NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

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

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

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

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 With the unit at 96% power, both charging pump service water pumps, 2-SW-10A and
0 3 10B, lost suction. This is contrary to T.S.3.3.A.8.b and is reportable in
0 4 accordance with T.S.6.6.2.b(2). Since the pumps were out of service for only 5
0 5 minutes and were restored to service within the time limit of T.S.3.0.1, the health
0 6 and safety of the public were not affected.
0 7
0 8

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	W A (11)	X (12)	X (13)	P U M P X X (14)	B (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 2	—	0 2 8	/	0 3	L	—	0

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
X (18)	F (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	N (24)	A (25)	I 0 7 5 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The use of service water by the chillers can cause a loss of suction pressure to the
1 1 charging pumps. Marine growth in the suction lines can reduce NPSH and clog suction
1 2 line strainers. The Service Water to the chillers was throttled to increase flow
1 3 to the pumps. The strainer and lines have been cleaned.
1 4

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	E (28)	0 9 6 (29)	N/A	A (31)	Operator Observation

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

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	N/A

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	N/A

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	N/A

8206210043 820611
PDR ADOCK 05000280
S PDR

PUBLICITY

	ISSUED	DESCRIPTION (45)	NRC USE ONLY
2 0	N (44)		

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

ATTACHMENT 1
SURRY POWER STATION, UNIT NO. 2
DOCKET NO: 50-281
REPORT NO: 82-028/03L-0
EVENT DATE: 05-13-82

TITLE OF THE EVENT: Loss of Suction to Service Water Pumps SW-P-10A and 10B

1. DESCRIPTION OF EVENT:

With the unit at 96%, service water pump 2-SW-P-10A failed to maintain system pressure, causing the automatic start of the redundant pump, 2-SW-P-10B. However, pump 10B was air bound and did not return system pressure to normal until the suction line was manually flooded 5 minutes later. This event is contrary to T.S. 3.3.A.8.b and is reportable in accordance with T.S. 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. For the short period of time that these pumps were inoperable, (5 minutes), the charging pump temperature did not increase. Since the pumps were restored to service within the time limit of T.S.3.0.1, the health and safety of the public were not affected.

3. CAUSE:

Pump SW-P-10A could not maintain system pressure because of loss of suction pressure that was caused by a clogged suction strainer.

The service water piping for the charging pump service water pumps also supply the Control Room/Relay Room air conditioner chiller units 1-VS-E-4A, B, and C. Use of service water by the chillers can cause a loss of suction pressure to the charging pump service water pumps. In addition, an inspection revealed marine growth fouling in the suction lines possibly decreasing NPSH at the pump. A combination of these conditions caused the loss of suction to pump 1-SW-P-10B.

4. IMMEDIATE CORRECTIVE ACTION:

The immediate corrective action was to throttle the service water flow through the chillers and vent pump SW-P-10B so that the suction line to that pump was flooded. System pressure and flow then returned to normal.

5. SUBSEQUENT CORRECTIVE ACTION:

The suction strainer of pump SW-P-10A was cleaned, and the pump was returned to service.

6. ACTION TAKEN TO PREVENT RECURRENCE:

The marine growth fouling portions of the service water supply lines has been flushed from some of the piping (VEPCO procedure MMP-C-SW-120). Preparations are underway to flush the remaining portions of the suction piping. In addition, a design change (D/C 81-41) has been initiated that will change and relocate the service water pumps and piping to increase the NPSH.

7. GENERIC IMPLICATIONS:

This is a generic problem to both units at Surry.