

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 | 0 | 4 | 1 | 1 | 1 | 1 | 1 | 4 | \_\_\_\_\_ | 5  
8 9 14 15 25 26 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

01 | L | 0 | 5 | 0 | 0 | 0 | 2 | 8 | 1 | 7 | 1 | 1 | 0 | 6 | 8 | 2 | 8 | 1 | 2 | 0 | 3 | 8 | 2 | 9  
60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

012 | With the unit at full power, while performing PT 18.8, charging pump service  
013 | water pump 2-SW-10A failed to develop sufficient discharge pressure. This is  
014 | contrary to T.S. 3.A.8(b) and is reportable per T.S.6.6.2.b(2). The redundant  
015 | pump was oper a, therefore the health and safety of the public were not affected.  
016 | \_\_\_\_\_  
017 | \_\_\_\_\_  
018 | \_\_\_\_\_

09 | W | A | X | Z | P | U | M | P | X | X | B | Z | L | 8 | 2 | 0 | 6 | 5 | 0 | 3 | L | 0 | A | F | Z | Z | 0 | 0 | 0 | 0 | Y | N | A | I | 0 | 7 | 5 | 26  
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

110 | The immediate cause of this event was a corroded carbon steel stud on the packing  
111 | gland housing which led to cocking of the gland. The root cause is a lack of  
112 | NPSH. The packing material and both studs were replaced.  
113 | \_\_\_\_\_  
114 | \_\_\_\_\_

15 | E | 1 | 0 | 0 | N/A | B | Routine Test.  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

16 | Z | Z | N/A | N/A  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

17 | 0 | 0 | 0 | Z | N/A  
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18 | 0 | 0 | 0 | N/A  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

19 | Z | N/A  
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NRC USE ONLY

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110 917-924

ATTACHMENT 1

SURRY POWER STATION, UNIT NO. 2

DOCKET NO: 50-281

REPORT NO: 82-065/03L-0

EVENT DATE: 11-06-82

TITLE OF THE EVENT: 2-SW-P-10A LO DISCHARGE PRESSURE

1. Description of the Event:

With the unit at full power, while performing PT-18.8, (Charging Pump Component Cooling and Service Water Performance Test), charging pump service water pump 2-SW-P-10A failed to develop sufficient discharge pressure. This is contrary to T.S.-3.3.A.8(b) and is reportable per T.S. 6.6.2.b(2).

2. Probable Consequences and Status of Redundant Equipment:

The charging pump service water pumps supply water to the charging pump intermediate seal coolers and the lube oil coolers. During the event, the redundant pump 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 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.

The packing gland for the pump was cocked allowing air inleakage causing the pump to become airbound. The packing gland housing is supported with two studs. One of the studs was carbon steel and one was stainless steel. The carbon steel stud was corroded so that it would not tighten when its nut was turned. The stainless stud did provide tightening of that side of the packing. This led to cocking of the gland and air inleakage.

4. Immediate Corrective Action:

The redundant pump was verified operational and a maintenance report was initiated.

5. Subsequent Corrective Action:

The packing material in the pump was replaced and both studs were replaced with new stainless steel studs. The pump was tested and returned to service.

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. This should make the pumps less susceptible to air inleakage by improving their NPSH.

7. Generic Implications:

The NPSH problem is Generic at both Surry Units.