

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 3
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TITLE (4)
Diesel Generator Failure.

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 1	2 1	8 5	8 5	0 0 2	0 0	0 2	2 8	8 5	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) 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="6">POWER LEVEL (10) 8 6</td> <td>20.402(b)</td> <td>20.405(c)</td> <td>50.73(a)(2)(iv)</td> <td>73.71(b)</td> </tr> <tr> <td>20.405(a)(1)(i)</td> <td>50.36(c)(1)</td> <td><input checked="" type="checkbox"/> 50.73(a)(2)(v)</td> <td>73.71(c)</td> </tr> <tr> <td>20.405(a)(1)(ii)</td> <td>50.36(c)(2)</td> <td>50.73(a)(2)(vii)</td> <td rowspan="4">OTHER (Specify in Abstract below and in Text, NRC Form 366A)</td> </tr> <tr> <td>20.405(a)(1)(iii)</td> <td>50.73(a)(2)(i)</td> <td>50.73(a)(2)(viii)(A)</td> </tr> <tr> <td>20.405(a)(1)(iv)</td> <td>50.73(a)(2)(ii)</td> <td>50.73(a)(2)(viii)(B)</td> </tr> <tr> <td>20.405(a)(1)(v)</td> <td>50.73(a)(2)(iii)</td> <td>50.73(a)(2)(ix)</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) 8 6	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)	20.405(a)(1)(i)	50.36(c)(1)	<input checked="" type="checkbox"/> 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)(ix)
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LICENSEE CONTACT FOR THIS LER (12)

NAME R.W. Stanley	TELEPHONE NUMBER AREA CODE 7 1 7 5 4 2 - 1 3 9 1 3 0
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRDs
*									

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)

The "B" Diesel Generator was removed from service at 0820 on January 21, 1985 for 18 month preventive maintenance. A 3 day LCO was entered and the remaining diesel generators were tested as required by Technical Specifications. A start attempt was made on the "A" Diesel at 0902 which resulted in a trip. The diesel was declared inoperable and Technical Specification Action Statement requires 3 diesels to be restored to operable status within 2 hours or be in Hot Shutdown within the next 12 hours. At 0935, the "C" Diesel was successfully started. A start attempt was made at 1018 on the "D" Diesel; the diesel failed to start; the diesel was declared inoperable and the Technical Specification Action Statement remained the same, i.e., restore 3 diesels to operable status within 2 hours or be in Hot Shutdown within the next 12 hours. The maintenance activity on the "B" Diesel was postponed and the "B" Diesel was successfully started at 1058. The "A" Diesel was successfully started at 1122 and the "D" Diesel was successfully started at 1142. All 4 diesels were declared operable at 1200.

The starting problems were determined to be cold temperature related. Corrective actions have been initiated to prevent the diesel buildings and related diesel equipment (Governor) from future cold temperature complications. Interim corrective measures included use of temporary space heaters and repair of diesel generator outside air supply dampers.

* Not Applicable

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PDR ADDCK 05000387
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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 5	- 0 0 2	- 0 0	0 2	OF	0 3

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

On January 21, 1985, at 0820, the "B" Diesel Generator was taken out of service for Maintenance to perform a 18 month preventive maintenance. Since the diesel was removed from service the remaining diesel generators are required to be started within 4 hours, in accordance with Technical Specification Requirements 3.8.1.1, Action Statement a.

A start attempt was made on the "A" Diesel Generator at 0902, and the diesel tripped on low lube oil pressure and was declared inoperable. With 2 diesels inoperable, Technical Specification Action Statement 3.8.1.1.e was entered which requires the operability of the A.C. sources to be demonstrated within 1 hour, and start the remaining diesels within 2 hours and 8 hours thereafter. Restore 3 diesels to operable status within 2 hours or be in Hot Shutdown within the next 12 hours and Cold Shutdown within the following 24 hours.

A second start attempt was made on the "A" Diesel at 0920. The diesel tripped on high vibration. At 0935, the "C" Diesel Generator was successfully started, and SO-024-013 Diesel Operability Test was completed.

At 1015 and 1018, start attempts were made on the "D" Diesel. Both starts resulted in the diesel tripping on overvoltage. Operations declared the "D" Diesel inoperable. Technical Specification Actions remained the same, i.e., 2 hours to restore 3 diesels generators or Hot Shutdown in 12 hours. Although the diesel was declared out of service, it would still perform its emergency function.

The maintenance activity on "B" Diesel was postponed, and at 1058 the "B" Diesel Generator was successfully started and loaded, and surveillance SO-024-013, Diesel Operability Test, was completed. The diesel tripped 11 minutes after the diesel start. The trip was noted to be reverse power and engine vibration. The trip is not in the circuit for emergency operation and the loaded run is not an acceptance criteria requirement for SO-024-013.

At 1122 the "A" Diesel Generator was successfully started and loaded. At 1142 the "D" Diesel Generator was successfully started and and loaded. At 1200 all 4 Diesel Generators were declared operable.

The common factor in the diesel problems is cold temperature. The outside air temperature during the event was -10 degrees F. Non-functioning outside air supply dampers in the diesel bays caused low temperatures which affected diesel performance. This problem was further compounded by cold emergency service water circulating through the deisel governor resulting in sluggish governor response.

Interim corrective measures include use of temporary space heaters and repair of diesel generator room supply air dampers. Additional corrective measures include a design review of the diesel generator governor oil cooler water supply.

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

In accordance with Regulatory Guide 1.108, c.3.b, the below information is supplied.

The "A" Diesel Generator trip on low lube oil pressure at 0902 was determined to be a valid failure caused by cold temperatures. The second start attempt on the "A" Diesel at 0920 was determined to be a non-valid failure since the high vibration trip was due to a spurious operation of a trip that is bypassed in the emergency mode.

The "D" Diesel trips on overvoltage at 1015 and 1018 were determined to be non-valid failures since this was a spurious operation of a trip that is bypassed in the emergency mode.

The "B" Diesel trip at 1109 due to reverse power was determined to be a non-valid failure since this is a malfunction of equipment which is not operative in the emergency mode.

At the completion of the event, there was one valid failure in the last 100 valid tests. The diesels are on a test interval of every 31 days, per Regulatory Guide 1.108, Section c.2.d.



Pennsylvania Power & Light Company

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

February 28, 1985

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

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 85-002-00
ER 100450 FILE 841-23
PLAS-045

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

Attached is Licensee Event Report 85-002-00. This event was determined reportable per 10CFR50.73(a)(2)(v), due to more than one Emergency Diesel Generator being inoperable.

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

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