #  
 FACIL:50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylv 05000387  
 AUTH.NAME AUTHOR AFFILIATION  
 DAVIS,S.E. Pennsylvania Power & Light Co.  
 BYRAM,R.G. Pennsylvania Power & Light Co.  
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-015-00:on 880717,loss of fire detection due to  
 thunderstorm activity.

W/8 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED:LTR / ENCL / SIZE: 4  
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:LPDR 2 cys Transcripts.

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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				
TITLE (4) Loss of Fire Detection due to Thunderstorm Activity																		
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   7	1   7	8   8	8   8	0   1   5	0   0	0   8	1   7	8   8	SSES - Unit 2				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) 0   9   7			20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)			
			20.405(a)(1)(i)				50.36(c)(1)				50.73(a)(2)(v)				73.71(c)			
			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)				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 S.E. Davis - Site Fire Protection Engineer										TELEPHONE NUMBER 7   1   7   5   4   2   -   3   9   1   5								
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																		
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC								
C	I   C	E   C   B   D	S   2   2   6	No														
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)

On July 17, 1988 at 0200 hours, with Unit 1 in condition 1 at 97% power and Unit 2 in condition 1 at 95% power, the plant fire protection panel (Simplex) lost channel 2 communications. This resulted in the loss of fire detection and alarm for those devices on channel 2, as well as the loss of the Control By Event (CBE) for automatic initiation of several of the spray and sprinkler systems and CO2 systems on channel 2. Hourly roving firewatches were already in place in the affected areas, however, Technical Specification 3.7.6.2 and 3.7.6.3 require continuous firewatches be established within one hour for those areas in which redundant systems or components could be damaged. Continuous firewatches could not be established within the one hour timeframe to cover the affected areas. The required continuous firewatches were established within approximately seven (7) hours. By not meeting the Action statement for these Technical Specifications, this SORR is deemed as reportable under 10CFR50.73(a)(2)(i)(B) as a condition prohibited by the plant Technical Specifications.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

DESCRIPTION OF EVENT

During a thunderstorm, several plant electrical perturbations were experienced which caused some damage to the plant fire protection panel. Communications for all of channel 2 were lost due to the failure of two transponders and a DC transmission circuit card. The loss of channel 2 communications resulted in all fire detection and alarms on channel 2 being lost. This loss of communications also made several spray and sprinkler systems and CO2 systems inoperable due to the loss of the automatic initiation through CBE. Several of the fire detection circuits, spray and sprinkler systems and CO2 systems affected are required by the Technical Specifications.

REPORTABILITY/ANALYSIS

The loss of channel 2 communications and its effect on the plant systems described above required entry into the action statement of Technical Specifications 3.3.7.9, 3.7.6.2, and 3.7.6.3. The action statement for Technical Specification 3.3.7.9 requires establishing an hourly roving firewatch for the areas affected when less than the minimum number of instruments are operable. An hourly firewatch was already in place for the affected areas prior to the event. Technical Specifications 3.7.6.2 and 3.7.6.3 require a continuous firewatch be established within one hour for those areas in which redundant systems or components could be damaged. Continuous firewatches could not be established within the one hour timeframe to provide coverage for the affected areas, however, hourly roving firewatches were in effect for the areas. Continuous firewatches were established in all affected areas within approximately seven (7) hours.

Due to not meeting the Action statements for 3.7.6.2 and 3.7.6.3 within the one hour timeframe, this event was determined to be reportable under 10CFR50.73(a)(2)(i)(B) as a condition prohibited by the plant Technical Specifications.

CAUSE OF EVENT

The cause of this event was the failure of a DC transmission circuit card and two transponders. The failure of these items appears to have resulted from electrical perturbations as a result of lightning strikes from a thunderstorm.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

TEXT (If more space is required, use additional NRC Form 365A's) (17)

CORRECTIVE ACTIONS

The DC transmission circuit card was replaced and the two transponders were repaired (microprocessor chips replaced). The system was reset and functioned properly, and returned to service at 1320 hours. The required continuous firewatches were terminated within eleven and one half hours from the initial event.

ADDITIONAL INFORMATION

Failed Component Identification: ECBD \*

System Code: IC

Previous LERs from both units were reviewed to identify any similar events; none were found.

\* Note: The components which failed within the Simplex 2120 CPU system are not specifically identified.



**Pennsylvania Power & Light Company**

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

August 17, 1988

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

SUSQUEHANNA STEAM ELECTRIC STATION  
LICENSEE EVENT REPORT 88-015-00  
FILE R41-2  
PLAS-332

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

Attached is Licensee Event Report 88-015-00. This event was determined reportable per 10CFR50.73(a)(2)(i)(B) due to not meeting the required action statements per Plant Technical Specifications 3.7.6.2 and 3.7.6.3.

R. G. Byram  
Superintendent of Plant - Susquehanna

SED/mjm

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11