

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) SURRY POWER STATION, Unit I										DOCKET NUMBER (2) 0 5 0 0 0 2 8 0				PAGE (3) 1 OF 03										
TITLE (4) 'A' MFP Trip Resulting in Turbine Trip/Rx Trip																								
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	4	2	9	8	5	8	5	0	0	7	0	0	5	2	9	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)				<input checked="" type="checkbox"/> 50.73(a)(2)(iv)				73.71(b)										
POWER LEVEL (10)		0 1 1 7				20.405(a)(1)(i)				50.36(e)(1)				50.73(a)(2)(v)		73.71(c)								
		20.405(a)(1)(ii)				50.36(e)(2)				50.73(a)(2)(vi)				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)(vii)(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)(ix)														
LICENSEE CONTACT FOR THIS LER (12)																								
NAME										TELEPHONE NUMBER														
R. F. Saunders, 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															
B	S	J	1 1 8 4	C 5 6 3	Y																			
SUPPLEMENTAL REPORT EXPECTED (14)																								
YES (If yes, complete EXPECTED SUBMISSION DATE)										<input checked="" type="checkbox"/> NO		EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR								

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

ABSTRACT

On April 29, 1985 with unit I at 17% power and ramping down to investigate the cause of an increasing primary leakrate, a turbine trip/Rx trip occurred as a result of the 'A' Main Feed Pump trip. At the time of the trip, no valid trip conditions was indicated for the feed pump.

As a result of an investigation and special test following the event, it was noted that it was possible for the actuator arm to not properly depress the limit switch associated with the valve position signal to the pump trip logic. Therefore, it is believed that when the recirc. valve opened at the specified low discharge flow setpoint, a valve open signal was not sent to the feed pump trip logic and a pump trip resulted.

The trip circuitry was tested satisfactorily and the valve position actuator arm was modified to ensure proper limit switch makeup.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

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

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

1. Description of the Event

On April 29, 1985, at 2008 hours, with unit I at 17% power and ramping down to investigate the cause of an increasing primary leak rate, the breakers for the 'A' main feed pump opened. Since the 'B' main feed pump was not in operation at the time due to the low load, a turbine trip/Rx trip occurred. There were no valid trip conditions indicated for the 'A' main feed pump at the time.

Operators followed appropriate plant procedures and quickly stabilized the plant following the trip.

2. Safety Consequences and Implications

Feedwater to the steam generator is normally provided by the operation of the condensate and feedwater systems. In the event the normal feedwater supply is lost, residual heat removal would be assured by the operation of the auxiliary feedwater system. Since the auxiliary feedwater pumps operated and all other safety related parameters remained within the bounds of the accident analysis, this event did not constitute an unreviewed safety question nor affect the health and safety of the public.

3. Cause

Upon inspection of the feed pump's recirc. valve, it was noted that it was possible for the actuator arm to not properly depress the limit switch associated with the valve position signal to the pump trip logic. Therefore, it is believed that when the recirc. valve opened at the specified low discharge flow setpoint, a valve open signal was not sent to the feed pump trip logic and a pump trip resulted.

4. Immediate Corrective Action

The 'B' Main Feed Pump was placed into operation and operators performed all appropriate Emergency Procedures and Functional Restoration Procedures to ensure the plant was returned to a stable condition.

Also, the STA performed the status tree reviews to ensure specific plant parameters were noted and appropriate procedures were used to maintain those parameters within safe bounds.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1) Surry Power Station, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 2 8 0	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (If more space is required, use additional NRC Form 356A's) (17)

5. Additional Corrective Actions

A special test was prepared (ST-178) and performed to determine the cause of the 'A' main feed pump trip. The trip logic circuits for the low lube oil pressure, low suction pressure and recirc. valve closed with low flow, were checked. Particular attention was given to the recirc. valve logic, since this trip would not give any indication in the control room. All setpoints, switches and circuits, associated with the trips, tested satisfactory. However, it was noted that the recirc. valve position indicator actuator arm had excessive lateral movement. This may have prevented the actuation of the valve open limit switch and as a result, a valve open signal would not have been sent to the pump trip logic.

6. Actions Taken to Prevent Recurrence

The recirc. valve actuator arm was modified to ensure proper limit switch actuation.

Also, Unit 2 main feed pumps recirc. valves will be inspected and modified if required prior to startup from the unit's present refueling outage.

7. Generic Implications

A similar event occurred in December, 1984, when the Unit 2 'B' feed pump trip resulted in a turbine/Rx trip. During the investigation of the Unit 1 trip, evidence was obtained that provided a better understanding of the cause of the Unit 2 trip.



VIRGINIA POWER

May 29, 1985

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

Serial No: 85-012

Docket No: 50-280

License No: DPR-32

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

Gentlemen:

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

REPORT NUMBER

85-007-00

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,

R. F. Saunders

R. F. Saunders
Station Manager

Enclosure

cc: Dr. J. Nelson Grace
Regional Administrator
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Atlanta, Georgia 30323

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11