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NRC Form 368 (9-53)							ISEE EVENT REPORT (LER)						U.S. NUCLEAR REGULATORY COMMISSION APPROVED OMB NO. 3150-0104 EXPIRES: 8/31/86								
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occurred as a result of a low condenser vacuum signal. The low condenser vacuum was created when an operator inadvertantly closed the 4 condenser inlet valves (MOV-CW-106A, B, C, D) while attempting to throttle the 4 condenser outlet valves (MOV-CW-100A, B, C, D) from a fully open position.

Contributing factors in the event were the placement and appearance of the control switches for the valves. Covers have been placed on the inlet valves Control switches for Unit I and Unit 2 to prevent inadvertant operation. 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 operation of the valves in that only one valve is to be operated at a time.

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NRC Form 386A (9-83) LICENSEE EVENT RE	PORT (LER) TEXT CONTINU	OITAL	N	01	AP EX	PROVED O	M8 NO 31	Y CON	INISSION
FACILITY NAME (1)	DOCKET NUMBER (2)	T	LE	R NUMBER (PAGE (3)			
		YEAR		NUMBER	-	NUMBER			
Surry Power Station, Unit I	0 5 0 0 2 8 0	8 5	_	0 1 8	-	010	02	OF	0 3
TEXT (If more space is required, use additional NRC Form 386A's) (17)									
TURBINE TRIP/RX TR	IP DUE TO LOW COND	ENSE	R	VACUL	JM				

POW 28-06-01

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, B, 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.

NRC Form 386A (9-63) LICENSEE EVENT R	EPORT (LER) TEXT CONTINU	U.S. NUCLEAR D UATION APPROVE EXPIRES	REGULATORY COMMISSION D. OMB NO. 3150-6104 8/31/86
FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)	PAGE (3)
		YEAR SEQUENTIAL REVISI NUMBER NUMB	ON
Surry Power Station, Unit I	0 5 0 0 2 8 0	815 - 011 8-01	0 0 3 OF 0 3
TEXT (# more space is required, use additional NRC Form 368.4's) (17)			
TURBINE TRIP/RX T	RIP DUE TO LOW COND	ENSER VACUUM	

The feed pump trip was due to the failure of its recirc. valve, FCV-FW-150A, (EIIS 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 inadvertant 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. value's internals and SOV were replaced and its operator is schoduled 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 occurrance.

7. Generic Implications

None.

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VIRGINIA ELECTRIC AND POWER COMPANY

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

October 11, 1985

U.S. Nuclear Regulatory Commission Document Control Desk 016 Phillips Building Washington, D. C. 20555 Serial No: 85-025 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 for Surry Unit 1.

REPORT NUMBER

85-018-00

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 Station Manager

Enclosure

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

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