

**Virginia Electric and Power Company
Surry Power Station
P. O. Box 315
Surry, Virginia 23883**

June 22, 1992

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

Serial No.: 92-422
SPS:VS
Docket Nos.: 50-280
50-281
License Nos: DPR-32
DRP-37

Dear Sirs:


Pursuant to Surry Power Station Technical Specifications, Virginia Electric and Power Company hereby submits the following updated Licensee Event Report applicable to Surry Power Station Units 1 and 2.

REPORT NUMBER

50-280/92-003-01

This report has been reviewed by the Station Nuclear Safety and Operating Committee and will be forwarded to the Management Safety Review Committee for its review.

Very truly yours,


M. R. Kansler
Station Manager

Enclosure

cc: Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

M. W. Branch
NRC Senior Resident Inspector
Surry Power Station

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Surry Power Station, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 2 8 0	PAGE (3) 1 OF 0 5
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TITLE (4)
Incomplete Engineered Safety Features Testing Due to Procedure Deficiency

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	2	1 4 9 2	9 2	0 0 3	0 1	0 6	2 2	9 2	Surry Unit 2		0 5 0 0 0 2 8 1
											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 9 0	20.402(b)			20.405(c)			50.73(a)(2)(iv)			73.71(b)		
	20.405(a)(1)(i)			50.38(e)(1)			50.73(a)(2)(v)			73.71(c)		
	20.405(a)(1)(ii)			50.38(e)(2)			50.73(a)(2)(vii)			OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
	20.405(a)(1)(iii)			X			50.73(a)(2)(i)					
	20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(viii)(A)					
20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(viii)(B)			50.73(a)(2)(x)			

LICENSEE CONTACT FOR THIS LER (12)

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

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)	X	NO	EXPECTED SUBMISSION DATE (15)

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

On February 14, 1992 at 1343 hours, with Unit 1 and Unit 2 at 90% and 100% reactor power, respectively, it was determined that certain Engineered Safety Feature (ESF) system logic actuation relays associated with automatic initiation of safety injection and main steam line isolation were not being fully tested in accordance with Technical Specifications (TS). On May 21, 1992 with Unit 1 and Unit 2 at 100% reactor power it was determined that the Pressurizer Power Operated Relief Valve (PORV) position indication channel calibration procedures did not include actuation verification of the associated alarm. For these events, the affected instrumentation was declared inoperable and the appropriate Limiting Conditions for Operation (LCOs) were entered in accordance with TS. Actions were promptly initiated to test the affected instrumentation. Following successful testing, the LCOs were exited. Since the instrumentation was verified operable, no safety implications were posed by the events. The events occurred because of procedural deficiencies in properly or completely specifying test methodology. The procedural deficiencies were identified during upgrades of certain surveillance test procedures and assessments of surveillance testing by Engineering and Quality Assurance. A programmatic review of TS required surveillances, including engineering reviews, procedure upgrades and Quality Assurance activities is being undertaken to identify other surveillance deficiencies. These events are being reported pursuant to 10CFR50.73(a)(2)(i)(B).

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TEXT CONTINUATION**

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

1.0 DESCRIPTION OF THE EVENT

On February 14, 1992 at 1343 hours, with Unit 1 and Unit 2 at 90% and 100% reactor power, respectively, it was determined that certain Engineered Safety Feature (ESF) system logic actuation relays [EIIS-JE,RLY] associated with automatic initiation of safety injection and main steam line isolation were not being fully tested in accordance with Technical Specification (TS) Table 4.1-1, Item 26. Specifically, actuation of the relays which energize on low reactor coolant system average temperature were not being verified. These procedural errors were identified during the revisions to certain surveillance test procedures which were being performed as part of the Surry Procedure Upgrade Program.

Automatic initiation of safety injection and main steam isolation will occur when a high steam flow condition in two of three steam lines exists coincident with either a low steam line pressure greater than or equal to 525 psig in two of three steam lines or a low average reactor coolant system (RCS) temperature greater than or equal to 543 F in two of three RCS loops. TS Table 3.7-2, Item 1e, and Table 3.7-3, Item 2a, require that a minimum of two low RCS average temperature channels must be operable. TS Table 4.1-1, Item 26 requires that Logic Channel Testing, consisting of a channel functional test, be performed monthly.

In this particular instance, the monthly surveillance test procedures verified continuity of the low average RCS temperature relay coils, but did not verify actuation of the relays. This is contrary to the Technical Specification definition of a channel functional test which requires verification of trip initiating action.

On May 21, 1992, with Unit 1 and Unit 2 at 100% power, it was determined that the Reactor Coolant System (RCS) {EISS-AB} Pressurizer {EISS-PZR} Power Operated Relief Valve (PORV) {EISS-PCV} position indication channel calibration procedures did not include actuation verification of the associated alarm. The PORVs are equipped with two limit switches, but the alarm is only actuated from one of the limit switches. The procedure deficiencies were identified during a Quality Assurance audit at North Anna Power Station. Subsequently, it was determined that Surry Power Station's procedures also contained the same deficiencies. As a result, the channels were not being fully tested. In this particular instance, the alarm actuation was not being verified as part of the channel calibration. This condition is believed to have existed since PORV limit switch replacement in 1987. The alarm actuation can only be verified by stroking the PORV which is, at a minimum, performed during refueling outages.

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The surveillance test procedures which govern PORV stroking did not include instructions for documenting the appropriate alarm actuation.

Technical Specifications (TS) surveillance 4.1.B.1.b requires that each PORV accident monitoring instrumentation channel shall be demonstrated operable by performance of channel calibrations at a minimum of each refueling as shown in Table 4.1-2. The definition in TS 1.G.3 states channel calibration shall encompass the entire channel including equipment action, alarm, or trip and shall be deemed to include the channel functional test. The surveillance test procedures which govern PORV stroking did not include adequate instructions to document alarm actuation.

These events are being reported pursuant to 10CFR50.73(a)(2)(i)(B).

2.0 SIGNIFICANT SAFETY CONSEQUENCES AND IMPLICATIONS

Following discovery that the trip initiating actuation of the relays had not been verified, the low average RCS temperature relays were tested and determined to be operable. Additionally, the high steam flow low steam line pressure protection function, for which the high steam flow/low average temperature protection serves as a backup, was being tested and verified operable in accordance with Technical Specification requirements.

Although the surveillance test procedures for the PORVs did not include verification of the alarm, additional indications were available to alert Control Room personnel to the actuation of a PORV. These include low pressurizer pressure indication/alarm, backup heater operation, increasing level, temperature and pressure in the pressurizer relief tank, high temperatures downstream of the PORVs and two open indications from the PORV position indicator lights. This event posed no significant safety implications because the alarm is not required for the Pressurizer PORVs to perform their design functions and subsequent testing demonstrated that the associated alarms actuated as required.

Therefore, the health and safety of the general public was not affected at any time due to these events.

3.0 CAUSE OF THE EVENT

These events were caused by procedural deficiencies. An improper test methodology had been specified during the original preparation of the test procedures. The weakness in the methodology was identified during the Surry Procedure Upgrade Program.

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The failure to verify the PORV alarm actuation was caused by a procedural deficiency that resulted in a failure to satisfy the channel calibration surveillance requirements. When the PORV indications were originally installed, the alarm was not considered part of the channel.

4.0 IMMEDIATE CORRECTIVE ACTION(S)

The affected channels were declared inoperable, and a LCO requiring hot shutdown within six hours and cold shutdown within 30 hours was entered for each Unit in accordance with TS Tables 3.7-2 and 3.7-3 at 1343 on February 14, 1992. Additionally, a Station Deviation Report was submitted.

On May 21, 1992, at 2310 hours, Units 1 and 2 PORV indication channels were declared inoperable and a forty-eight hour action statement was entered in accordance with TS 3.7.F.2.

5.0 ADDITIONAL CORRECTIVE ACTION(S)

The test procedures were changed and actuation testing of the low RCS average temperature relays was performed satisfactorily. This allowed Unit 1 and Unit 2 to exit the LCOs at 1413 and 1434, respectively, on February 14, 1992.

Surveillance test procedures governing the channel functional test of the PORV position indications were changed to include testing of PORV alarm actuations. Units 1 and 2 Pressurizer PORV alarm actuation verifications were performed satisfactorily. The PORV indication channels were returned to service, and the action statements were exited on May 22, 1992 at 1420 hours for Unit 1 and 1516 hours for Unit 2.

6.0 ACTIONS TO PREVENT RECURRENCE

Surveillance test procedures governing the channel calibration test of the PORV position indications will be changed to include testing of PORV alarm actuations.

One event was identified though the Surry Procedure Upgrade Program. To improve surveillance programs, a structured Review of TS required surveillances is being conducted for both stations. This structured program includes Engineering Reviews, Procedure Upgrades and Quality Assurance Audit activities. This program will continue until the TS required surveillances and associated procedures have been reviewed. Any additional discrepancies will be appropriately dispositioned, categorized and reported in accordance with the Station's deviation reporting and corrective action programs.

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7.0 SIMILAR EVENTS

LER S2-91-007-00: Failure To Full Flow Test 2-RH-47 Due To Procedure Deficiency.

8.0 ADDITIONAL INFORMATION

None.