

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Surry Power Station, Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 2 8 1	PAGE (3) 1 OF 0 3
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TITLE (4)
Discrepancies with EQ Components

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 5	0 1	8 5	8 5	0 0 4	0 0	0 5	3 1	8 5			0 5 0 0 0
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THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

OPERATING MODE (9) N	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)	
	20.405(a)(1)(i)	50.38(c)(1)	50.73(a)(2)(v)	73.71(c)	
	20.405(a)(1)(ii)	50.38(c)(2)	<input checked="" type="checkbox"/> 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)		
POWER LEVEL (10)		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME R. F. Saunders, Station Manager	TELEPHONE NUMBER AREA CODE 8 1 0 4 3 1 5 1 7 1 - 1 3 1 1 8 1 4
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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

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

ABSTRACT

With Unit No. 2 in a Refueling Shutdown Condition, discrepancies with Rosemount Model II53 transmitters and CONAX environmental seal assemblies were noted. The identified discrepancies were: (1) degraded terminal screws used to terminate the field wiring inside the Rosemount transmitters, and (2) CONAX seal assemblies that did not provide a positive environmental seal.

The failure of the terminal screws was due to overtightening the hollow (bored) screws. The hollow screws had been installed in the transmitters by the vendor. The CONAX connectors had been improperly installed due to inadequate installation procedures.

Solid terminal screws were installed in the EQ transmitters located in both containments. CONAX connector discrepancies were corrected and the installation procedures were modified.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

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

DISCREPANCIES WITH EQ COMPONENTS1. Description of the Event

With Unit No. 2 in a Refueling Shutdown Condition, discrepancies with Rosemount Model II53 transmitters and CONAX environmental seal assemblies were noted. The identified discrepancies were: (1) degraded terminal screws used to terminate the field wiring inside the Rosemount transmitters, and (2) CONAX seal assemblies that did not provide a positive environmental seal.

Terminal Screws

Destructive testing conducted on site, indicated that the screw heads would shear with low torque applied. The terminal screws are of a hollow (bored) design. In addition to the field wiring terminals, each transmitter has 2 test terminals to allow the measurement of loop current during transmitter calibration. The test terminal screws are bored to accept a miniature banana plug.

CONAX Connectors

Several CONAX connectors were found improperly installed which allowed moisture to accumulate inside transmitters. Specific problems noted were: (1) the sealing ferrule was improperly located on the feed thru sub-assembly, (2) sealing ferrule installed backwards, and (3) the seal body sub-assembly hand tight.

Approximately 140 CONAX connectors (unit 1 and 2) were inspected and 9 connectors would not have provided a positive seal. Evidence of inleakage (moisture or snubber oil) was found in 5 transmitters. Approximately 30 connectors may not have provided a positive seal.

2. Safety Consequences and Implications

The affect of the degraded terminal screws and CONAX connectors would have been erratic transmitter output or loss of circuit continuity. Depending upon the specific component (transmitter or valve) involved, the degradation could have resulted in spurious alarms or containment isolation valve closure, partial ESF signals, or detected during routine channel checks and calibrations.

3. CauseTerminal Screws

The hollow style terminal screws, when torqued to an excessive value, have sufficient tensile loading to cause them to fail.

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

Conax CONNECTORS

The CONAX Connectors were improperly installed due to inadequate installation procedures. CONAX connectors had been installed under the Design Change program.

4. Corrective ActionsTerminal Screws

Replacement terminal screws (solid style) were obtained from Rosemount and were installed in the Environmentally Qualified transmitters located in Unit 1 and 2 containments. Solid screws will be installed in the remaining Rosemount transmitters.

CONAX Connectors

A detailed inspection program was developed and conducted for both Units 1 and 2 and identified discrepancies were corrected.

5. Actions Taken to Prevent Recurrence

The CONAX connector installation procedure for open Design Change Packages has been modified to insure the correct placement of the sealing ferrule. Other replacement and repair procedures for CONAX connectors will be modified.

6. Generic Implications

Rosemount provides the transmitters to licensees with the hollow style screws for both the field wiring and test terminals.



VIRGINIA POWER

May 31, 1985

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

Serial No: 85-013

Docket No: 50-281

License No: DPR-37

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 2.

REPORT NUMBER

85-004-00

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
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Atlanta, Georgia 30323

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