NRC Form 366 (9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Surry Power Station, Unit 1	0 5 0 0 0 2 8 0	1 OF 0 3

TITLE (4)
Control/Relay Room Chillers Inoperable Due To Inadequate Service Water Flow

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
										0 5 0 0 0
0 2	2 4	8 8	8 8	— 0 0 7	— 0 0	0 3	1 7	8 8		0 5 0 0 0

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N	1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
D. L. Benson, Station Manager	8 0 4 — 3 5 7 — 3 1 8 4

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On February 24, 1988 at 1005 hours, with Unit 1 and Unit 2 at 100% power, one of the three control room/relay room (CR/RR) chillers (1-VS-E-4C) {EIIS-CHU} tripped on high condenser discharge pressure. The 'B' chiller unit had previously been removed from service for cleaning of its service water (SW) {EIIS-BI} strainer {EIIS-STR}. This condition is contrary to Technical Specification 3.14 which requires one CR/RR chiller to be operating and another to be operable. After the 'C' chiller tripped, the 'A' chiller was immediately started. The 'C' chiller was returned to service at 1110 hours and the 'A' chiller was secured. The chiller tripped due to insufficient SW flow. SW flow to the chiller was being controlled manually because the normal pressure control valves (1-SW-PCV-100C & 1-SW-PCV-101C) {EIIS-PCV} were out of service. In addition, a manual inlet and outlet valve to the 'C' chiller which should have been fully open, were found throttled. The throttled SW valves were fully opened, and the correct outlet valve was throttled to obtain proper SW flow. The normal chiller pressure control valves will be repaired.

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NRC Form 366A
(9-83)

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT *(If more space is required, use additional NRC Form 366A's)* (17)

1.0 Description of the Event

On February 24, 1988 at 1005 hours, with Unit 1 and Unit 2 at 100% power, one of the three control room/relay room (CR/RR) chillers (1-VS-E-4C) {EIIS-CHU} tripped on high condenser discharge pressure. The 'B' chiller unit had previously been removed from service for cleaning of its service water (SW) {EIIS-BI} strainer {EIIS-STR}. This condition is contrary to Technical Specification 3.14 which requires one CR/RR chiller to be operating and another to be operable. After the 'C' chiller tripped, the 'A' chiller was immediately started. The 'C' chiller was returned to service at 1110 hours and the 'A' chiller was secured.

2.0 Safety Consequences and Implications

The CR/RR air conditioning system consists of three air conditioning chiller units. The design temperature of the CR/RR spaces is from 40 degrees Fahrenheit to 120 degrees Fahrenheit.

During this event, the CR/RR air handling Units remained operable or operating. In addition, there was no noticeable increase in ambient temperature of the CR/RR areas. Therefore, the health and safety of the public were not affected by this event.

3.0 Cause

The cause of the chiller trip was insufficient SW flow which resulted in insufficient heat transfer from refrigerant to SW causing the high condenser discharge pressure trip. SW flow to the chiller was being controlled manually because the normal pressure control valves (1-SW-PCV-100C & 1-SW-PCV-101C) {EIIS-PCV} were out of service. Increased SW flow to 'C' chiller was required when the 'B' chiller was shut down for maintenance. Since the SW flow to the 'C' chiller was being controlled manually, flow did not automatically increase to meet the higher demand. In addition, a manual inlet and outlet valve to the 'C' chiller which should have been fully open, were found throttled.

★U.S.GPO:1988-0-624-538/455

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TEXT *(If more space is required, use additional NRC Form 366A's)* (17)

4.0 Immediate Corrective Action(s)

The throttled SW valves were fully opened, and the correct outlet valve was throttled to obtain proper SW flow. The 'C' chiller was returned to service with no further problems.

5.0 Additional Corrective Action(s)

Service water pressure to the CR/RR chillers is checked at least every four hours.

6.0 Action(s) Taken to Prevent Recurrence

The normal chiller pressure control valves will be repaired. Design work is proceeding on upgrading the service water supply to the CR/RR chillers.

The operations training program includes training on proper operation of heat exchanger inlet and outlet valves; and this event will be included in future retraining sessions.

7.0 Similar Events

Although this specific event has not occurred before, previous incidents of inadequate SW flow to the CR/RR chillers have been reported.

8.0 Manufacturer/Model Number

N/A

VIRGINIA ELECTRIC AND POWER COMPANY
Surry Power Station
P. O. Box 315
Surry, Virginia 23883

March 17, 1988

U.S. Nuclear Regulatory Commission
Document Control Desk
016 Phillips Building
Washington, D.C. 20555

Serial No.: 88-009
Docket No.: 50-280
Licensee No.: DPR-32

Gentlemen:

Pursuant to Surry Power Station Technical Specifications, Virginia Electric and Power Company hereby submits the following Licensee Event Report for Surry Unit 1.

REPORT NUMBER

88-007-00

This report has been reviewed by the Station Nuclear Safety and Operating Committee and will be reviewed by Safety Evaluation and Control.

Very truly yours,

David L Benson

David L. Benson
Station Manager

Enclosure

cc: Dr. J. Nelson Grace
Regional Administrator
Suite 2900
101 Marietta Street, NW
Atlanta, Georgia 30323

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