

LICENSEE EVENT REPORT

CONTROL BLOCK: \_\_\_\_\_ (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | V | A | S | P | S | 2 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 3 | 4 | 1 | 1 | 1 | 1 | 4 | 5  
9 LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 31 CAT 56

CONT  
0 1 | L | 0 | 5 | 0 | 0 | 0 | 2 | 8 | 1 | 1 | 1 | 1 | 0 | 4 | 8 | 2 | 8 | 1 | 2 | 0 | 3 | 8 | 2 | 9  
60 REPORT SOURCE 61 DOCKET NUMBER 66 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)  
0 12 | On 11/04/82, charging pump service water pump 2-SW-P-10B experienced a loss of  
0 13 | suction pressure. Inoperability of this pump is contrary to Tech. Spec. 3.3.A.8.b  
0 14 | and reportable per Tech. Spec. 6.6.2.b(2). Since the redundant charging pump  
0 15 | service water pump (2-SW-P-10A) remained operable, the health and safety of the  
0 16 | public were not affected.  
0 17 |  
0 18 |

0 9 | W | A | 11 | X | 12 | Z | 13 | P | U | M | P | X | X | 14 | B | 15 | Z | 16  
9 10 11 12 13 18 19 20  
17 LER/RO REPORT NUMBER | 8 | 2 | 21 | 22 | 0 | 6 | 9 | 24 | 26 | 0 | 3 | 27 | 28 | L | 30 | 31 | 0 | 32  
EVENT YEAR SEQUENTIAL REPORT NO. OCCURRENCE CODE REPORT TYPE REVISION NO.  
ACTION TAKEN FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NPRD-4 FORM SUB. PRIME COMP. SUPPLIER COMPONENT MANUFACTURER  
X 18 F 19 Z 20 Z 21 0 0 0 0 0 Y 23 N 24 A 25 I 0 7 5 25  
33 34 35 36 37 40 41 42 43 44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)  
1 10 | The loss of suction to the pump was due to insufficient NPSH. Service water flow  
1 11 | to the air conditioning chillers was throttled, and the pump was vented to restore  
1 12 | NPSH.  
1 13 |  
1 14 |

1 5 | E | 28 | 1 | 0 | 0 | 29 | N/A | 30 | A | 31 | Operator Observation | 32  
7 8 9 10 11 12 13 44 45 46  
1 6 | Z | 33 | Z | 34 | N/A | 35 | N/A | 36  
7 8 9 10 11 12 13 44 45 46  
1 7 | 0 | 0 | 0 | 37 | Z | 38 | N/A | 39  
7 8 9 10 11 12 13  
1 8 | 0 | 0 | 0 | 40 | N/A | 41  
7 8 9 10 11 12  
1 9 | Z | 42 | N/A | 43  
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7 8 9 10  
PDR 821203  
PDR AD0CK 05000281  
S PDR  
NRC USE ONLY  
68 69  
NAME OF PREPARED J. L. Wilson PHONE (804) 357-3184  
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ATTACHMENT 1  
SURRY POWER STATION, UNIT NO. 2  
DOCKET NO: 50-281  
REPORT NO: 82-069/03L-0  
EVENT DATE: 11-04-82

TITLE OF THE EVENT: CHARGING PUMP SERVICE WATER PUMP INOPERABLE

1. Description of the Event:

On November 4, 1982, with the unit at full power, the control room operator was attempting to start charging pump service water pump 2-SW-P-10B so that maintenance could be performed on the operating pump, 2-SW-P-10A. It was discovered that pump 2-SW-P-10B was air bound and could not develop discharge pressure. Inoperability of this pump is contrary to Technical Specification 3.3.A.8.b and is reportable in accordance with Technical Specification 6.6.2.b(2).

2. Probable Consequences and Status of Redundant Equipment:

The charging pump service water pumps supply cooling water to the charging pump intermediate seal coolers and the charging pump lubricating oil coolers. During the short period of time that the pump was inoperable, the redundant pump (2-SW-P-10A) remained operable. Therefore, the health and safety of the public were not affected.

3. Cause:

The presence of air in the pump is due to insufficient NPSH. Four Charging pump service water pumps, along with three Air Conditioner Chiller units are located in the No. 3 equipment room. The aforementioned components are supplied with service water, via rotating strainers, from two 6" supply lines. Each supply line is gravity fed from the intake canal.

Two-inch branch lines supply service water to the charging pump service water pumps, while the service water lines to the chiller units are four-inch lines. Experience has shown that the performance of the charging pump service water pumps are sensitive to the available NPSH.

A recent modification (DC 80-42) attempted to resolve the NPSH problems of the service water system. Installation and testing, completed in early spring, indicated satisfactory performance; however, an intermittent problem is still indicated. Both service water suction lines have been cleaned to reduce pressure losses due to marine fouling, but the problem remains.

4. Immediate Corrective Action:

The service water flow through the air conditioning chillers was reduced, thereby increasing the available NPSH to the service water pumps. The service water pump was vented and returned to service.

5. Subsequent Corrective Action:

No further actions were required.

6. Action Taken to Prevent Recurrence:

A design change has been initiated, and approved by the NRC, that will relocate two of the charging pump service water pumps, i.e. lower the pumps and increase the size of the suction piping to the pumps. In an effort to reduce air inleakage in the suction header, a preventative maintenance procedure has been implemented.

7. Generic Implications:

The NPSH problem is Generic at both Surry Units.