NRC FORM 366
(7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | LICENSEE CODE: V A S P S 2 (2) | LICENSE NUMBER: 0 0 - 0 0 0 0 0 - 0 0 (3) | LICENSE TYPE: 4 1 1 1 1 (4) | CAT (5)

CON'T 0 1 | REPORT SOURCE: L (6) | DOCKET NUMBER: 0 5 0 0 0 2 8 1 (7) | EVENT DATE: 0 5 3 0 8 2 (8) | REPORT DATE: 0 6 2 5 8 2 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 On 05-30-82 with the unit at 96% power, charging pump service water pump
0 3 2-SW-P-10B was found to have zero discharge pressure as a result of loss of
0 4 suction to the pump. Inoperability of this pump is contrary to T.S.3.3.A.8.b and
0 5 is reportable per T.S.6.6.2.b(2). Since the redundant pump remained operable,
0 6 the health and safety of the public were not affected.
0 7
0 8

0 9 | 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 | EVENT YEAR: 8 2 | — | SEQUENTIAL REPORT NO.: 0 3 3 | / | OCCURRENCE CODE: 0 3 | REPORT TYPE: L | — | REVISION NO.: 0

ACTION TAKEN: Z (18) | FUTURE ACTION: Z (19) | EFFECT ON PLANT: Z (20) | SHUTDOWN METHOD: Z (21) | HOURS (22): 0 0 0 0 | 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)

1 0 The low discharge pressure due to insufficient NPSH. The Service Water to the
1 1 chillers was throttled to provide sufficient NPSH for the charging pump service
1 2 water pumps.
1 3
1 4

1 5 | FACILITY STATUS: E (28) | % POWER: 1 0 0 (29) | OTHER STATUS (30): N/A | METHOD OF DISCOVERY: A (31) | DISCOVERY DESCRIPTION (32): Operator Observation

1 6 | ACTIVITY RELEASED: Z (33) | CONTENT OF RELEASE: Z (34) | AMOUNT OF ACTIVITY (35): N/A | LOCATION OF RELEASE (36): N/A

1 7 | PERSONNEL EXPOSURES NUMBER: 0 0 0 (37) | TYPE: Z (38) | DESCRIPTION (39): N/A

1 8 | PERSONNEL INJURIES NUMBER: 0 0 0 (40) | DESCRIPTION (41): N/A

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PDR ADOCK 05000280
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1 9 | LOSS OF OR DAMAGE TO FACILITY (43) TYPE: Z (42) | DESCRIPTION: N/A

2 0 | PUBLICITY ISSUED: N (44) | DESCRIPTION (45): N/A | NRC USE ONLY

NAME OF PREPARER J. L. Wilson PHONE (804) 357-3184

ATTACHMENT 1
SURRY POWER STATION, UNIT NO. 2
DOCKET NO: 50-281
REPORT NO: 82-033/03L-0
EVENT DATE: 05-30-82

TITLE OF THE EVENT: 2-SW-P-10B Low Discharge Pressure

1. DESCRIPTION OF EVENT:

On May 30, 1982 with the unit at 96% power, charging pump service water pump, 2-SW-P-10B failed to develop sufficient discharge pressure. This event is contrary to Technical Specification 3.3.A.8.b and reportable per Technical Specification 6.6.2.b(2).

2. PROBABLE CONSEQUENCES OF OCCURRENCE:

The charging pump service water pumps supply water to the charging pump intermediate seal coolers and the charging pump lubricating oil coolers. During the event, the redundant charging pump service water pump remained operable; therefore, the health and safety of the public were not affected.

3. CAUSE OF THE EVENT:

The low discharge pressure was 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.

The NPSH available to the charging pumps service water pumps is affected by the number of chiller units in operation. In addition, a previous inspection revealed marine growth fouling in the 6" service water supply lines. The majority of the service water supply piping was cleaned approximately one week before this event.

4. IMMEDIATE CORRECTIVE ACTION:

The immediate corrective action was to throttle the service water flow through the chillers and vent 2-SW-P-10B, thereby, flooding '10B' pump suction.

5. SUBSEQUENT CORRECTIVE ACTION:

The remaining 6 inch supply piping has been cleaned.

6. ACTION TAKEN TO PREVENT RECURRENCE:

An engineering evaluation of the service water system is in progress. 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.

7. GENERIC IMPLICATIONS:

This is a generic problem to both units at Surry.