

NRC Form 366
(9-83)U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Surry Power Station, Unit No. 1										DOCKET NUMBER (2) 0 5 0 0 0 2 8 0				PAGE (3) 1 OF 03	
TITLE (4) Degraded Feedwater Isolation Function															
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	3	28	84	007	00	0	4	27					0 5 0 0 0		
OPERATING MODE (9) N			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)												
POWER LEVEL (10) 1 0 0			20.402(b)			20.405(c)			50.73(a)(2)(iv)			73.71(b)			
			20.405(a)(1)(i)			50.36(c)(1)			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)(ix)									
LICENSEE CONTACT FOR THIS LER (12)															
NAME J. L. Wilson, Station Manager										TELEPHONE NUMBER AREA CODE 804 357-3184					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)															
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS						
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR	
YES (If yes, complete EXPECTED SUBMISSION DATE)										NO					

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

On March 28, 1984 with Unit No. 1 at 100% power, the instrument technicians determined that the Main Feed Reg. Valves would not have tripped closed upon receipt of a Feedwater Isolation signal.

The main feed pumps would have tripped in the event of a Safety Injection and would have provided the necessary feedwater isolation function. The FRVs would not have closed because the instrument air tubing from the FRVs' actuator had been connected to the wrong port of the 3-way solenoid valves (SOV) that de-energize to vent air and thereby allow the FRVs to close rapidly.

The primary cause of the incorrect air arrangement was that work was performed on safety related equipment without an approved procedure and/or Engineering Work Request.

The instrument air tubing arrangement was corrected and the ability of the SOVs to vent air from the FRV actuator when the SOVs are de-energized was tested.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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Surry Power Station	05000280	84	007	00	02	OF 03

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

1.0 Event Description

On March 28, 1984 with Unit No. 1 at 100% power, the instrument technicians determined that the Main Feed Reg. Valves (FCV-1478, 1488, 1498) would not have tripped closed upon receipt of a Feedwater Isolation signal.

Post maintenance testing on the Main Feed Reg. Valves (FRV) for Unit No. 2, which was in cold shutdown condition, revealed that the instrument air tubing arrangement was such that it prevented the FRVs from performing their safety function. Since Unit No. 1 had undergone the same maintenance during a previous outage (Feb. 27 - Mar. 11, 1984), the Unit No. 1 FRVs were checked and found to have the same problem. Maintenance that had been performed on the Unit No. 1 & 2 FRVs included the relocation and retubing of safety-related and non safety-related instrument and controls.

2.0 Safety Consequences and Implications

The closure of the FRVs following a reactor trip or a Safety Injection, minimizes excessive primary plant cooldown in the event of a Main Steam Line Break. The main feed pumps would have tripped in the event of a Safety Injection and would have provided the necessary feedwater isolation function. Other safety related systems remained functional and plant parameters remained within the bounds of the accident analysis. Therefore, this event did not constitute an unreviewed safety question nor affect the health and safety of the public.

3.0 Cause

The FRVs would not have closed because the instrument air tubing from the FRVs' actuator had been connected to the wrong port of the 3-way solenoid valves (SOV) that de-energize to vent air and thereby allow the FRVs to close rapidly. The primary cause of the incorrect arrangement was that work was performed on safety-related equipment without an approved maintenance procedure and/or Engineering Work Request. In addition, the testing procedure that was specified to be used following maintenance did not test the safety-related function (trip close) of the FRVs. Station management had requested that a functional test of the automatic closure feature be performed and to be initiated from the protection relay racks. The instrument technicians energized the associated SOVs and verified that the FRV would open. They then de-energized the SOVs by lifting leads, with the FRV in the closed position, hence, the capability of the SOVs to vent air was not verified. However, the statement in the completed maintenance request did not mention this method of testing.

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

4.0 Immediate Corrective Action

Administrative controls were placed into effect immediately to ensure that the main feed pumps would be secured upon receipt of a reactor trip or safety injection signal.

5.0 Additional Corrective Action

The instrument air tubing arrangement was corrected and the ability of the SOVs to vent air from the FRV actuator when the SOVs are de-energized was tested.

6.0 Actions Taken to Prevent Recurrence

The proper classification of equipment will be emphasized and all maintenance and operations personnel will be re-instructed regarding requirements for performing maintenance on safety-related systems or components.

The FRV functional testing procedure will be revised to include the testing of the safety related function.

7.0 Generic Implications

None.

Vepco

VIRGINIA ELECTRIC AND POWER COMPANY

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

APR 27 1984

Serial No: 84-017

Docket No: 50-280

License No: DPR-32

U.S. Nuclear Regulatory Commission
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Gentlemen:

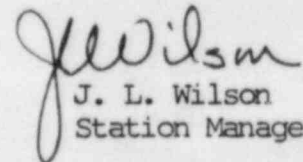
Pursuant to Surry Power Station Technical Specifications, the Virginia Electric and Power Company hereby submits the following Licensee Event Report for Surry Unit 1.

REPORT NUMBER

84-007-00

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,


J. L. Wilson
Station Manager

Enclosure

cc: Mr. James P. O'Reilly
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Atlanta, Georgia 30303

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