

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9602020236 DOC.DATE: 96/01/30 NOTARIZED: NO DOCKET #
FACIL:50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylv 05000387
AUTH.NAME AUTHOR AFFILIATION
CODDINGTON,C.T. Pennsylvania Power & Light Co.
STANLEY,H.G. Pennsylvania Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 95-016-00:on 951231,power to HPCI flow controller lost.
Caused by loss of circuit continuity due to inadequate
control circuit termination.125 volt dc battery charger &
inverter power supply visually inspected.W/960130 ltr.

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TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

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Pennsylvania Power & Light Company

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January 30, 1996

U.S. Nuclear Regulatory Commission
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SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 50-387/95-016-00
PLAS - 661 FILE R41-2

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

Attached is Licensee Event Report 50-387/95-016-00. This event was determined to be reportable per 10CFR50.73(a)(2)(ii) in that the High Pressure Coolant Injection (HPCI) System was inoperable due to the loss of power to the HPCI flow controller. This is a condition that alone could have prevented the fulfillment of a required safety function.


H.G. Stanley
VP - Nuclear Operations

Attachment

CTC/dmd

cc: Mr. T. T. Martin
Regional Administrator, Region I
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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 1

DOCKET NUMBER(2)

0 5 0 0 0 3 8 7 1 OF 0 3

PAGE (3)

TITLE (4)

Loss of Power to HPCI Flow Controller

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)									
1	2	3	1	9	5	9	5	0	1	6	0	5	0	0	0				

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																
1		20.402(b)			20.405(c)			50.73(a)(2)(v)			73.71(b)							
POWER LEVEL (10)		20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)			73.71(c)							
1 0 0		20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vi)			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)(vii)(A)										
		20.405(a)(1)(iv)			X 50.73(a)(2)(ii)			50.73(1)(2)(vii)(B)										
		20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(viii)										

(LICENSEE CONTACT FOR THIS LER (12))

NAME							TELEPHONE NUMBER					
Cornelius T. Coddington - Sr. Project Engineer, Licensing							AREA CODE					
							7 1 7		5 4 2 - 3 2 8 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)				X NO				EXPECTED SUBMISSION DATE (15)		MONTH		DAY		YEAR	

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

At 0850 on December 31, 1995, with Unit 1 in Condition 1 (Power Operation) at 100% power, the Control Room received simultaneous alarms that indicated that HPCI was out of service and there was a HPCI inverter failure. Per procedure, a visual inspection of the inverter power supply and the 125 VDC battery charger was performed. Nothing abnormal was found. An investigation indicated that power was lost to the HPCI flow controller and power monitor relay downstream of the inverter. It was confirmed that HPCI was still capable of initiating but would not be able to reach rated speed or flow. HPCI was declared inoperable. Since HPCI is a single train safety system, this condition was determined to be reportable under 10CFR50.73(a)(2)(ii).

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 1 Susquehanna Steam Electric Station	DOCKET NUMBER (2) 0 5 0 0 0 3 8 7	LER NUMBER (6)						PAGE (3)			
		YEAR	SEQUENTIAL NUMBER			REVISION NUMBER					
		9 5	—	0	1	6	—	0	0	2	OF

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

EVENT DESCRIPTION

At 0850 on December 31, 1995, with Unit 1 in Condition 1 (Power Operation) at 100% power, the Control Room received simultaneous alarms that indicated that HPCI (EIS Code: BJ) was out of service and there was a HPCI inverter failure. Per procedure, a visual inspection of the inverter power supply and the 125 VDC battery charger was performed. Nothing abnormal was found. An investigation found the flow controller demand meter downscale, and the controller was nulled (indicating loss of power to the controller). It was confirmed that HPCI was still capable of initiating but would not be able to reach rated speed or flow. HPCI was declared inoperable. Since HPCI is a single train safety system, this condition was determined to be reportable under 10CFR50.73(a)(2)(ii).

During the subsequent investigation all system, alarm, and controller indications returned to normal. The condition could not be reproduced during the physical inspection of the circuits.

CAUSE OF EVENT

PP&L has concluded that the cause of the event was the loss of circuit continuity due to an apparent inadequate control circuit termination. This conclusion is based on the investigation of the circuits. In addition to voltage readings, the investigation included both the physical and visual inspections of wiring, lug terminations and pin jack pin terminations. It also verified that the power fuse and power monitor relay did not affect the loss of circuit power.

REPORTABILITY/ANALYSIS

This event was determined to be reportable per 10CFR50.73(a)(2)(ii) in that the power was lost to the HPCI flow controller rendering it inoperable. Since the HPCI flow controller was inoperable, the HPCI System was inoperable; thus Susquehanna SES Unit 1 HPCI System was in a condition that alone could have prevented the fulfillment of a required safety function.

During the time that the HPCI System was inoperable, Unit 1 was in a condition that did not require HPCI System response in either its safety related injection mode or other support mode of operation. There were no direct safety consequences or events that resulted from this interruption of control power other than the loss of HPCI availability. Also during the period of time that the HPCI System was inoperable, all other ECCS systems and RCIC System were maintained operable. As such, there were no safety consequences or compromises to public health and safety as a result of this event.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY N/ME (1) Unit 1 Susquehanna Steam Electric Station	DOCKET NUMBER (2) 0 5 0 0 0 3 8 7	LER NUMBER (6)						PAGE (3)		
		YEAR		SEQUENTIAL NUMBER		REVISION NUMBER				
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

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 January 30, 1996.

CORRECTIVE ACTIONS

The following corrective actions were initiated and completed:

- The 125 VDC battery charger and the inverter power supply were visually inspected.
- Voltages were checked at various points in the circuits.
- Wires and terminations in the circuit were checked to ensure they were intact.
- Resistance in the circuit and relay coil were checked.
- Pin jack connections were checked and all were tight.

An additional investigation into this event will be conducted during an upcoming system work window to further check terminations to ensure continued circuit integrity.

ADDITIONAL INFORMATION

Past Similar Events: None