

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
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TITLE (4)
Unit 1 Scram on Phase-to-Phase Fault; Unit 2 Scram on Loss of 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)																																															
07	15	84	84	034	00	08	14	84	SSES - Unit 2		0 5 0 0 0 3 8 8																																															
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">OPERATING MODE (9)</td> <td style="width:15%;">1</td> <td colspan="10">THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)</td> </tr> <tr> <td rowspan="5">POWER LEVEL (10)</td> <td>100</td> <td>20.402(b)</td> <td>20.408(e)</td> <td><input checked="" type="checkbox"/></td> <td>80.73(a)(2)(iv)</td> <td>73.71(b)</td> </tr> <tr> <td></td> <td>20.408(a)(1)(i)</td> <td>80.38(a)(1)</td> <td><input type="checkbox"/></td> <td>80.73(a)(2)(v)</td> <td>73.71(e)</td> </tr> <tr> <td></td> <td>20.408(a)(1)(ii)</td> <td>80.38(a)(2)</td> <td><input type="checkbox"/></td> <td>80.73(a)(2)(vii)</td> <td rowspan="3">OTHER (Specify in Abstract below and in Text, NRC Form 366A)</td> </tr> <tr> <td></td> <td>20.408(a)(1)(iii)</td> <td>80.73(a)(2)(i)</td> <td><input type="checkbox"/></td> <td>80.73(a)(2)(viii)(A)</td> </tr> <tr> <td></td> <td>20.408(a)(1)(iv)</td> <td>80.73(a)(2)(ii)</td> <td><input type="checkbox"/></td> <td>80.73(a)(2)(viii)(B)</td> </tr> <tr> <td></td> <td>20.408(a)(1)(v)</td> <td>80.73(a)(2)(iii)</td> <td><input type="checkbox"/></td> <td>80.73(a)(2)(ix)</td> <td></td> </tr> </table>												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)	100	20.402(b)	20.408(e)	<input checked="" type="checkbox"/>	80.73(a)(2)(iv)	73.71(b)		20.408(a)(1)(i)	80.38(a)(1)	<input type="checkbox"/>	80.73(a)(2)(v)	73.71(e)		20.408(a)(1)(ii)	80.38(a)(2)	<input type="checkbox"/>	80.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)		20.408(a)(1)(iii)	80.73(a)(2)(i)	<input type="checkbox"/>	80.73(a)(2)(viii)(A)		20.408(a)(1)(iv)	80.73(a)(2)(ii)	<input type="checkbox"/>	80.73(a)(2)(viii)(B)		20.408(a)(1)(v)	80.73(a)(2)(iii)	<input type="checkbox"/>	80.73(a)(2)(ix)	
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LICENSEE CONTACT FOR THIS LER (12)

NAME L.A. Kuzcynski - Nuclear Plant Specialist III	TELEPHONE NUMBER AREA CODE: 71175 421-137519
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS
C	EIL	CIBL	*	N					
X	WIF	JIC	**	N					

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15) MONTH: DAY: YEAR:
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On July 15, 1984, at 0914 while operating at 100% power, the 230KV transmission line experienced a phase-to-phase fault. This opened the Unit 1 sync breaker, resulting in a generator load rejection and turbine trip. This, in turn, caused a Unit 1 scram. Subsequently, Unit 2 experienced a reactor scram at 1007 from 25% power due to low condenser vacuum which developed after its associated off gas recombiner tripped and could not be returned to service.

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S PDR

* South Wire Co.
** Not Applicable.

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 8 4 - 0 3 4 - 0 0	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 4	0 3 4	0 0	0 2	OF 0 2

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

On July 15, 1984, at 0914 Unit 1 experienced a B-to-C phase fault on the transmission lines to its 230KV Susquehanna switching station. Within the following second, the generator span protection tripped, the main turbine master trip actuated and a reactor scram occurred. Three safety relief valves actuated to bring reactor pressure from 1081 psig to approximately 975 psig. There were no ECCS initiations associated with this scram and none were required. Approximately fifteen minutes after the Unit 1 scram, the common off-gas recombiner which had been in operation and aligned to support Unit 2 tripped. Operations personnel tried three times to return it to service, but received an isolation each time due to low inlet temperature. The on-call Reactor Engineer was contacted at the time of the initial recombiner trip and provided direction regarding the insertion of control rods to reduce power to prevent condenser vacuum from reaching the turbine trip setpoint. Although several rod adjustments were accomplished (bringing reactor power from 37% to 25%), by 1007 sufficient vacuum was lost to trip the turbine. A reactor scram followed on turbine control valve fast closure. There were no safety relief valve or ECCS initiations; none were required.

The Unit 1 scram was caused by transmission line sag into a tree. This event occurred after several days of high heat and humidity with the unit operating near rated capacity. The tree has been cut down. At the time of the Unit 1 generator trip, the Unit 2 off-gas recombiner was out of service. Unit 2 was operating on the common off-gas recombiner. A review of Unit 2 computer data indicates that the common recombiner began to malfunction at the time of the Unit 1 generator trip. The malfunction of the common recombiner is postulated as being due to a momentary loss of power to the recombiner's control panels. The problems encountered while operations personnel tried to restart the recombiner should be alleviated by revisions which will be implemented to recombiner operation procedures to change the rate at which a recombiner is placed in service.



Pennsylvania Power & Light Company

August 14, 1984

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

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 84-034-00
ER 100450 FILE 841-23
PLA-2282

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

Attached is Licensee Event Report 84-034-00. This event was determined reportable per 10CFR50.73(a)(2)(iv), in that Unit 1 scrambled due to a phase-to-phase fault on its main transmission lines and Unit 2 scrambled shortly thereafter on loss of condenser vacuum.

H.W. Keiser
Superintendent of Plant-Susquehanna

LAK/pjg

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