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 1	0 5 0 0 0 3 8 7	1 OF 0 2

TITLE (4)

Unit 1 Reactor Scram Due to Low Condenser Vacuum.

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 7	1 6	8 4	8 4	— 0 3 3	— 0 0	0 8	1 5	8 4		0 5 0 0 0
										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 2 7	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
R.W. Stanley - Compliance Engineer	AREA CODE 7 1 7 — 5 4 2 - 1 1 6 6

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	
A	K A	*	*	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)

On July 16, 1984 at 1806 the Unit 1 Reactor scrammed on Turbine Valve Fast Closure caused by Loss of Condenser Vacuum. This resulted in the automatic actuation of the Engineered Safety Feature (ESF), which consisted of the Main Steam Isolation Valves (MSIV) closure and also included automatic actuation of the Reactor Protection System (RPS). The Loss of Condenser Vacuum was caused by the inadvertent opening of the Low Pressure Condenser Vacuum Breaker Valve HV-10742C, instead of Extraction Steam Feedwater Heater Isolation Valve HV-10242C. Unit 1 was at 27% power. The ECCS Systems were available for operation, but none were challenged.

*Not Applicable.

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

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

On July 16, 1984, at 1806, the Unit 1 Reactor scrammed on Turbine Fast Closure caused by Loss of Condenser Vacuum. The Loss of Condenser Vacuum occurred during power ascension when the feedwater heaters were in the process of being placed into service. The feedwater heaters were placed in service by opening the Extraction Steam Feedwater Heater Isolation Valves (two valves per heater), total of three heaters. Due to a high level interlock, the extraction steam isolation motor operated valves do not operate from the Control Room. Due to the difficulty of manually operating the valves and radiation concerns, the Extraction Steam Isolation Valves were operated electrically by depressing the reverse contactor then opening the breaker to prevent it from reclosing.

One operator was coordinating the activities via hand held radio using a procedure and directing the operators to perform the required tasks. One operator was assigned to open the Extraction Steam Valves. The "A" String Feedwater Heaters were the first to be put into service. Two (2) Extraction Steam Valves in this string were successfully opened. The same operator then successfully opened the "B" String Feedwater Heater Extraction Steam Valve. From there he went to the MCC 1B101, which controlled the "C" String Feedwater Heater MOV's. He successfully opened the Extraction Steam MOV HV-10240C. He was then instructed via radio to open the 42C Valve. Looking at the MCC he noticed that the adjoining breaker cubicle was for the 42C Valve, he opened the cubicle door and manually depressed the reverse contactor. He informed the operator coordinating the activity that the reversing contactor was depressed. He was informed that dual indication was not observed which indicated the valve was still closed, and the bulb was being checked. Shortly after this the operator at the MCC 1B101 heard via the P.A. that Unit 1 had scrammed. At this time he had not realized the reason for the scram. He then closed the cubicle door at which time he noted that the label on the cubicle read LP CDSR VAC BKR MOV HV-10742C. He immediately called the Control Room and informed them he had opened the Low Pressure Vacuum Breaker Valve.

This method of opening the Extraction Steam Valves was used in the past without incident.
The Emergency Core Cooling Systems were available but none were required for the safe shutdown of the plant. Unit 1 was at 27% power at time of scram.

The corrective action taken is indicated below:

1) Operating procedures for the Feedwater Heaters OP-147-001 and OP-247-001 were changed to prevent a recurrence. The procedures now require states links to be open and restored which allows the Feedwater Isolation Valves to be open from the Control Room, with a high feedwater heater level.
2) Operating Instruction OI-AD-035 was written to provide standard communication practice to ensure complete messages are being transmitted and received. Included in this procedure are guidelines for identifying valves by unit designator, valve number, and valve noun name.

PP&L Pennsylvania Power & Light Company
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August 15, 1984

U.S. Nuclear Regulatory Commission
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SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 84-033-00
ER 100450 FILE 841-23
PLA- 2284

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

Attached is Licensee Event Report 84-033. This event was determined reportable per 10CFR50.73(a)(2)(iv), in that automatic actuation of the Engineered Safety Feature (ESF) occurred due to Loss of Condenser Vacuum.

J A Blakeslee Jr
for
H.W. Keiser
Superintendent of Plant-Susquehanna

RWS/pjg

cc: Dr. Thomas E. Murley
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