

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) SURREY POWER STATION, UNIT 1	DOCKET NUMBER (2) 0 5 0 0 0 2 8 0	PAGE (3) 1 OF 0 3
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TITLE (4)

Inadvertent Safety Injection

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	0 1	8 4	8 4	0 0 5	0 0 0	0 3	2 9	8 4		0 5 0 0 0
										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) 0 0 0		20.402(b)		20.405(e)	<input checked="" type="checkbox"/>	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 8 0 4 3 5 7 - 3 1 8 4
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15) MONTH DAY YEAR 1 1 1
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On March 1, safety injection signals were initiated as a result of completing 3 of 4 high containment pressure signals and completing 2 of 3 high steam flow signals.

At the time of the event, operators were performing MOP 26.9 (Removal of vital bus SOLA transformer I-I) when vital bus I and III were mistakenly cross connected out of phase. This resulted in a voltage transient on vital bus I and III, which caused spurious containment high pressure and high steam flow signals. The voltage transient in vital bus I and III is believed to have resulted in tripping 2 of 4 containment high pressure relays. Since channel II was in trip prior to the voltage transient, the 3 of 4 matrix for containment high pressure was completed and safety injection was initiated. Also, the power transient resulted in resetting the high steam flow low Tavg or low steam pressure safety injection circuitry. Since high steam flow signals were also generated with voltage transient and both low header pressure low Tavg were present, safety injection was actuated.

The operator was re-instructed in the correct manner of removing the vital bus SOLA transformer. Labels have been made for both unit's manual transfer switches. Fan 58B iris damper shall be run in the automatic mode.

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PDR ADCK 05000280
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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
SURRY POWER STATION, UNIT 1	0 5 0 0 0 2 8 0	8 4	— 0 0 5	— 0 0	0 2	OF	0 3

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

1.0 Description of the Event

On March 1, 1984, at 2135 hours, with unit 1 at Cold Shutdown, Safety Injection Signals were initiated as the result of completing 3 of 4 High Containment Pressure Signals (EIIS No. PT) and completing 2 of 3 High Steam Flow signals (EIIS No. FT).

At the time of the event, operators were performing MOP 26.9 (Removal of Vital Bus SOLA Transformer I-I) when vital buses I and III were mistakenly cross connected out of phase. This resulted in a voltage transient on vital bus I and III, which caused spurious containment high pressure and high steam flow signals. The vital bus synchronizing switch for vital buses II-IV had been used in error rather than the synchronizing switch for the buses being crosstied.

Prior to receiving the safety injection signals, high containment pressure channel II had locked in as a result of normal containment pressure during outage purging. In addition, filter exhaust fan 1-VS-F-58B (EIIS NO. Fan) was purging containment and exhaust fan 1-VS-F-58A was out of service for maintenance.

Immediately following the safety injection actuation, operators noted all control and protection systems to function properly except for an unplanned stopping of exhaust fan 1-VS-F-58B. Operators followed appropriate plant procedures and quickly identified the cause of the safety injection. Dampers (EIIS NO. DMP) were aligned for containment purge and fan 1-VS-F-58B was started from the control room.

2.0 Safety Consequences and Implications

During cold shutdown, there is a negligible amount of energy stored in the reactor coolant system; therefore an accident comparable in severity to the design basis accident is not possible and safety injection is not required. This event did not constitute an unreviewed safety question nor was the health and safety of the public affected.

The automatic start of ventilation fans 58A, 58B and alignment of auxiliary ventilation dampers following a safety injection is intended to provide standby capability for removal of particulate and iodine contamination from safety related areas. This also limits Emergency Core Cooling System Equipment area temperatures to the original design temperatures in the event of a LOCA.

Since damper alignment was completed and the fan was re-started from the control room, the health and safety of the public were not affected.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

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

3.0 Cause

Actuation of safety injection was caused by a voltage transient induced on vital buses I and III when they were inadvertently cross connected out of phase. The voltage transient in vital bus I and III is believed to have resulted in tripping 2 of 4 containment high pressure relays. Since channel II was in trip prior to the voltage transient, due to normal containment pressure during outage purging, the 3 of 4 matrix for containment high pressure was completed and safety injection was initiated.

In addition, the power transient resulted in momentarily spiking Tav_g which reset the high steam flow low Tav_g or low steam pressure safety injection circuitry. Since high steam flow signals were also generated with the voltage transient and both low header pressure and low Tav_g were present, safety injection was actuated.

Vital Buses I and III were cross connected because a licensed operator failed to recognize which vital bus system was being placed in service. This was due in part to poor labeling of the Bus Transfer switches.

The unplanned stopping of Fan 1-VS-F-58B was due to low differential pressure caused by the fan inlet damper iris being in manual control. This limited the inlet diameter and did not allow compensation for damper re-positioning following safety injection.

4.0 Immediate Corrective Action

Operators performed all appropriate emergency procedures. No change in reactor coolant system level was observed.

5.0 Additional Corrective Actions

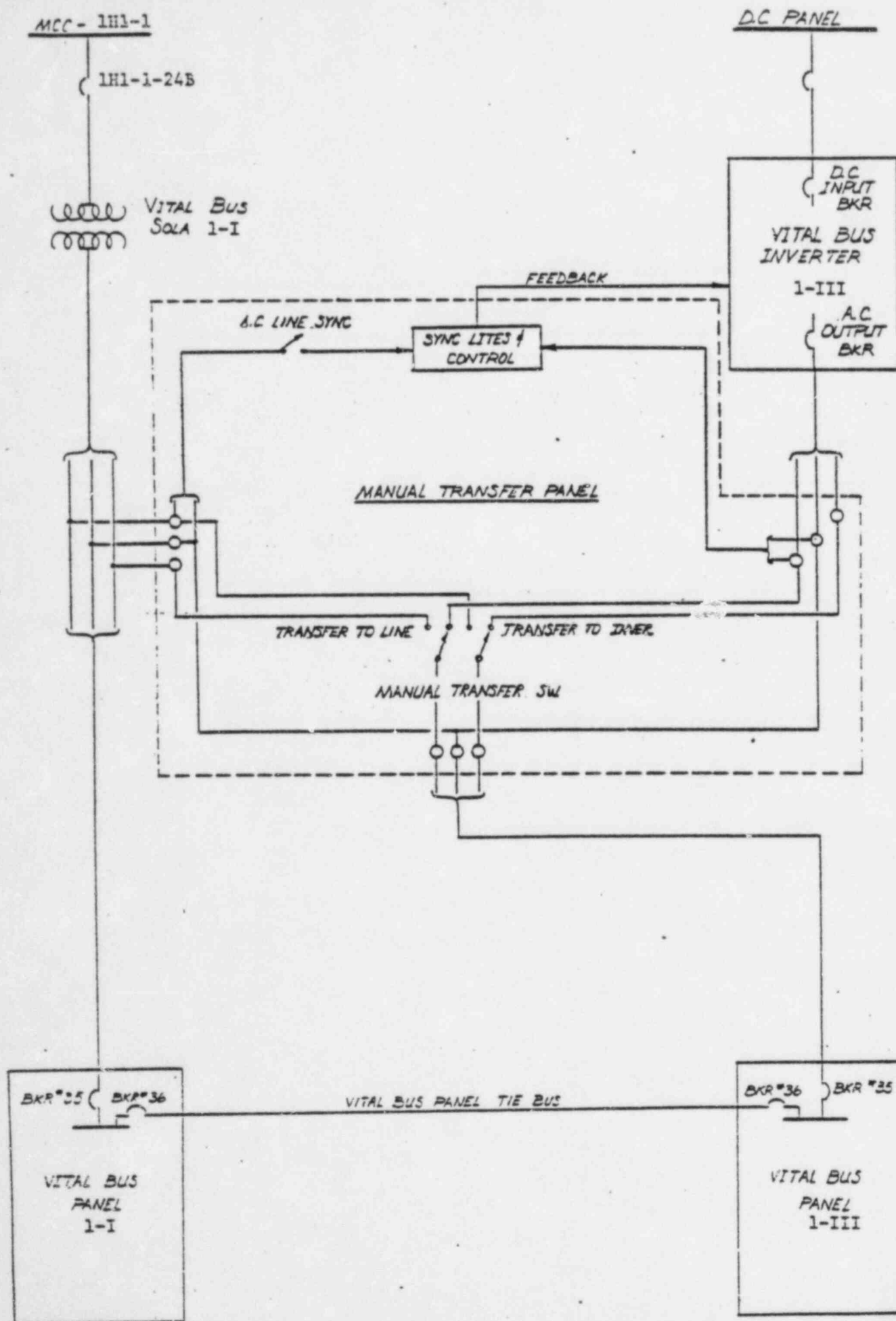
Labels have been made for the vital bus manual transfer switches. The tripping of 1-VS-F-58B was verified to have been caused by low fan differential pressure. Dampers were aligned for containment purge and fan 1-VS-F-58B was started from the control room.

6.0 Action Taken to Prevent Recurrence

The operator was re-instructed in the correct manner of removing the vital bus SOLA transformer. Fan 1-VS-F-58B iris damper shall be run in the automatic mode.

7.0 Generic Implications

Vital Bus manual transfer switches for unit 2 have been labeled.



Vepco

VIRGINIA ELECTRIC AND POWER COMPANY

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

MAR 30 1984

Serial No: 84-010

Docket No: 50-280

License No: DPR-32

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

Gentlemen:

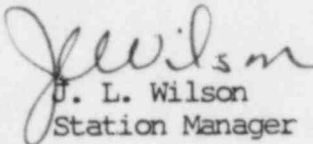
Pursuant to Surry Power Station Technical Specifications, the Virginia Electric and Power Company hereby submits the following Licensee Event Report for Surry Unit 1.

REPORT NUMBER

84-005-00

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
Regional Administrator
Suite 2900
101 Marietta Street, NW
Atlanta, Georgia 30303

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