NRC Form 366 (9-83)

LICENSEE EVENT REPORT (LER)

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

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)

Inadequate Review of AFW Supply Following a HELB in Safeguards

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	3 0	8 7	8 7	0 1 4	0 1	1 1	3 0	8 8		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) 1 0 0	20.405(a)(1)(i)	50.36(c)(1)	X 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)	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
M. R. Kansler, Station Manager	AREA CODE 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 June 30, 1987 with Unit One at 100% power and Unit Two at 69% power, it was determined as a result of a company initiated safety system functional inspection, that a unique scenario could exist whereby auxiliary feedwater (AFW) could be lost to an operating unit. In the event of a high energy line break (HELB) in the main steam valve house (MSVH) of an operating unit, the AFW pumps on that unit could be rendered inoperable due to the harsh environment. With the unaffected unit at cold shutdown and only one of its motor driven AFW pumps available for cross connect to the affected unit, an assumed loss of offsite power, with a single failure could result in a loss of AFW to the affected unit.

Administrative controls have been established to ensure that when a unit is above 350 degrees/450 psig, two motor driven AFW pumps will be available from the other unit.

Engineering has reviewed the original safety analysis for the HELB (loss of AFW) and a Technical Specification change has been submitted.

IE22

NRC Form 366A (9-83)

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Surry Power Station, Unit 1	0 5 0 0 0 2 8 0	8 7	— 0 1 4	— 0 1	0 2 OF 0 3

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

1.0 Description of the Event

On June 30, 1987 with Unit One at 100% power and Unit Two at 69% power, it was determined as a result of a company initiated safety system functional inspection, that a unique scenario could exist whereby auxiliary feedwater (AFW) {EIIS-BA} could be lost to an operating unit. In the event of a high energy line break (HELB) in the main steam valve house (MSVH) of an operating unit, the AFW pumps {EIIS-P} on that unit could be rendered inoperable due to the harsh environment. With the unaffected unit at cold shutdown and only one of its motor driven AFW pumps available for cross connect to the affected unit, an assumed loss of offsite power, with a single failure could result in a loss of AFW to the affected unit.

The existing Technical Specification requires that only one motor driven AFW pump be available when the unit is at cold shutdown. This specification was developed in 1980 to provide assurance that AFW could be supplied from one unit to another in the event that the AFW pumps in one unit were destroyed by fire (Appendix R). The HELB event was not considered at that time, and Appendix R does not require consideration of the single failure criterion.

This event is reportable in accordance with 10CFR 50.73(a)(2)(v).

2.0 Safety Consequences and Implications

This scenario is not analyzed in the UFSAR. However, a main steam line break is a condition IV event and is of very low probability. Additionally, Functional Restoration Procedure H.1 provides guidance in the event of total loss of FW and AFW to the Steam Generators. Further protection is provided through an extensive non-destructive testing program of the main steam postulated break points in the main steam valve house.

NRC Form 366A (9-83)

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Surry Power Station, Unit 1	0 5 0 0 0 2 8 0	8 7	— 0 1 4	— 0 1	0 3 OF 0 3

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

3.0 Cause

Section 14B.5.1.7 of the UFSAR considers a HELB in the MSVH and assumes that should all three of the affected units AFW pumps become inoperable, redundancy is not lost because there are three AFW pumps available from the unaffected unit. The UFSAR does not consider the possibility that only one AFW pump from the unaffected unit might be available when that unit is at cold shutdown.

4.0 Immediate Corrective Action(s)

Administrative controls have been established to ensure that when a unit is above 350 degrees/450 psig, two motor driven AFW pumps will be available from the other unit.

5.0 Additional Corrective Actions

A change to the Technical Specifications has been submitted to ensure redundant protection against loss of all AFW under HELB conditions.

6.0 Actions Taken to Prevent Recurrence

None.

7.0 Similar Events

None

8.0 Manufacturer/Model Number

N/A

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

November 30, 1988

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

Serial No.: 87-016A
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 updated Licensee Event Report for Unit 1.

REPORT NUMBER

87-014-01

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,

M. R. Kansler
Station Manager

Enclosure

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

IE22
1/1