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 1 (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 0 (7)	EVENT DATE: 1 2 0 4 7 8 (8)	REPORT DATE: 1 2 1 8 7 8 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 During normal full power operation, a loss of flow was detected in the charging

0 3 pump intermediate seal cooler 1-SW-E-1B. Redundant cooler 1-SW-E-1A was placed

0 4 in service until valve repairs were completed. Unit 1 operated in a degraded

0 5 mode in accordance with T.S. 3.3.B.7 and the event is reportable per T.S. 6.6.2.b.(2).

0 6 The health and safety of the public were not affected because the standby cooler

0 7 remained operable.

0 8

0 9	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
	W A (11)	E (12)	D (13)	V A L V E X (14)	E (15)	0 (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	7 8	—	0 4 4	/	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
B (18)	A (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	Y (24)	A (25)	W 0 3 0 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 Loss of flow resulted from failure of the cooler intake gate valve. Corrosion of the

1 1 valve stem permitted the disk to fall freely and obstruct service water flow. A

1 2 new stem was fabricated and then installed along with the old disk. A design change

1 3 has been initiated to replace similar charging pump service water gate valves with

1 4 ball valves.

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

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

PERSONNEL EXPOSURES

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

PERSONNEL INJURIES

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

LOSS OF OR DAMAGE TO FACILITY (43)

1 9	TYPE	DESCRIPTION
	Z (42)	N/A

PUBLICITY

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

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NAME OF PREPARER T. L. Baucom PHONE: 357-3184 (804)

GPO 917-926

Surry Power Station, Unit 1
Docket No: 50-280
Report No: 78-044/03L-0
Event Date: 12-4-78

Title of Report: Loss of Service Water Flow Through Charging Pump Intermediate Seal Cooler

1. Description of Event:

At about 1440 on December 4, 1978 with Unit 1 operating at full power, a loss of flow was detected in the charging pump intermediate seal cooler 1-SW-E-1B. Unit 1 was operating in a degraded mode in accordance with Technical Specification 3.3.B.7 and the event is reportable in accordance with Technical Specification 6.6.2.b.(2).

2. Probable Consequences of Event:

Loss of the charging pump intermediate seal cooler 1-SW-E-1B did not affect the health and safety of the general public because adequate cooling was obtained from the "A" charging pump intermediate seal cooler which is a redundant, full size cooler.

3. Cause:

Loss of flow to the "B" intermediate seal cooler resulted from failure of the cooler intake gate valve 1-SW-110. Corrosion of the valve stem permitted the disk to fall freely and obstruct service water flow.

4. Immediate Corrective Action:

Immediate action was taken to establish and verify flow to seal cooler 1-SW-E-1A.

5. Subsequent Corrective Action:

The inoperable gate valve was repaired by installing a new stem fabricated from stainless steel.

6. Action to Prevent Recurrence:

A corrosion study was performed on the service water gate valves resulting in initiation of a design change for replacement with bronze ball valves. Ball valves will eliminate the galvanic couple created by stem to disk contact in salt water.

7. Generic Implications:

Valve failure in the charging pump service water subsystem is generic in that many of the existing gate valves are undergoing the same galvanic corrosion. Replacement with bronze ball valves will solve this corrosion problem and provide for long term reliability.