

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9008090419 DOC.DATE: 90/08/06 NOTARIZED: NO DOCKET #
 FACIL:50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylv 05000388
 AUTH.NAME AUTHOR AFFILIATION
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 STANLEY,H.G. Pennsylvania Power & Light Co.
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-007-00:on 900705,ESF actuations due to RPS EPA
 breaker spurious trip.

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

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Pennsylvania Power & Light Company

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August 6, 1990

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 90-007-00
FILE R41-2
PLAS - 435

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

Attached is Licensee Event Report 90-007-00. This event was determined reportable per 10CFR50.73(a)(2)(iv) in that unplanned actuations of Engineered Safety Features occurred due to the loss of the primary power supply to the Division 1 Reactor Protection System power distribution panel when one of its Electrical Protection Assembly breakers tripped.

H.G. Stanley
Superintendent of Plant - Susquehanna

PPR/mjm

cc: Mr. T. T. Martin
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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 0** PAGE (3) **1 OF 0 3**

TITLE (4) **ESF Actuations Due to RPS EPA Breaker Spurious Trip**

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)
07	05	90	90	007	00	08	06	90			0 5 0 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	20.402(b)	20.405(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)
	20.405(a)(1)(i)	50.36(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(ii)	50.36(c)(2)	<input type="checkbox"/>	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)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)	
	20.405(a)(1)(iv)	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)	
	20.405(a)(1)(v)	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME **P. P. Rusanowsky - Power Production Engineer** TELEPHONE NUMBER **7 1 7 5 4 2 - 3 7 5 9**

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)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15) **0 6 3 0 9 1**

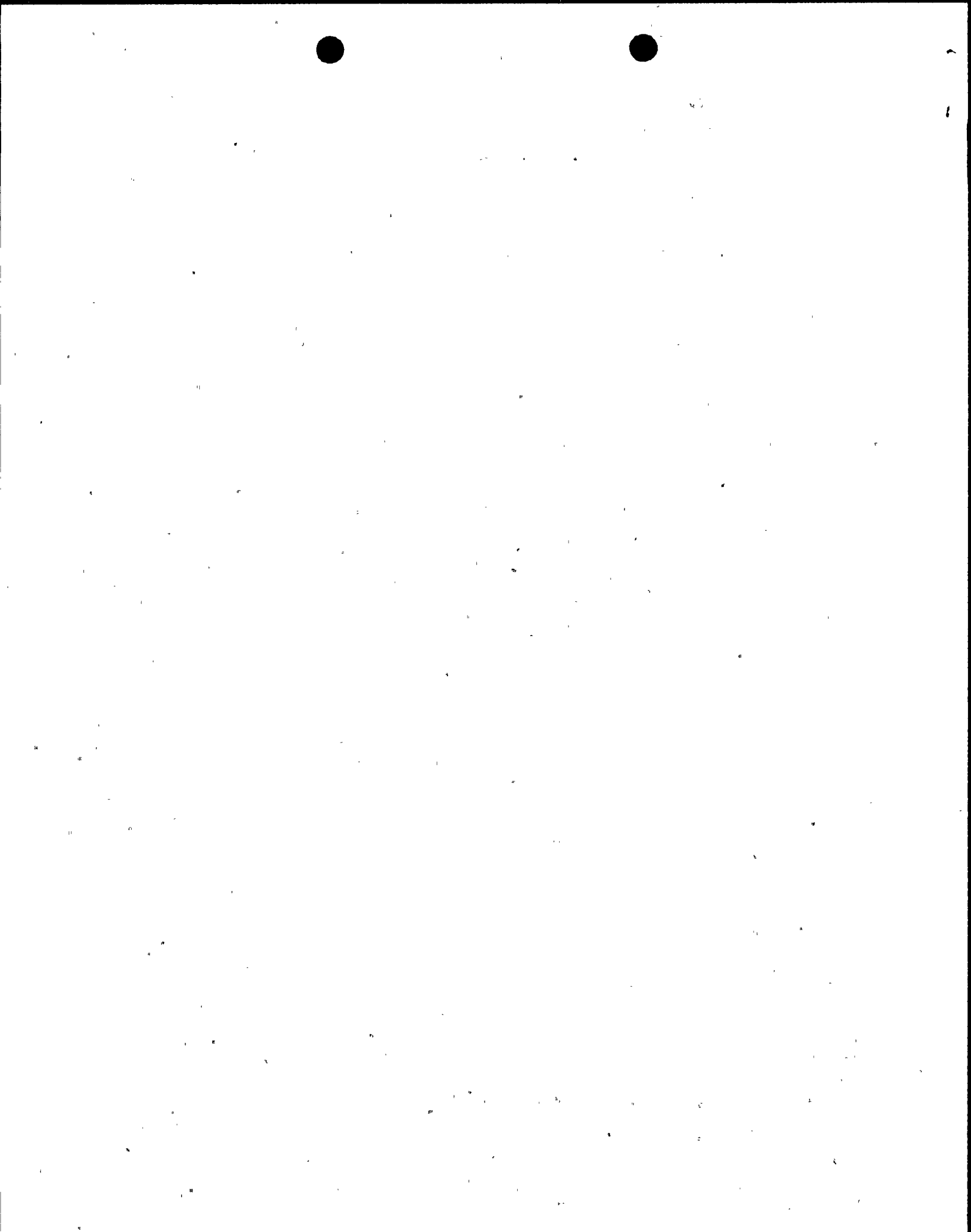
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

At 1633 on 7-5-90 with the unit operating at 100% power, the primary power supply to the "A" Reactor Protection System (RPS) power distribution panel was lost when one of its Electrical Protection Assembly (EPA) breakers tripped. This interruption of power to "A" RPS, per design, caused Reactor Building HVAC Zones II and III, the Reactor Water Cleanup System, and various other Primary Containment Isolation System components to isolate and the Standby Gas Treatment System and Control Room Emergency Outside Air Supply System to auto initiate. All plant systems and components functioned properly and as expected in response to the event. No reactor parameters were affected and no Emergency Core Cooling Systems were actuated.

The EPA breaker was reset at 1640 and all isolation signals were reset by 1646. Full power operation of the unit continued without interruption. The EPA breaker has been in service since it was reset on 7-5-90 and has not tripped since then.

The cause of the breaker trip will be investigated during the next unit outage (forced or scheduled). An analysis of all previous station events involving EPA breaker trips and surveillance failures is being conducted to determine if any significant trends or patterns exist.

Since all Engineered Safety Feature (ESF) systems and components functioned properly and per design, there were no safety consequences or compromises to the health or safety of the public.



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

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

DESCRIPTION OF EVENT

At 1633 on 7-5-90 with the unit operating at 100% power, the primary power supply to the "A" Reactor Protection System (RPS; EIIS Code: JC) power distribution panel 2Y201A was lost when one of its Electrical Protection Assembly (EPA) breakers, 2CB-S003A-C, tripped. This power interruption, per design, resulted in numerous Primary Containment Isolation System (EIIS Code: JM) actuations and automatic system initiations. The major actuations were as follows:

- 1) Reactor Building HVAC (EIIS Code: VA) Zones II and III isolated.
- 2) Reactor Water Cleanup System (EIIS Code: CE) inboard isolation valve closed.
- 3) Cooling water isolation valves to the Reactor Recirc Pumps closed (EIIS Code: CC).
- 4) "A" Standby Gas Treatment System (EIIS Code: BH) auto initiated.
- 5) "A" Control Room Emergency Outside Air Supply System (EIIS Code: BH) auto initiated.

The EPA breaker was reset at 1640, all isolation signals were reset by 1646, and all affected systems were subsequently restored. Full power operations of the unit continued without interruption. The EPA breaker has been in service since it was reset on 7-5-90 and has not tripped since then.

CAUSE OF EVENT

The cause of the breaker trip is unknown.

CORRECTIVE ACTIONS

The EPA will be tested in an attempt to determine the cause of the trip during the next unit outage (forced or scheduled).

An analysis of all previous station events involving EPA breaker trips and surveillance failures is being conducted to determine if any significant trends or patterns exist.

The results of these activities will be included in a supplemental report to this LER.

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.

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 7	0 0	0 3	OF	0 3

TEXT (If more space is required, use additional NRC Form 368A's) (17)

REPORTABILITY/ANALYSIS

This event was determined to be reportable under 10CFR50.73(a) (2) (iv) in that unplanned actuations of Engineered Safety Features (ESF) occurred when the RPS EPA breaker tripped.

Since all ESF systems and components functioned properly and per design, there were no safety consequences or compromises to the health or safety of the public.

Had this event occurred with the unit in cold shutdown or refueling, the safety significance would have been slightly greater due to the fact that shutdown cooling could have been temporarily lost. Even under these conditions the safety significance would be minimal since the plant is more than adequately designed to safely handle this type of event.

In accordance with the guidance provided in NUREG 1022 Supplement 1 Items 14.1 and 14.10, the required submission date for this report was determined to be 8-6-90.

ADDITIONAL INFORMATION

A review of past Licensee Event Reports (LERs) for the station identified five previous events where EPA breaker trips resulted in ESF actuations. Several other events in which the EPA breaker trips were caused by the starting of large motors are not reported here since this problem was corrected in 1985 by replacing the RPS Alternate Power Supply transformers with constant voltage transformers in both Units 1 and 2.

UNIT 1 (Docket No. 50-387/License No. NPF-14)

- LER 87-024
- LER 86-029
- LER 86-023
- LER 83-172

UNIT 2 (Docket No. 50-388/License No. NPF-22)

- LER 88-005