

VIRGINIA ELECTRIC AND POWER COMPANY
Surry Power Station
P.O. Box 315
Surry, Virginia 23883

October 2, 1989

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

Serial No.: 89-041
Docket No.: 50-280
50-281
License No.: DPR-32
DPR-37

Gentlemen:

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

REPORT NUMBER

89-038-00

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,



M. R. Kansler
Station Manager

Enclosure

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

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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, Units 1 and 2** DOCKET NUMBER (2) **0 5 0 0 0 2 8 0** PAGE (3) **1 OF 0 4**

TITLE (4) **Unplanned Engineered Safety Features Component Actuation, Auto Start of #3 EDG While Attempting to Shut Down Due to Existing Hi Hi CLS Signal**

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)
09	03	89	89	038	00	10	02	89		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) 1 0 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME **M. R. Kansler, Station Manager** TELEPHONE NUMBER **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) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

On September 3, 1989 at 2048 hours, with Unit 1 at 100% power and Unit 2 at cold shutdown, while attempting to shut down the #3 Emergency Diesel Generator (EDG) following its operation in support of a special test, the EDG automatically started when its control switch was placed from the "exercise" to the "auto" position. The automatic start was due to an existing hi hi Consequence Limiting Safeguards (CLS) signal that had been initiated for the special test. During the recent outages, several events have occurred during special testing. These events will be compiled and analyzed, and the administrative procedure governing the preparation and conduct of special tests will be revised to incorporate the lessons learned. This event was reported to the Nuclear Regulatory Commission as an unplanned Engineered Safety Features component actuation per 10CFR50.72(b)(2)(ii).

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

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FACILITY NAME (1) Surry Power Station, Units 1 and 2	DOCKET NUMBER (2) 0 5 0 0 0 2 8 0 8 9	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

1.0 Description of the Event

On September 3, 1989 at 2048 hours, with Unit 1 at 100% power and Unit 2 at cold shutdown, while attempting to shut down the #3 Emergency Diesel Generator (EDG) (EIIS-DG) following its operation in support of a special test, the EDG automatically started when its control switch was placed from the "exercise" to the "auto" position.

The special test was designed to verify the sequencing of loads onto the Unit 2 "J" (2J) emergency bus (EIIS-EK) following the initiation of an Engineered Safety Features (ESF) (EIIS-JE) signal in coincidence with an undervoltage condition on the emergency bus. The #3 EDG automatically started and loaded as planned upon the initiation of the test when both trains (A & B) of the hi hi Consequence Limiting Safeguards (CLS) pushbuttons were depressed while simulating an undervoltage condition on the 2J bus. After verifying the load sequencing, the hi hi CLS reset pushbuttons for both trains were depressed in accordance with the test procedure. However, the hi hi CLS signal did not reset, and efforts were directed to determine what immediate actions were required and why the signal would not reset. A station deviation was filed and the step in the special test procedure was marked not applicable. During this time, the one hour minimum EDG loaded operation time had elapsed and operations personnel attempted to secure the EDG in accordance with the shutdown procedure. The EDG stop pushbuttons were depressed and the engine speed decreased from 900 to approximately 400 rpm as designed. However, since the "B" hi hi CLS signal had not been reset, a signal to automatically start the #3 EDG still existed. Consequently, when the operator placed the selector switch from the "exercise" to the "auto" position, the EDG speed increased to 900 rpm. A four hour non-emergency report was made to the Nuclear Regulatory Commission of an unplanned ESF component actuation per 10CFR50.72(b)(2)(ii).

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YEAR	SEQUENTIAL NUMBER	REVISION NUMBER

TEXT (If more space is required, use additional NRC Form 388A's) (17)

2.0 Safety Consequences and Implications

The #3 EDG is designed to supply emergency power to either the Unit 1 (1J) emergency bus or the Unit 2 (2J) emergency bus. The capability of the #3 EDG to perform this function was not affected throughout the duration of this event. Unit 2 was at cold shutdown, and CLS is not required in this mode. Therefore, the health and safety of the public were not affected.

3.0 Cause

The personnel involved with the test failed to adequately assess the impact of the hi hi CLS signal on the operation of the EDG. A contributing factor was incorrect procedural handling of the step in the test procedure requiring verification for CLS reset.

Following the failure of the signal to reset, the operations shift supervisor and test director discussed actions that would be required to realign the plant to normal status. Operation of the EDG was discussed and a decision was made to synchronize the EDG to the electrical grid per the appropriate procedure to satisfy the requirement for the minimum full load operating time. Shutdown of the EDG after full load operation was not discussed at this time. The step providing for verification of the reset was marked not applicable, the nonconforming condition noted in the test critique, and a station deviation along with a work request was submitted. Marking the step not applicable allowed the test to proceed. Operators later initiated the EDG shutdown after the minimum full load operation time had elapsed per the appropriate procedures without any further discussion with the test director.

The initial failure of the hi hi CLS signal to reset was due to a loose screw on a terminal block in the hi hi CLS circuitry.

The procedural action of marking the step not applicable should have been handled by a procedure deviation. The additional review provided by the procedure deviation process may have aided in more completely diagnosing the situation.

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TEXT (If more space is required, use additional NRC Form 368A's) (17)

4.0 Immediate Corrective Action(s)

When the hi hi CLS signal would not reset, the impact on plant systems was assessed and efforts were directed to determine the cause. Following the automatic start of the EDG, operators verified that the cause was due to the hi hi CLS signal.

5.0 Additional Corrective Action(s)

The loose terminal screw was tightened, the hi hi CLS signal was reset, and the EDG was successfully shut down and returned to the automatic mode in accordance with the appropriate procedures.

6.0 Action(s) Taken to Prevent Recurrence

During the recent outages, several events have occurred during special testing. These events will be compiled and analyzed, and the administrative procedure governing the preparation and conduct of special tests will be revised to incorporate the lessons learned.

The loose terminal screw is considered an isolated event, therefore, no further actions are required.

7.0 Similar Events

LERs 1-88-013 and 2-89-002 described events where previously unrecognized starting logic signals resulted in the unplanned actuation of the EDGs during the performance of EDG testing procedures. Corrective actions taken as a result of these events would not have prevented the September 3, 1989 event.

8.0 Manufacturer/Model Number(s)

N/A.