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	V A S P S 2 (2)	00-00000-00 (3)	4 1 1 1 1 (4)	(5)
		LICENSEE CODE	LICENSE NUMBER	LICENSE TYPE	CAT

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

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 With Unit 2 operating at 90%, a fault occured on the Feeder cables to 'B' RSS
0 3 transformer. Isolation of the fault de-energized the '2H' Emergency Bus. This
0 4 event is contrary to T.S.3.1.6.A.4 and is reportable in accordance with
0 5 T.S.6.6.2.b.(2). The emergency bus was re-energized by the #2 EDG. In addition,
0 6 a dependable alternate source remained available. Therefore, the health and
0 7 safety of the public were not affected.
0 8

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	E A (11)	C (12)	A (13)	E L E C O N (14)	Z (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 2	—	0 0 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
F (18)	Z (19)	B (20)	Z (21)	0 0 0 0	Y (23)	N (24)	A (25)	(26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The spraying of the 'B' RSS transformer feeder cable insulators with brackish water
1 1 apparently caused a flashover to ground and to an adjacent phase. As a result, the
1 2 feeder cable failed. The failed cable was replaced and the transformer returned to
1 3 service within 7 days. Measures have been initiated to deflect water spray
1 4 from the RSS transformers.

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

	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

PUBLICITY

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

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PDR ADOCK 05000281
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NAME OF PREPARER: Wilson PHONE: (804) 357-3184

ATTACHMENT 1
SURRY POWER STATION, UNIT NO. 2
DOCKET NO: 50-281
REPORT NO: 82-008/03L-0
EVENT DATE: 01-18-82

TITLE OF EVENT: LOSS OF 'B' RESERVE STATION SERVICE TRANSFORMER

1. DESCRIPTION OF EVENT:

With unit two operating at 90% power, a fault occured on the feeder to 'B' Reserve Station Service (RSS) transformer. Isolation of the fault de-energized the 'E' transfer bus and the '2H' emergency bus. Emergency Diesel Generator (EDG) #2 started on the undervoltage and re-energized the emergency bus.

Vital bus 2-I, which is fed from '2H' bus via a sola transformer, was momentarily de-energized producing a spurious signal which created a a turbine runback, the plant was stabilized at 62% reactor power and 350 MWe.

The loss of RSS transformer is contrary to Technical Specification 3.16.A.4 and is reportable in accordance with Technical Specification 6.6.2.b (2).

2. PROBABLY CONSEQUENCES AND STATUS OF REDUNDANT EQUIPMENT:

The Reserve Station Service Transformers ensures immediate availability of electric power to shutdown the reactor safely. In addition, quick start Emergency Diesel generators are available to provide backup power to safety related components.

The dependable alternate source, i.e.; removing the unit from service, disconnecting the generator and feeding offsite power through the main step-up transformer and normal station service to the emergency bus, would have been available in eight hours.

Loss of 'B' Reserve Station Service Transformer

The unit can be maintained in a safe condition for eight (8) hours with no off-site power and without damaging reactor fuel or the reactor coolant pressure boundry, therefore the health and safety of the public were not affected.

3. CAUSE:

Ice forming at the high level intake traveling screen caused a blockage of the fish flume. Water backed up in the fish flume to the point where it exited through a "Blow hole" (vent). Blackish water exiting the blow hole sprayed on the terminating insulators (Pot Heads) for the feeder cables to 'B' RSS transformer. This apparently caused one of the phases to flashover to ground and to an adjacent phase. The flashover generated a Pilot Wire Differential signal, thereby initiating the isolation of 'B' RSS transformer.

4. IMMEDIATE CORRECTIVE ACTION:

The immediate corrective action was to verify No. 2 EDG supplying power to 2H emergency bus. In addition, measures were initiated to insure that an alternate source would be available, if required, within eight (8) hours.

5. SUBSEQUENT CORRECTIVE ACTION:

The blockage of the fish flume has been eliminated. Investigation revealed that the underground cables from the switchyard, for the two affected phases, had failed. The failed cables were replaced and the 'B' RSS transformer was returned to service within 7 days.

Loss of 'B' Reserve Station Service Transformer

6. ACTION TAKEN TO PREVENT RECURRENCE:

Corrective measures have been initiated to insure any water exiting the fish flow "blow hole" will be deflected away from the RSS transformers.

7. GENERIC IMPLICATIONS:

None.