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)

Unplanned Engineered Safety Feature Actuation (RWCU, SGTS, Cont. Iso. Valves).

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 2	2 3	8 5	8 5	0 1 0	0 0	0 3	2 5	8 5		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)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
1 0 0		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
D.J. Gandenberger, Power Production Engineer	7 1 7 5 4 2 - 3 9 1 4

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	
X	J C	1 5 2	G 0 8 3	Y							

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 February 23, 1985, at 1203, Operations personnel received indication of a half scram on the 'B1/B2' channels of the Reactor Protection System (RPS), half isolation on the 'B' and 'D' Main Steam Isolation Valve (MSIV) logic, an auto start of the 'B' Standby Gas Treatment System (SGTS), isolation of Reactor Water Cleanup (RWCU) System, closure of the containment isolation valves for the Hydrogen-Oxygen Analyzers and Containment Radiation Monitors (CRM) and isolation of cooling water to the reactor recirculation pumps. Investigation determined that circuit breaker CB8B in 2Y201B, RPS Power Distribution Panel, had tripped. The breaker was reset and the affected system restored. At 1301 and 1324 the same sequence of events occurred. Circuit breaker CB8B on 2Y201B was replaced by Work Authorization V50185 and the unit was restored to its normal line up.

IE22
1/1

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 1 0	— 0 0	0 2 OF 0 2

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

On February 23, 1985, at 1203, 1301, and 1324, Operations personnel received indication of a half scram on the 'B1/B2' channels of the Reactor Protection System (RPS), half isolation on the 'B' and 'D' Main Steam Isolation Valve (MSIV) logic, an auto start of the 'B' Standby Gas Treatment System (SGTS), isolation of Reactor Water Cleanup (RWCU) System, closure of the containment isolation valves for the Hydrogen-Oxygen Analyzers and Containment Radiation Monitors (CRM), and isolation of cooling water to the reactor recirculation pumps. The cause of the event was that circuit breaker CB8B in 2Y201B, RPS Power Distribution Panel, had tripped. After the third occurrence the circuit breaker was replaced under Work Authorization (WA) V50185. Circuit breaker CB8B in 2Y201B is a non-Q, 120VAC, single pole, non-adjustable GE type TEB 111100 breaker rated for 100 amp continuous service.

Testing of the removed circuit breaker verified that it had tripped prematurely. This was determined by applying 300 amps test current to the breaker to determine trip times. Trip times of 17 seconds and 14 seconds were recorded on two tests of the breaker. According to the trip curves supplied by the manufacturer, the breaker should not have tripped for at least 35 seconds. Normal circuit load is 62.5 amps.

During investigation of the defective breaker, it was observed that the wire from the supply bus to the breaker line side connection had overheated. This wire had a loose connection on the threaded rod which connects to the breaker line side terminal. The insulator on the threaded rod was also cracked which may have been caused by overheating. The increased resistance of the loose connection may have caused the overheating condition and resultant heat damage. The ambient temperature in the vicinity of the circuit breaker would increase and cause heat to be transferred to the breaker thermal element. The breaker line side terminal was found oxidized and the breaker was very hot to touch.

The new breaker installed in 2Y201B under (WA) V50185 was tested prior to installation with satisfactory results for both the magnetic and thermal trip components. The loose connection was tightened and heat shrink and tape was applied over the cracked insulator. Permanent repairs to the damaged wire and insulator will be performed during a future outage under (WA) V50190. A breaker test of CB8B will also be performed under this WA to identify any potential degradation of the circuit breaker.

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

March 25, 1985

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 85-010-00
ER 100450 FILE 841-23
PLAS - 058

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

Attached is Licensee Event Report 85-010-00. This event was determined reportable per 10CFR50.73(a)(2)(iv), in that an unplanned Engineered Safety Feature (ESF) actuation occurred due to a tripped Reactor Protection System (RPS) power supply breaker.

H. W. Keiser
Superintendent of Plant-Susquehanna

/jls

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