

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8802160308 DOC. DATE: 88/02/10 NOTARIZED: NO DOCKET #  
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylv 05000387  
 AUTH. NAME AUTHOR AFFILIATION  
 RYDER, T. S. Pennsylvania Power & Light Co.  
 BYRAM, R. G. Pennsylvania Power & Light Co.  
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-002-00: on 880111, ESF actuation occurred when HPCI steam supply outboard isolation valve closed. Caused by meter circuit shunting module trip contacts. HPCI isolation logic reset, valve opened & Riley module replaced. W/880210 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 3  
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD1-2 LA THADANI, N	1 1 1 1	PD1-2 PD	1 1
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	2 2
	AEOD/DQA	1 1	AEOD/DSP/NAS	1 1
	AEOD/DSP/RGAB	2 2	AEOD/DSP/TPAB	1 1
	ARM/DCTS/DAB	1 1	DEDRO	1 1
	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/DREP/SIB	1 1	NRR/PMAS/ILRB	1 1
	REG FILE 02	1 1	RES TELFORD, J	1 1
	RES/DE/EIB	1 1	RES/DRPS DIR	1 1
	RGN1 FILE 01	1 1		
EXTERNAL:	EG&G GROH, M	5 5	FORD BLDG HOY, A	1 1
	H ST LOBBY WARD	1 1	LPDR	2 2
	NRC PDR	1 1	NSIC HARRIS, J	1 1
	NSIC MAYS, G	1 1		

NOTES: 3 3

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 2**

TITLE (4) **High Pressure Coolant Injection Steam Supply Valve Isolation**

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		
0	1	1	8	8	0 0 2	0	0	2			
0	1	1	8	8	0 0 2	0	0	2	DOCKET NUMBER(S) 0 5 0 0 0		
0	1	1	8	8	0 0 2	0	0	2	0 5 0 0 0		

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

OPERATING MODE (9) <b>1</b>	20.402(b)	20.405(c)	<input checked="" type="checkbox"/>	60.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) <b>1 0 0</b>	20.405(a)(1)(i)	60.38(c)(1)		60.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(ii)	60.38(c)(2)		60.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iii)	60.73(a)(2)(ii)		60.73(a)(2)(viii)(A)	
	20.405(a)(1)(iv)	60.73(a)(2)(iii)		60.73(a)(2)(viii)(B)	
	20.405(a)(1)(v)	60.73(a)(2)(iii)		60.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
<b>T.S. Ryder - Power Production Engineer</b>	<b>7 1 1 7 5 4 2 - 3 2 3 5</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)

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)

At 1655 hours on January 11, 1988 with Unit 1 operating in condition 1 at 100% power, an Engineered Safety Feature (ESF) actuation occurred when the High Pressure Coolant Injection (HPCI) Steam Supply Outboard Isolation Valve, HV155F003, went closed unexpectedly. Technicians had successfully completed the 31 day equipment room channels surveillance test on Equipment Area Temperature Module TSH-E41-IN600B. Upon completion, they heard a humming noise from the module. After they removed a meter used to investigate this abnormality, the module actuated causing the valve to close. Operations immediately reset the HPCI isolation logic and re-opened HV155F003. This event was determined to be reportable per 10CFR50.73 (a) (2) (iv), in that it comprised an unplanned ESF actuation. There was no measurable hazard presented to the plant by the HPCI system being unavailable for only a few minutes with the remaining Emergency Core Cooling Systems available to respond in their designed manner. Corrective actions included resetting the HPCI isolation logic, reopening HV155F003, and ultimately replacing the Riley module. This event will also be reviewed with Instrumentation and Controls personnel.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

DESCRIPTION OF EVENT

At 1655 hours on January 11, 1988 with Unit 1 operating in condition 1 at 100% power, an Engineered Safety Feature (ESF) actuation occurred when the High Pressure Coolant Injection (HPCI, EIIS Code: BJ) Steam Supply Outboard Isolation Valve, HV155F003, went closed unexpectedly. Instrumentation and Controls (I&C) technicians had successfully completed SI-152-204, the 31 day equipment room channels surveillance test on Equipment Area Temperature Module TSH-E41-1N600B. Upon completion, the technicians heard a humming noise emanating from the module. They then connected a meter to check for an open contact and when they removed the meter, the module actuated causing the valve to close. The module ceased humming after the actuation. Operations immediately reset the HPCI isolation logic and re-opened HV155F003. A non-emergency event notification was completed to the NRC within the prescribed 4 hours in accordance with 10CFR50.72 requirements for reporting ESF actuations.

CAUSE OF THE EVENT

The source of the humming noise identified after completion of SI-152-204 could not be confirmed. The meter connected across contacts of Riley Module TSH-E41-1N600B did not indicate a malfunction of the module trip circuit. The possibility exists that the meter circuit shunted the module's trip contacts causing the HPCI HV155F003 valve to isolate.

REPORTABILITY / ANALYSIS

This event was determined to be reportable per 10CFR50.73(a) (2) (iv), in that the automatic closure of the HPCI Steam Supply Outboard Isolation Valve comprised an unplanned ESF actuation. This event posed little, if any, hazard to the plant in that the HPCI system was unavailable for only a few minutes. If a low reactor vessel level condition had occurred at the same time the HPCI valve was closed, the remaining Emergency Core Cooling Systems would have responded in their designed manner.

CORRECTIVE ACTION

Immediate corrective actions included resetting the HPCI isolation logic and re-opening HV155F003. Additional surveillances in this same logic were then performed with no further recurrences of the humming noise being noted. Subsequently, the Riley Module TSH-E41-1N600B was replaced and tested to applicable sections of surveillance SI-152-304. This event will be reviewed with I&C personnel as an additional measure.

ADDITIONAL INFORMATION

Failed Component Identification: Not Applicable

Previous Similar Events: None.



**Pennsylvania Power & Light Company**

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

February 10, 1988

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

SUSQUEHANNA STEAM ELECTRIC STATION  
LICENSEE EVENT REPORT 88-002-00  
FILE R41-2  
PLAS - 299

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

Attached is a Licensee Event Report 88-002-00. This event was determined reportable per 10CFR50.73(a)(2)(iv) in that an engineered safety feature actuation occurred when the HPCI steam supply outboard isolation valve closed unexpectedly following surveillance testing.

R. G. Bynam  
Superintendent of Plant - Susquehanna

TSR/mjm

cc: Mr. William Russell  
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