POW 28-06-01

NRC Form 366 (9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

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)

Containment High Temperature

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 7	2 1	8 5	8 5	— 0 1 3	— 0 0	0 8	2 0	8 5		0 5 0 0 0

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 0 8 8	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)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
	20.405(a)(1)(iv)	X 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
R. F. Saunders, 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	
X	K M	C H U C	0 5 3	Y							

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)

ABSTRACT

With Unit 1 at 88% power and unit 2 at 100% power, unit 1 containment temperature exceeded 120°F for approximately 3 hours. This is contrary to T.S.3.8, figure 3.8.1. The high containment temperature was due to the loss of 1-CD-REF-1A.

Component cooling chiller unit 1-CD-REF-1A was restarted and both 1-CD-REF-1A and 1B were aligned to cool unit 1 containment. 1-CD-REF-1A tripped due to the high chiller condenser pressure initiated by tube fouling on the service water side of the chiller condenser. The chiller condenser service water tubes for the three units were cleaned and the chiller units were noted to operate satisfactorily.

Operations with containment temperature above 120°F is not bounded by the existing Surry containment calculations and reanalysis has proven that the calculated peak containment pressure to be less than the designed containment pressure. Therefore the health and safety of the public were not affected.

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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)

CONTAINMENT HIGH TEMPERATURE

1. Description of the Event

With unit 1 at 88% power and unit 2 at 100% power, unit 1 containment temperature exceeded 120°F for approximately 3 hours. This is contrary to T.S. 3.8, figure 3.8.1. Prior to this event, component cooling water chiller unit 1-CD-REF-1A (EIIS CHU), which was being used to cool unit 1 containment, tripped. At the time 1-CD-REF-1A tripped, component cooling chiller units 2-CD-REF-1 and 1-CD-REF-1B were aligned to unit 2 containment.

2. Safety Consequences and Implications

Calculations for the design of the containment spray system, which depressurizes the containment to less than atmospheric within 60 minutes in the unlikely event of a LOCA, are based on a maximum initial dry bulb containment temperature of 120°F. The containment design pressure is 45 psig, which is conservative with respect to a peak post LOCA pressure of 44.2 psig based on a double-ended cold-leg rupture with minimum engineered safeguards. During this event, containment temperature reached 121.6°F. Containment dew point temperature and refueling water storage tank (RWST) temperature were lower than the design basis accident conditions. Operations with containment temperature above 120°F is not bounded by the existing Surry containment calculations and additional analysis was required.

Reanalysis performed by the architectural engineer, Stone and Webster, for a LOCA at 100% power with an initial containment temperature of 122°F, actual RWST temperature and containment dew point temperature yielded a peak containment pressure of 43.8 psig. The maximum calculated containment pressure was found to be less than the design pressure. In addition, if the 88% actual power level had been used in the calculation, peak containment pressure would have been less. Therefore, the health and safety of the public were not affected during this event.

3. Cause

The high containment temperature was due to the loss of 1-CD-REF-1A. 1-CD-REF-1A tripped due to a high chiller condenser pressure initiated by tube fouling on the service water side of the chiller condenser.

4. Immediate Corrective Action

Component cooling chiller unit 1-CD-REF-1A was restarted and both 1-CD-REF-1A and 1B were aligned to cool unit 1 containment.

5. Additional Corrective Actions

The chiller condenser service water tubes for the three units were cleaned and the chiller units were noted to operate satisfactorily.

NRC Form 366A
(9-83)

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

CONTAINMENT HIGH TEMPERATURE

6. Action Taken to Prevent Recurrence

Preventative maintenance and operating procedures for the chiller units will be re-evaluated.

7. Generic Implications

None.

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VIRGINIA POWER

Surry Power Station
P. O. Box 315
Surry, Virginia 23883

August 20, 1985

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

Serial No: 85-021
Docket No: 50-280
License No: DPR-32

Gentlemen:

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

REPORT NUMBER

85-013-00

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,

R F Saund

R. F. Saunders
Station Manager

Enclosure

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

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