

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) SUSQUEHANNA STEAM ELECTRIC STATION - Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 1 8 1 7	PAGE (3) 1 OF 0 1 2
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TITLE (4)
Grease in RPS M-G Set 'A' Motor Windings Caused Short Circuit and ESF Actuations

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	2 4	8 4	8 4	0 3 6	0 0	0 8	2 1	8 4			0 5 0 0 0
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)											

OPERATING MODE (9)	POWER LEVEL (10) 110.10	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 20.406(a)(1)(v)	<input checked="" type="checkbox"/> 20.406(e)	<input type="checkbox"/> 30.38(e)(1)	<input type="checkbox"/> 30.38(e)(2)	<input type="checkbox"/> 30.73(a)(2)(i)	<input type="checkbox"/> 30.73(a)(2)(ii)	<input type="checkbox"/> 30.73(a)(2)(iii)	<input type="checkbox"/> 30.73(a)(2)(iv)	<input checked="" type="checkbox"/> 30.73(a)(2)(v)	<input type="checkbox"/> 30.73(a)(2)(vi)	<input type="checkbox"/> 30.73(a)(2)(vii)	<input type="checkbox"/> 30.73(a)(2)(viii)(A)	<input type="checkbox"/> 30.73(a)(2)(viii)(B)	<input type="checkbox"/> 30.73(a)(2)(ix)	<input type="checkbox"/> 73.71(b)	<input type="checkbox"/> 73.71(e)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
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LICENSEE CONTACT FOR THIS LER (12)

NAME L.A. Kucynski - Nuclear Plant Specialist III	TELEPHONE NUMBER AREA CODE
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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
A	E I C M I O J	I	G I O B I O	Y					

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)

Due to a buildup of grease in the motor of the 'A' Reactor Protection System (RPS) Motor-Generator (M-G) Set, a short circuit to ground developed which tripped the M-G Set. This resulted in the unanticipated start of the Standby Gas Treatment System and the Control Room Emergency Outside Air Supply System, which are engineered safety features.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		0 3 6 -	0 1 0		0 2	OF	0 2

TEXT (If more space is required, use additional NRC Form 388A's) (17)

The failure of the Reactor Protection System (RPS) Motor Generator (M-G) set motor on July 24, 1984, was attributed to a buildup of grease in the motor windings. The excessive grease resulted from an increased lubrication frequency initiated in response to a significant rattle in the M-G set's flywheel bearing. Inadvertently, in addition to the flywheel bearing, the lubrication frequency of all points on the M-G set was increased. The lubrication was performed by non-licensed, utility personnel, and the excessive lubrication was due to a cognitive error associated with an activity not covered by a work authorizing document. The M-G set motor failure caused an RPS M-G set 'A' trip with a resulting start of the Standby Gas Treatment System (SGTS) and the Control Room Emergency Outside Air Treatment System (CREOASS) which are Engineered Safety Features.

Within three minutes, Operations personnel checked the actual physical status of the RPS M-G set, determined that it could not readily be put back in service and restored power to the RPS bus using its alternate feed. Following its start, the CREOASS tripped due to low differential temperature across the train's heaters. This is a condition that had been identified in the past and will be corrected by relocating one of the train's temperature elements and adjusting the trip parameters. The RPS M-G set 'A' motor was replaced, tested, and placed in service on July 25, 1984.

On August 3, 1984, a preventive maintenance activity was completed on the RPS M-G set 'A' which performed the following:

- cleaned, inspected and changed bearings (as necessary);
- cleaned the generator field windings, rotor windings and generator internals;
- visually checked the stator frame, windings, wedges, end turns, rotor frame and windings, exciter frame and windings.

Normal lubrication frequencies are controlled by approved preventive maintenance documents which have been reviewed and revised to agree with vendor recommendations.



Pennsylvania Power & Light Company

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

August 21, 1984

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

SUSQUEHANNA STEAM ELECTRIC STATION

LICENSEE EVENT REPORT 84-036-00

ER 100450

FILE 841-23

Docket No. 50-387

PLA- 2287

License No. NPF-14

Attached is Licensee Event Report 84-036-00. This event was determined reportable per 10 CFR 50.73 (a)(2)(iv) in that a short in the Reactor Protection System Motor-Generator Set 'A' motor caused the associated Electrical Protective Assembly breaker to trip and cause an actuation of the Standby Gas Treatment System and Control Room Emergency Outside Air Supply System.

H.W. Keiser
Superintendent of Plant-Susquehanna

LAK/e1o

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