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 8 8	1 OF 0 2

TITLE (4)

Unit 2 Reactor Scram Due to High Turbine Vibration.

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 5 0 0 0
0 1	1 9	8 5	8 5	—	0 0 3	— 0 0	0 2	1 9	8 5		0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 9 9	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	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 - 3 9 3 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	
*											

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)

On January 19, 1985, at 1655, the Unit 2 Reactor scrammed on Turbine Control Valve Fast Closure which was a result of a Main Turbine Trip on High Vibration. No Emergency Core Cooling System actuations or Primary Containment Isolation occurred, and none were required. Throughout the transient all safety systems performed as designed, and the Unit responsed as predicted.

Surveillance SO-293-001, Weekly Turbine Overspeed Protection System Valve Cycling Test, was being performed in conjunction with Hot Functional Test HF-293-068, which required Turbine Control Valve Testing to be done at 100% power. During the performance of the test the #1 Control Valve was closed. Approximately 20 seconds after the valve closed, the Main Turbine tripped.

The Unit was restarted at 0523 on January 20, 1985.

*Not Applicable.

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 3	— 0 0	0 2 OF 0 2

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

Susquehanna Steam Electric Station Unit 2 scrammed on Control Valve Fast Closure, which was the result of a Main Turbine Trip on High Vibration. The unit had been operating at 99% power. Additional automatic actions after the turbine trip were turbine stop valve closure, reactor recirculation pump trips, and main generator trips. The turbine bypass valves and the safety relief valves cycled to control reactor pressure. No emergency core cooling system actuations or primary containment isolations occurred and none were required. Throughout the transient all safety systems performed as designed and the unit responded as predicted.

SO-293-001, Weekly Turbine Overspeed Protection System Valve Cycling Test, was being performed in conjunction with HF-293-068, Maximum Power Level for Turbine Valve Surveillance Determination. This test is a portion of the Power Ascension Testing and requires the turbine control valve testing be done at 100% power. The valve testing consisted of cycling each individual main stop valve, combined intermediate valve and control valve closed one at a time, and checking plant instrumentation for proper response.

The testing of the main stop valves and the combined intermediate valves was completed satisfactorily. The #4 control valve was also cycled without incident and the testing of the #1 control valve was in progress. The #1 valve was closed and, in accordance with the procedure, the plant control operator was waiting 15 to 25 seconds before reopening the valve to allow the main turbine to stabilize. Approximately 20 seconds after the valve closed, the main turbine tripped.

The reactor scram was the direct result of the main turbine tripping on high vibration during turbine control valve testing. Examination of process computer historical data shows that during the test of the #4 control valve, bearing vibration did not increase. However, during the test of the #1 valve, vibration on the #1 and #2 bearings increased significantly. The #1 bearing vibration peaked at 9.9 mils., just before the turbine trip. The calibration of the #1 turbine bearing trip setpoints was checked and found to be within tolerance.

The combination of reduced overall turbine vibration after the rebalancing and the procedure cotrols of SO-293-001 should reduce the risk of subsequent turbine trips.

The Unit was restarted at 0523 on January 20, 1985.

PP&L Pennsylvania Power & Light Company
Two North Ninth Street • Allentown, PA 18101 • 215/770-5151

February 19, 1985

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 85-003-00
ER 100450 FILE 841-23
PLAS-041

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

Attached is Licensee Event Report 85-003-00. This event was determined reportable per 10CFR50.73(a)(2)(iv), in that automatic actuation of the Engineered Safety Feature (ESF) occurred due to Main Turbine High Vibration.

H.W. Keiser
Superintendent of Plant-Susquehanna

RWS/pjg

cc: Dr. Thomas E. Murley
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Mr. R.H. Jacobs
Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P.O. Box 52
Shickshinny, PA 18655

IE22
1/1