

LICENSEE EVENT REPORT

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

01 V A S P S 2 0 0 - 0 0 0 0 0 0 - 0 0 3 4 1 1 1 1 4 5
LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 37 CAT 56

01 REPORT SOURCE L 0 5 0 0 0 2 8 1 7 0 9 0 1 8 2 E 0 9 3 0 8 2 9
60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10

012 On 9-1, 13, 18 and 20, 1982, 2-SW-P-10A experienced a loss of suction pressure.
013 Similar losses of suction were experienced on 2-SW-P-10B on 9-13 and 14, 1982.
014 The inoperability of these pumps is contrary to T.S.3.3.A.8.b and reportable per
015 T.S.6.6.2.b.(2). Since the charging pump bearing temperatures remained within
016 specifications and the low pressure alarms were in for only a short time, the
017 health and safety of the public were not affected.

09 SYSTEM CODE W A 11 CAUSE CODE X 12 CAUSE SUBCODE Z 13 COMPONENT CODE P U M P X X 14
COMP. SUBCODE B 15 VALVE SUBCODE Z 16

17 LER/RO REPORT NUMBER 8 2 21 22 SEQUENTIAL REPORT NO. 0 5 7 24 26 OCCURRENCE CODE 0 3 28 29 REPORT TYPE L 30 31 REVISION NO. 0 32
ACTION TAKEN X 18 FUTURE ACTION F 19 EFFECT ON PLANT Z 20 SHUTDOWN METHOD Z 21 HOURS 0 0 0 0 22 ATTACHMENT SUBMITTED Y 23 NPRD-4 FORM SUB. N 24 PRIME COMP. SUPPLIER A 25 COMPONENT MANUFACTURER I 0 7 5 26

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS 27

110 The loss of suction to the operating pump(s) was due to insufficient NPSH. During
111 these incidents, service water to the air conditioning chillers was reduced and
112 the affected service water pump (s) vented to restore NPSH.

15 FACILITY STATUS E 28 % POWER 1 0 0 29 OTHER STATUS N/A 30 METHOD OF DISCOVERY A 31 DISCOVERY DESCRIPTION Operator Observation 32

16 ACTIVITY CONTENT Z 33 Z 34 AMOUNT OF ACTIVITY N/A 35 LOCATION OF RELEASE N/A 36

17 PERSONNEL EXPOSURES NUMBER 0 0 0 37 TYPE Z 38 DESCRIPTION N/A 39

18 PERSONNEL INJURIES NUMBER 0 0 0 40 DESCRIPTION N/A 41

19 LOSS OF OR DAMAGE TO FACILITY TYPE Z 42 DESCRIPTION N/A 43

20 PUBLICITY ISSUED N 44 DESCRIPTION 45
8210060398 820930 PDR ADOCK 05000280 S PDR
NRC USE ONLY

ATTACHMENT 1

SURRY POWER STATION, UNIT NO. 2

DOCKET NO: 50-281

REPORT NO: 82-057/03L-0

EVENT DATE: 09-01-82

TITLE OF THE EVENT: Inoperable Charging Pump Service Water Pumps

1. DESCRIPTION OF THE EVENT:

On September 1, 13, 18 and 20, with the unit at full power, 2-SW-P-10A (Charging Pump Service Water Pump) experienced a loss of suction pressure, which resulted in a loss of discharge pressure. On September 13 and 14, 2-SW-P-10B experienced a loss of suction pressure.

Inoperability of the charging pump service water pumps is contrary to Technical Specification 3.3.A.8.b and is reportable per 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 oil coolers and the charging pump lubricating oil coolers. During the short periods when these pumps were inoperable, a maximum of 20 minutes, the charging pump bearing temperature did not show any significant increase. In all cases, the pumps were restored to service within the time limits of T.S.3.3.B.6 and 3.0.1; 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 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. In addition, the Unit No. 1 and Unit No. 2 'B' charging pump service water pumps are located at a higher elevation.

Experience has shown that the performance of the charging pump service water pumps, especially the 'B' 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 now indicated.

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. In addition, the associated service water pump suction strainer was inspected. The service water pump was vented and returned to service.

5. SUBSEQUENT CORRECTIVE ACTION:

The setpoint for 'B' air conditioning chiller service water flow control valve was checked. Minor adjustments were required. The setpoints for the remaining flow control valves will be checked.

6. ACTION TAKEN TO PREVENT RECURRENCE:

A Design Change has been initiated 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 reduced air inleakage in suction header, a preventative maintenance procedure has been implemented.

7. GENERIC IMPLICATIONS:

The NPSH problem is Generic at both Surry Units.