

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8801060145      DOC. DATE: 87/12/28      NOTARIZED: NO      DOCKET #  
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylvania      05000387  
 AUTH. NAME      AUTHOR AFFILIATION  
 HIRT, J.A.      Pennsylvania Power & Light Co.  
 BYRAM, R.G.      Pennsylvania Power & Light Co.  
 RECIPIENT NAME      RECIPIENT AFFILIATION

SUBJECT: LER 87-034-00: on 871129, technician inadvertently connects test equipment to incorrect sys module.

W/8      ltr.

DISTRIBUTION CODE: IE22D      COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4  
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES: 1cy NMSS/FCAF/PM.      LPDR 2cys Transcripts.      05000387 S

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	
	PD1-2 LA	1 1	PD1-2 PD	1 1	/
	THADANI, M	1 1			A
					D
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	2 2	D
	AEOD/DOA	1 1	AEOD/DSP/NAS	1 1	D
	AEOD/DSP/ROAB	2 2	AEOD/DSP/TPAB	1 1	S
	ARM/DCTS/DAB	1 1	DEDRO	1 1	S
	NRR/DEST/ADS	1 0	NRR/DEST/CEB	1 1	
	NRR/DEST/ELB	1 1	NRR/DEST/ICSB	1 1	
	NRR/DEST/MEB	1 1	NRR/DEST/MTB	1 1	
	NRR/DEST/PSB	1 1	NRR/DEST/RSB	1 1	
	NRR/DEST/SGB	1 1	NRR/DLPQ/HFB	1 1	
	NRR/DLPQ/QAB	1 1	NRR/DOEA/EAB	1 1	
	NRR/DREP/RAB	1 1	NRR/DREP/RPB	2 2	
	NRR/DRIS/SIB	1 1	NRR/PMAS/ILRB	1 1	
	REG FILE 02	1 1	RES DEPY GI	1 1	
	RES TELFORD, J	1 1	RES/DE/EIB	1 1	
	RGN1 FILE 01	1 1			
EXTERNAL:	EG&G GROH, M	5 5	FORD BLDG HOY, A	1 1	R
	H ST LOBBY WARD	1 1	LPDR	2 2	I
	NRC PDR	1 1	NSIC HARRIS, J	1 1	D
	NSIC MAYS, G	1 1			S
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TOTAL NUMBER OF COPIES REQUIRED: LTTR 50 ENCL 49



Pennsylvania Power & Light Company

P.O. Box 451 • Berwick, PA-18603-0451 • 717/542-2151

December 28, 1987

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

SUSQUEHANNA STEAM ELECTRIC STATION  
LICENSEE EVENT REPORT 87-034-00  
FILE R41-2  
PLAS - 295

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

Attached is a Licensee Event Report 87-034-00. This event was determined reportable per 10CFR50.73(a)(2)(iv), in that an I&C technician incorrectly installed a circuit modifier during surveillance testing which resulted in an inadvertent actuation of an Engineered Safety Feature.

R. G. Byram  
Superintendent of Plant - Susquehanna

cc: Mr. William Russell  
Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
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Resident Inspector  
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P.O. Box 52  
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IE22  
1/1

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <b>Susquehanna Steam Electric Station - Unit One</b>	DOCKET NUMBER (2) <b>0 5   0   0   0   3   8   7</b>	PAGE (3) <b>1 OF 0 3</b>
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TITLE (4) **Technician Inadvertantly Connects Test Equipment to the Incorrect System Module Resulting in an Engineered Safety Feature Actuation**

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		
1	1	2	9	8	7	8	7	8			
				0	3				DOCKET NUMBER(S) <b>0 5   0   0   0      </b>		
				4	0	1	2	2	DOCKET NUMBER(S) <b>0 5   0   0   0      </b>		
						8	8	7			

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>0 8   0</b>	20.402(b)	20.405(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)					
	20.405(a)(1)(i)	50.38(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	73.71(c)					
	20.405(a)(1)(ii)	50.38(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)(ii)	<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 <b>Jeffrey A. Hirt, Engineer Level II</b>	TELEPHONE NUMBER <b>7 1   7 5   4 2   - 3 9   1 7</b>
AREA CODE	

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)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH DAY YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On November 29, 1987, at approximately 1900 hours, the High Pressure Coolant Injection (HPCI) inboard steam isolation valve inadvertently closed during surveillance testing. At the time, I&C technicians were performing SI-183-328 "Quarterly Calibration of Main Steam Line Tunnel (Turbine Bldg) Temperature Channels TSH-B21-10100A,B,C,D." Unit One was operating near 80% rated power during the surveillance testing. The technician identified the correct module, B21-10100A, by referring to a drawing of the module's location which was attached to the cabinet door and by locating the module's identification tag inside the cabinet. After the technician confirmed that he had chosen the correct module, he bent down to pick up a screw driver. The technician then attempted to relocate the module by locating the tag. He saw the tag and proceeded to work on the module located below the tag. It was, however, the incorrect module. B21-10100A lies above the tag. When the technician adjusted the thermocouple calibrator, to determine the trip setpoint, the HPCI steam supply inboard isolation valve closed.

The involved technicians reviewed the error with their supervisor. The event will also be reviewed by all other applicable I&C personnel on an upcoming shop meeting. Plant personnel will install states links inside the cabinet. The states links will be easier to access than the current modules. They also will provide a more unique labelling for the wiring in the panel which should prevent similar mistakes from occurring in the future.

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PDR ADOCK 05000387  
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*IE 22/11*

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Susquehanna Steam Electric Station - Unit One	DOCKET NUMBER (2) 0 5 0 0 0 3 8 7 8 7	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 7	- 0 3 4	- 0 0	0 2	OF 0 3	

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

EVENT DESCRIPTION

On November 29, 1987, at approximately 1900 hours, the High Pressure Coolant Injection (HPCI) (EIIIS Code: BJ) inboard steam isolation valve inadvertently closed during surveillance testing. At the time, I&C technicians were performing SI-183-328 "Quarterly Calibration of Main Steam Line Tunnel (Turbine Bldg) Temperature Channels TSH-B21-10100A,B,C,D." Unit One was operating near 80% rated power during the surveillance testing.

The technicians started the test at approximately 1740 hours. The applicable instructions of the surveillance test procedure are listed below:

- 6.1.2 At panel 1C614, NSSS Temperature Recording and Leak Detection Vertical Board, disconnect one or both thermocouple leads from B21-10100A terminals F2(-) and S(+).
- 6.1.3 Connect the digital thermometer and thermocouple calibrator to B21-10100A, terminals F2(-) and S(+).

The technician (non-licensed, non-utility) identified the correct module, B21-10100A, by referring to a drawing of the modules' location which was attached to the cabinet door and by locating the module's identification tag inside the cabinet. (These identification tags had been installed due to a previous misconnection of test equipment.) The tag was located below the module, on the wiring connected to the module. It had to be repositioned, i.e. flipped over, in order for the technician to read it. After the technician confirmed that he had chosen the correct module, he bent down to pick up a screw driver to disconnect the thermocouple leads. When he did, the tag flipped back to its original location, i.e. unreadable. The technician then attempted to relocate the module by locating the tag. He saw the tag (however could not read it since it had flipped over) and proceeded to work on the module below the tag. A second technician (non-licensed, utility) reviewed the installation of the thermocouple calibrator and verified that it was installed on the correct module. The two technicians believed that they had picked the correct module to attach the circuit modifier. It was, however, the incorrect module. B21-10100A lies above the tag. The technician actually disconnected leads from the module controlling the HPCI Emergency Area Room Cooler. When the technician adjusted the thermocouple calibrator, to determine the trip setpoint, the HPCI steam supply inboard isolation valve closed.

CORRECTIVE ACTIONS

Operations personnel immediately responded. An operator requested the I&C technicians to remove the trip signal. He then reset the HPCI isolation and reopened the valve.

The involved technicians reviewed the error with their supervisor. The event will also be reviewed by all other applicable I&C personnel on an upcoming shop meeting.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Susquehanna Steam Electric Station - Unit One	DOCKET NUMBER (2)  0 5   0   0   0   3   8   7	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 7	0 3 4	0 0	0 3	OF	0 3

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

The testing difficulty (i.e., identifying the correct module and connecting jumpers) of this cabinet and others like it has been previously identified by plant personnel. To correct this testability deficiency, a modification is planned. As part of the modification, plant personnel will install states links inside the cabinet. The states links will be easier to access than the current modules. They also will provide a more unique labelling for the wiring in the panel which should prevent similar mistakes from occurring in the future.

SAFETY SIGNIFICANCE

This event posed little, if any, hazard to the plant. The HPCI system was unavailable for only a few minutes. The Reactor Core Isolation Cooling system (EIIS Code: BN) was operable as were the Core Spray system (EIIS Code: BM), Automatic Depressurization System (EIIS Code: \*), and the Low Pressure Coolant Injection System (EIIS Code: B0). If a low level condition had occurred at the same time the HPCI valve was closed these systems would have responded in their designed manner.

SIMILAR OCCURRENCES

Licensee Event Report 85-022-00, filed with the Commission on July 30, 1985, identifies a similar inadvertent engineered safety feature actuation. On July 3, 1985, during surveillance testing, an I&C technician installed test equipment on the incorrect module. He was performing a test of the HPCI equipment room differential temperature channels. Instead of connecting his test equipment to the HPCI module he chose the RWCU leak detection module. No tags identifying the modules from the rear had been installed. The technician identified the HPCI module from the front of the cabinet, then moved to the rear of the cabinet to connect his equipment. Due to a transposition error, he chose the wrong module. As a result, a containment isolation valve closed when the technician inserted a test signal to confirm the trip setpoint of the HPCI module. Tags were installed on the input wires of each module. (The tag which the technician had to "flip" was one of these which were installed.)

REPORTABILITY

This event is considered an inadvertent actuation of the primary containment isolation system, which is an Engineered Safety Feature. As such it is reportable to the Commission per 10CFR50.73 (a)(2)(iv).

\* - NO APPLICABLE CODE