

LICENSEE EVENT REPORT

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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	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	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	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	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	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	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	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	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	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	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	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	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	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	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	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	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	91
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DOCKET NUMBER EVENT DATE REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

With the unit at full power, and the 10A service water pump running, the charging pump service water low pressure alarm sounded. The 10B service water pump auto started, but did not restore system pressure, this is contrary to T.S.3.3.A.8.(b) and is reportable per T.S.6.6.2.b(2). The low pressure alarm was in for only 20 minutes and the charging pump bearing temperatures remained within specifications, therefore the health and safety of the public were not affected.

SYSTEM CODE		CAUSE CODE		CAUSE SUBCODE		COMPONENT CODE				COMP. SUBCODE		VALVE SUBCODE			
19	W A	11	X	12	Z	13	P	U	M	P	X	X	14		
EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE		REPORT TYPE		REVISION NO.							
17	8 2	21	0 5 0	24	0 3	26	L	30	0						
ACTION TAKEN		EFFECT ON PLANT		SHUTDOWN METHOD		HOURS		ATTACHMENT SUBMITTED		NFRD-4 FORM SUB.		PRIME COMP. SUPPLIER		COMPONENT MANUFACTURER	
18	X F	19	Z	20	Z	21	0 0 0 0	22	Y	23	N	24	A	25	I 0 7 5

10 The low discharge pressure, when 1-SW-P-10B started, was due to insufficient NPSH.

11 The service water to the chillers was reduced and the 10B service water pump

12 vented to restore sufficient NPSH to the charging pump service water pumps. The

13 low pressure when 1-SW-P-10A was running was due to a partially clogged strainer.

14 The strainer was cleaned.

FACILITY STATUS		% POWER		OTHER STATUS		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION	
1	5	28	1	0	0	29	30	31	32
ACTIVITY		CONTENT		AMOUNT OF ACTIVITY		LOCATION OF RELEASE			
3	6	33	7	34	35	36			
PERSONNEL EXPOSURES		NUMBER		TYPE		DESCRIPTION			
4	8	37	0	0	0	38	39		
PERSONNEL INJURIES		NUMBER		DESCRIPTION					
5	9	40	0	0	0	41			
LOSS OF OR DAMAGE TO FACILITY		TYPE		DESCRIPTION					
6	10	42	2	43					
PUBLICITY		ISSUED		DESCRIPTION					
7	11	44	N	45					

8209200246 820910
PDR ADOCK 05000280
S PDR

NFC USE ONLY

NUMBER (804) 357-3184

ATTACHMENT 1

SURRY POWER STATION, UNIT NO. 2

DOCKET NO: 50-281

REPORT NO: 82-050/03L-0

EVENT DATE: 08-17-82

TITLE OF THE EVENT: 2-SW-P-10A & B Inoperable

1. DESCRIPTION OF THE EVENT:

With the unit at full power, and the 10A service water pump running, the charging pump service water pump discharge low pressure alarm sounded. The 2-SW-P-10B pump auto started, but did not restore system 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. The low pressure alarm was in for only 20 minutes and the charging pump bearing temperatures remained within specifications, therefore the health and safety of the public were not affected.

3. CAUSE:

The low pressure alarm causing the 10B pump to auto start was due to reduced flow through a partially clogged 10A pump strainer. This strainer has 1/16 inch holes in it. Engineering Study 82-39, recommended that the charging pump service water pump strainers have 1/8 inch holes.

The 10B service water pump was air bound and could not restore pressure above the alarm point. 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.

4. IMMEDIATE CORRECTIVE ACTION:

One chiller unit was shutdown and the 10B pump vented and started. The pump ran for a few minutes and became air bound again. After a second venting the pump ran with no further problems.

5. SUBSEQUENT CORRECTIVE ACTIONS:

The 10A pump strainer was cleaned, the 10A pump was returned to service, and the 10B pump was placed in standby.

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. The 10A pump strainer will be changed with one that has 1/8 inch holes.

7. GENERIC IMPLICATIONS:

The NPSH problem is generic at both Surry units.