

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Surry Power Station, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 2 8 0	PAGE (3) 1 OF 13
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TITLE (4)
"C" S/G Steam Flow Channel IV Failed Low Due To Failed Multiplier/Divider

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	8	02	8	8	02	0	8	02				0 5 0 0 0
0	8	02	8	8	02	0	8	02				0 5 0 0 0

OPERATING MODE (9) **N**

POWER LEVEL (10) **1 1 0 0**

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	50.38(c)(1)	50.73(a)(2)(v)	73.71(c)
20.405(a)(1)(ii)	50.38(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)
20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)	50.73(a)(2)(viii)(A)	
20.405(a)(1)(iv)	50.73(a)(2)(iii)	50.73(a)(2)(viii)(B)	
20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

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

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	JIE	X X X X	W 1 2 0	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

At 1928 hours on August 2, 1988, with Unit 1 operating at 100% power, "C" Steam Generator (S/G) Channel IV Steam Flow (FI 1495) failed to a low flow indication. This channel of steam flow provides an input into the reactor trip matrix, and safety injection and main steam isolation matrix. With this channel failed, and not in the trip mode, the degree of redundancy requirements of Technical Specification (T. S.) table 3.7-2, was not met.

At 2116 hours, the failed steam flow channel inputs into the reactor trip and safety injection logics were placed in the trip mode satisfying T. S. requirements. A failed multiplier/divider unit was replaced in the "C" S/G Channel IV Steam Flow circuitry and the channel was tested and returned to service at 2252 hours. The "C" S/G Channel failed to a low indication due to a failed multiplier/divider unit's power supply transformer. Instrumentation technicians were called in, and placed the affected channels in the trip mode. The multiplier/divider was replaced and the steam flow channel was tested and returned to service.

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

1.0 Description of the Event

At 1928 hours on August 2, 1988, with Unit 1 operating at 100% power, "C" Steam Generator (S/G) Channel IV Steam Flow (FI 1495) {EIIS-JE} failed to a low flow indication. This channel of steam flow provides an input into the low S/G level in coincidence with feed flow/steam flow mismatch reactor trip matrix, and the high steam flow in coincidence with low tavg or low steam line pressure safety injection and main steam isolation matrix. With this channel failed, and not in the trip mode, the degree of redundancy requirements of Technical Specification (T. S.) table 3.7-2, was not met and T. S. 3.0.1 was in effect.

At 2116 hours, the failed steam flow channel inputs into the reactor trip and safety injection logics were placed in the trip mode satisfying T. S. requirements.

A failed multiplier/divider unit was replaced in the "C" S/G Channel IV Steam Flow circuitry and the channel was tested and returned to service at 2252 hours.

2.0 Safety Consequences and Implications

The "C" S/G Channel IV steam flow provides an input into the low S/G level in coincidence with feed flow/steam flow mismatch reactor trip matrix, and the high steam flow with low tavg or low steam line pressure safety injection and main steam isolation matrix. The reactor trip is for protection against a loss of heat sink and the safety injection with main steam isolation is for protection against a main steam line break. During the time the failed steam flow channel was not in the trip mode, the minimum number of steam flow channels required by T. S., that provides an input to the above protection logics, was maintained. In addition, all other parameters that input to the protection logics remained operable. Consequently, a reactor trip and/or safety injection with main steam isolation would have occurred, if required. Therefore, the health and safety of the public were not affected.

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TEXT (If more space is required, use additional NRC Form 388A's) (17)

3.0 Cause

The "C" S/G Channel IV steam flow failed to a low indication due to a failed multiplier/divider unit's power supply transformer. This resulted in an erratic signal output.

4.0 Immediate Corrective Action(s)

Instrumentation technicians were called in, and placed the affected channels in the trip mode.

5.0 Additional Corrective Action(s)

The multiplier/divider was replaced and the steam flow channel was tested and returned to service.

6.0 Action(s) Taken to Prevent Recurrence

Although the reactor protection and safety injection instrumentation is periodically tested and calibrated, random failures of this nature cannot be prevented.

7.0 Similar Events

None.

8.0 Manufacturer/Model Number

Hagan/127-112.

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

August 30, 1988

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

Serial No.: 88-043
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

88-023-00

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
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