

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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			
		8 5 -	0 1 8 -	0 1	0 2	OF	0 3

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

TURBINE TRIP/RX TRIP DUE TO LOW CONDENSER VACUUM1. Description of the Event

On September 11, 1985 at 0945 hours with unit 1 at 100% power, an operator was in the process of throttling the four condenser outlet valves (MOV-CW-100A, P, C, D) from a fully open position. The outlet valves had been fully opened in order to measure service water differential pressures and temperatures across the condenser.

The operator held 2 control switches in the close position for 10 seconds for what he believed to be 2 outlet MOV's and then monitored condenser vacuum and generator output. Noting no change in these parameters, he continued with the same actions for the other 2 MOV's. Within seconds following this action, the operator observed a turbine Exhaust Hood Hi Temperature alarm and realized that he had inadvertently closed the condenser inlet valves (MOV-CW-106A), B, C, D). These valves are not capable of being throttled and therefore continued to close after the control switches were released. He and another operator reopened the inlet valves, but could not prevent the condenser vacuum from decreasing to the turbine trip setpoint and a turbine trip/Reactor trip resulted.

Following the trip, operators noted that the control and protection systems functioned properly except for the 'A' Main Feed Pump (MFP), that tripped.

In addition, operators followed appropriate plant procedures and quickly stabilized the plant following the trip.

2. Probable Consequences

A turbine trip occurs at a low condenser vacuum to protect the turbine and condenser from over pressurization as a result of a loss of condenser cooling. Since this protective function operated satisfactorily, this event did not constitute an unreviewed safety question nor affect the health and safety of the public.

3. Cause

The cause of the turbine trip/Rx trip was a low condenser vacuum that was the result of the inadvertent closure of the condenser inlet valves. Other contributing factors in the event were the placement and appearance of the control switches for the inlet and outlet MOV's. The switches are placed in two horizontal rows of 4 each with the outlets directly above the inlets and are identical in appearance and operation, except that the Outlet valves have a throttling capability.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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	0 3	OF	0 3
		8 5	- 0 1 8	- 0 1			

TEXT (If more space is required, use additional NRC Form 365A's) (17)

TURBINE TRIP/RX TRIP DUE TO LOW CONDENSER VACUUM

The feed pump trip was due to the failure of its recirc. valve, FCV-FW-150A, (EHS No. SJ) to fully open within 15 seconds following the pump low flow signal.

4. Immediate Corrective Action

The condenser inlet valves were reopened in an attempt to regain condenser vacuum and avert a turbine trip.

Operators performed all appropriate Emergency Procedures and Function Restoration Procedures to ensure the plant was returned to a stable condition.

The STA performed the Status Tree Reviews to ensure specific plant parameters were noted and the appropriate procedures were used to maintain those parameters within safe bounds.

5. Additional Corrective Actions

See items in 'Actions Taken to Prevent Recurrence'.

6. Actions Taken to Prevent Recurrence

Covers have been placed on the condenser inlet valve control switches for Unit 1 and Unit 2 to prevent inadvertent operation. Also, these switches will undergo additional evaluation as part of the 'Control Room Design Review'.

In addition, the operator has been reinstructed in the manipulation of the control switches for the valves in that only one valve is to be operated at a time.

The 'A' MFP recirc. valve's internals and SOV were replaced and its operator is scheduled to be replaced when parts are available during the next outage of sufficient duration.

In the interim, plant operating instructions have been modified to ensure that both feed pumps will remain in operation until such time as the recirc. valve has been verified in the open position. In addition, an EWR has been initiated to study the feasibility of modifying the recirc. valve/pump trip circuit to prevent a similar occurrence.

7. Generic Implications

None.



VIRGINIA ELECTRIC AND POWER COMPANY

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

November 26, 1985

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

Serial No: 85-025A
Docket No: 50-280
License No: DPR-32

Gentlemen:

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

REPORT NUMBER

85-018-01

This supplemental report is submitted to correct the Docket Number on Page 1 of the initial Licensee Event Report forwarded on October 11, 1985. This report has already been reviewed by the Station Nuclear Safety and Operating Committee and Safety Evaluation and Control.

Very truly yours,

R. F. Saunders
Station Manager

Enclosure

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

IE22
11