

# PRIORITY

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ACCESSION NBR: 9503160061      DOC. DATE: 95/03/10      NOTARIZED: NO      DOCKET #  
 FACIL: 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylvania      05000388  
 AUTH. NAME      AUTHOR AFFILIATION  
 WEHRY, R.R.      Pennsylvania Power & Light Co.  
 STANLEY, H.G.      Pennsylvania Power & Light Co.  
 RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 95-002-00: on 950208, unplanned ESF actuation occurred.  
 Caused by human error. Operations performed review to  
 determine all affected loads, corrected switching error, re-  
 opened isolation valve & restored status. W/950310 ltr.

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

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EXTERNAL:	L ST LOBBY WARD	1	1	LITCO BRYCE, J H	2	2
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**Pennsylvania Power & Light Company**

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March 10, 1995

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

SUSQUEHANNA STEAM ELECTRIC STATION  
LICENSEE EVENT REPORT 95-002-00  
PLAS- 624 FILE R41-2

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

Attached is Licensee Event Report 95-002-00. This report is being made pursuant to 10CFR50.73(a)(2)(iv) in that an unplanned Engineered Safety Feature (ESF) actuation occurred when the Traversing Incore Probe indexer isolation valve automatically closed following loss of a 120 VAC power supply circuit.

  
H. G. Stanley  
VP - Nuclear Operations

RRW/mjm

cc: Mr. T. T. Martin  
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9503160061 950310  
PDR ADOCK 05000388  
S PDR

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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), U7.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) <b>Susquehanna Steam Electric Station - Unit 2</b>	DOCKET NUMBER(2) <b>0 5 0 0 0 3 8 8 1</b>	PAGE (3) <b>OF 0 3</b>
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TITLE (4)  
**Unplanned ESF Actuation Due To Operator Switching Error**

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 5	9 5	0 0 2	0 0	0 3	1 0	9 5			0 5 0 0 0

OPERATING MODE (9) <b>1</b>	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § : (Check one or more of the following) (11)									
POWER LEVEL (10) <b>1 0 0</b>	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(b)						
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(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"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(v)(A)							
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(1)(2)(v)(B)							
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(v)								

LICENSEE CONTACT FOR THIS LER (12)

NAME <b>Richard R. Wehry - Compliance Engineer</b>	AREA CODE <b>7 1 7</b>	TELEPHONE NUMBER <b>5 4 2 - 3 6 6 4</b>
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS

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 February 8, 1995 at 0452 hours, with Unit 2 in Condition 1 (Power Operation) at 100% power, an unplanned Engineered Safety Feature (ESF) actuation occurred when a normally open primary containment isolation valve for the Traversing Incore Probe (TIP) indexer automatically closed following the de-energization of a 120 VAC power supply circuit. The cause of the event was attributed to human error in that a plant operator, who was removing two fans from service for scheduled maintenance, inadvertently opened the wrong 120 VAC circuit breaker. The de-energization of the 120 VAC circuit also resulted in loss of control logic power and status indication to two isolation valves which were already in their closed (normal) position and loss of status indication only to three additional isolation valves. All equipment functioned per design in response to the event. The circuit and its affected loads were restored. Actions to prevent recurrence include counseling of the involved operator on self-checking in all aspects of the job; the development of a briefing package on the event by the involved operator and presentation to all operations shifts; and counseling of involved operations shift personnel by their supervision and review of the event with all operations shift personnel to reinforce the need for thorough control panel walkdowns and close coordination between in-plant and control room operations personnel.



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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	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 5	- 0   0   2	- 0   0	0 2	OF	0 3

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

DESCRIPTION OF EVENT

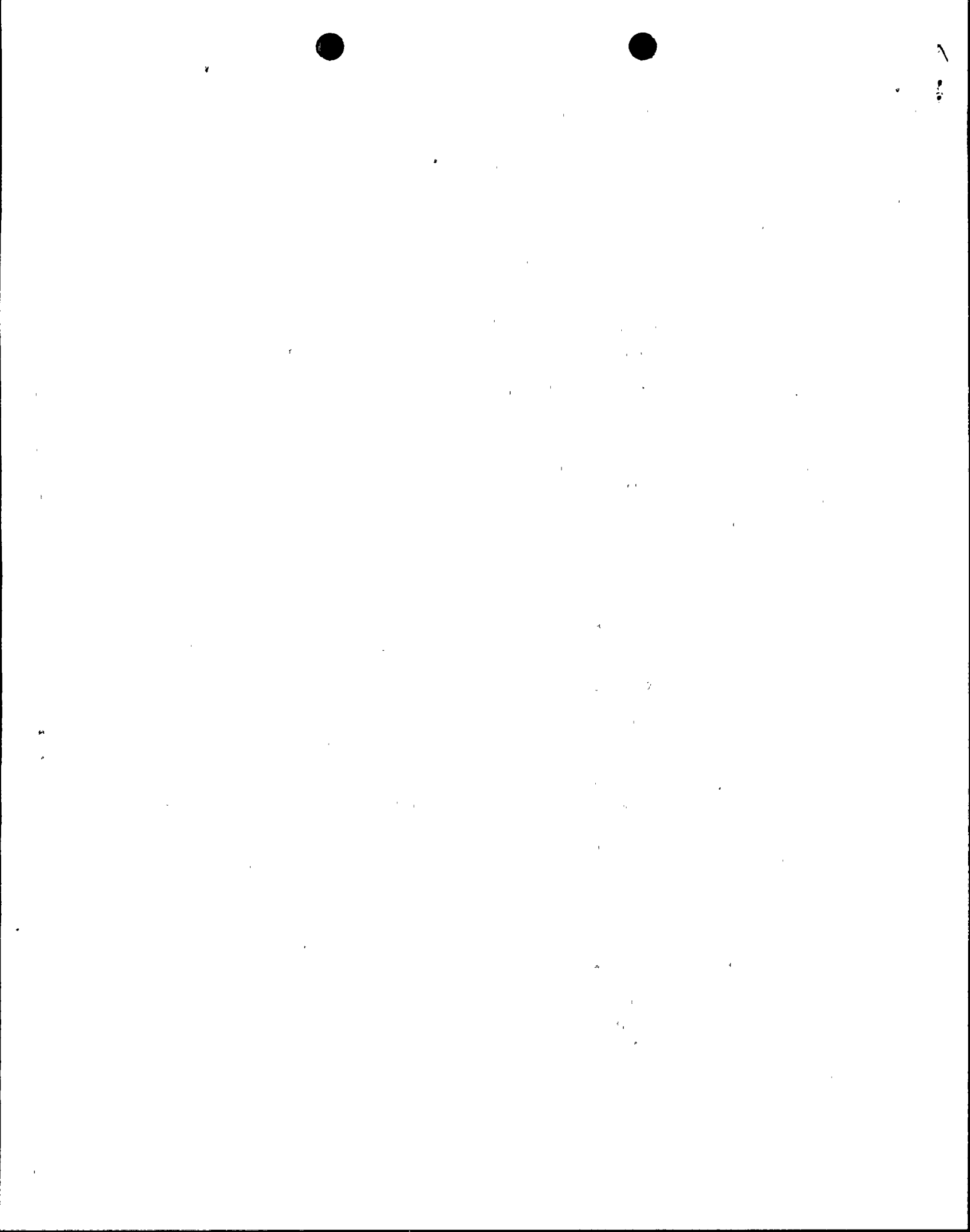
On February 8, 1995 at 0452 hours, with Unit 2 in Condition 1 (Power Operation) at 100% power, an unplanned Engineered Safety Feature (ESF) actuation occurred when a normally open primary containment isolation valve (EIS Code: JM) for the Traversing Incore Probe (TIP; EIS Code: IG) indexer automatically closed following the inadvertent de-energization of a 120 VAC power supply circuit (EIS Code: EF). The de-energization of the 120 VAC circuit also resulted in the loss of control logic power (no valve movement) and status indication for the 'A' drywell floor drain inboard isolation valve and the 'A' drywell drain tank inboard isolation valve and loss of status indication only for the suppression chamber purge inboard isolation valve, drywell purge supply inboard isolation valve and the instrument gas vacuum relief isolation valve (all EIS Code: JM). The fact that an incorrect 120 VAC circuit had been de-energized was identified approximately three hours later by a worker (utility; non-licensed) who was verifying electrical blocking for a scheduled maintenance activity. The worker immediately notified the control room and operations commenced an investigation.

CAUSE OF EVENT

The root cause of this event was attributed to operator (utility; non-licensed) error. The subject operator who was applying electrical blocking for a scheduled work evolution inadvertently opened the number 13 circuit breaker instead of the number 3 breaker in the 120 VAC panel. The error was of a mental / visual nature, associating the 3 in number 13 with the breaker to be opened. The operator failed to implement the required station self-check principles when applying the electrical blocking. There were no contributing causal factors associated with this operator error. The operator was not rushed or fatigued and lighting and panel labeling were adequate.

The investigating team identified weaknesses that contributed to not identifying that the incorrect 120 VAC circuit had been de-energized until approximately three hours later, as follows:

- There was no communication between the control room operator (utility; licensed) and the in-plant operator to confirm expected results on control room indication when the electrical blocking was applied. (It should be noted that there is no alarm annunciation from the opening of the no. 13 (incorrect) breaker).
- The loss of valve status indications resulting from de-energization of the incorrect 120 VAC circuit and the illuminated power available status for the system that was supposed to be de-energized were not observed by on-shift personnel in the control room nor identified during shift turnover panel walkdowns which occurred during operations shift change approximately two and one-half hours after the incorrect breaker had been opened.



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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 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 (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9   5	-   0   0   2	-   0   0	0   3	OF	0   3

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

**REPORTABILITY / ANALYSIS**

The automatic closing of the primary containment isolation valve for the TIP indexer as a result of the operator error is classified as an invalid actuation of an Engineered Safety Feature (ESF). The invalid actuation in this case, however does not meet the reporting exceptions described in 10CFR50.72(b)(2)(ii) and 10CFR50.73(a)(2)(iv). As such, this event is reportable per 10CFR50.73(a)(2)(iv).

There were no safety consequences or compromise to public health or safety as a result of this event. All equipment functioned per design in response to the deenergization of the 120 VAC power circuit.

In accordance with the guidelines provided in NUREG 1022, Supplement 1, Item 14.1, the required submission date for this report was determined to be March 10, 1995.

**CORRECTIVE ACTIONS**

Upon identification by the maintenance worker of the incorrect circuit breaker having been opened and blocked, the control room was notified. Operations immediately performed a review in accordance with operations procedures to determine all affected loads. Following the review, the switching error was corrected, the TIP indexer isolation valve was re-opened, all isolation logic and status indication was restored and a status control investigation was commenced.

Actions to prevent recurrence include:

- Counseling of the involved in-plant operator on the seriousness of self-checking in all aspects of the job.
- Development of a briefing package by the involved in-plant operator on the event and presentation to all operations shifts.
- Counseling of involved operations control room shift personnel by their supervision and review of the event with all operations shift personnel to reinforce the need for thorough control panel walkdowns and close coordination between in-plant and control room operations personnel.

**ADDITIONAL INFORMATION**

Failed Component Identification: None

Previous Similar Events involving unplanned ESF actuations caused by operator switching errors:

Docket No. 50-388 LER 89-007-00  
LER 88-007-00

Docket No. 50-387 LER 89-008-00 LER 87-016-00  
LER 88-022-00

