NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Susquehanna Steam Electric Station - Unit 2	0 5 0 0 0 3 1 4	1 OF 0 2

TITLE (4)
HPCI Stop Valve.

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 1	1 2	8 5	8 5	0 0 1	0 0	0 2	0 8	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
	1	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	0 7 4	20.405(a)(1)(i)	50.36(c)(1)	X 50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	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)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
R.W. Stanley	7 1 7 — 5 4 2 - 1 3 1 0

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	
B	B J	V	S 0 7 5	N							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

During a scheduled Hot Functional Test (HF-252-011), which was part of the Unit 2 Power Ascension Program, the High Pressure Coolant Injection (HPCI) turbine failed to trip. Operators attempted to trip the HPCI turbine per the test procedure by depressing the HPCI Turbine Trip pushbutton. A turbine trip due to Stop Valve (FV-25612) closure was expected, when no trip occurred, the turbine was stopped by closing the Steam Supply Valve (E41-HV-2F001). Investigation revealed the hydraulically operated stop valve actuator shaft was broken at the coupling to the valve shaft. The cause for the stop valve remaining open and resulting actuator failure was due to a valve position sensor bracket working its way loose and rotating around the stop valve coupling on which it was mounted. The bracket wedged itself between the actuator housing and the shaft coupling. The actuator shaft was replaced. The HPCI System was declared operable at 2130 on January 13, 1985. The valve position sensor bracket which had been used during testing was removed at the completion of the hot functional testing.

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

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

The High Pressure Coolant Injection (HPCI) System was started at 0315 on January 12, 1985, in accordance with Hot Functional Test HF-252-011 (HPCI Turbine Controller System Tune Up). At 0716 on January 12, 1985, Operations attemped to trip the HPCI Turbine by depressing the HPCI Turbine Trip Pushbutton in the Control Room; this should have tripped the HPCI Turbine by closing the Stop Valve (FV-25612) which admits steam to the turbine. The HPCI did not trip and was stopped by closing the Turbine Steam Supply Valve (E41-HV-2F001).

Investigation revealed the hydraulically operated stop valve actuator shaft was broken at the valve shaft to actuator shaft coupling. The cause for the stop valve remaining open and resulting actuator failure was a loose valve position sensor bracket. The bracket had rotated around the stop valve coupling on which it was mounted and wedged itself between the actuator housing and the shaft coupling. The actuator shaft was replaced, and the HPCI system was declared operable at 2130 on January 13, 1985. The valve position sensor bracket used to provide information during testing was removed at the completion of the hot functional testing.

As an interim measure, a modified sensor bracket will be installed when needed for HPCI testing. The bracket will be inspected prior to test initiation and prior to a HPCI trip to ensure proper orientation, and will be removed at test completion. A permanent design is being pursued.

The valve position sensor is used during testing for information gathering; the position sensor is not required for plant operation. The sensor bracket did not affect the initiation of the HPCI system in that when it loosened and rotated it came to rest under the stop valve coupling there by preventing the stop valve from closing, but did not prevent the stop valve from opening. There are eleven (11) other valves which contain external valve position sensor brackets. These sensor brackets and similar brackets on Unit 1 are being reviewed for adequacy of installation.

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February 8, 1985

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 85-001-00
ER 100450 FILE 841-23
PLAS-036

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

Attached is Licensee Event Report 85-001-00. This event was determined reportable per 10CFR50.73(a)(2)(v), in that the HPCI System was declared inoperable to facilitate repair of the Steam Admission Stop Valve Actuator.

H.W. Keiser
Superintendent of Plant-Susquehanna

RWS/pjg

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