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November 19, 1990

THE SOUTHWESTERN ELECTRIC SYSTEM

W. G. Hairston, III
Senior Vice President
Nuclear Operations

ELV-02268
070F

Docket No. 50-425

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

Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT
LICENSEE EVENT REPORT
MISSED PROCEDURE STEP RESULTS IN INADVERTENT
OPERATION OF ESF COMPONENTS

In accordance with 10 CFR 50.73, Georgia Power Company hereby submits the enclosed report related to an event which was discovered on October 26, 1990.

Sincerely,


W. G. Hairston, III

WGH, III/NJS/gm

Enclosure: LER 50-425/1990-015

xc: Georgia Power Company

Mr. C. K. McCoy
Mr. W. B. Shipman
Mr. P. D. Rushton
Mr. R. M. Odom
NORMS

U. S. Nuclear Regulatory Commission
Mr. S. D. Fbnetter, Regional Administrator
Mr. D. S. Hood, Licensing Project Manager, NRR
Mr. B. R. Bonser, Senior Resident Inspector, Vogtle

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) **VOGTLE ELECTRIC GENERATING PLANT - UNIT 2** DOCKET NUMBER (2) **05000425** PAGE (3) **1** OF **4**

TITLE (4) **MISSED PROCEDURE STEP RESULTS IN INADVERTENT OPERATION OF ESF COMPONENTS**

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQ NUM	REV	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
10	26	90	90	015	00	11	19	90			05000
											05000

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR (11)

OPERATING MODE (9)	20.402(b)	20.405(c)	X	50.73(a)(2)(iv)	73.71(b)
5	20.405(a)(1)(i)	50.36(c)(1)		50.73(a)(2)(v)	73.71(c)
POWER LEVEL	20.405(a)(1)(ii)	50.36(c)(2)		50.73(a)(2)(vii)	OTHER (Specify in Abstract below)
0	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(e)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
R. M. ODOM, NUCLEAR SAFETY AND COMPLIANCE	AREA CODE: 404, NUMBER: 826-3201

COMPLETE ONE LINE FOR EACH FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORT TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORT TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

ABSTRACT (16)

On 10-26-90, with the Unit in Mode 5 (Cold Shutdown), an Instrumentation and Controls (I&C) crew was assigned to restore Train B of the Solid State Protection System (SSPS). This was to be performed per the "Restore to Service" section of procedure 24831-2, "Reactor Trip and ESF Logic Response Time Test." After initiation of the task, Control Room operators noted that several Engineered Safety Feature (ESF) components had changed positions. At this point, the restoration was stopped and subsequent investigation revealed the I&C crew had missed a step which required restoration of blocks and reset of ESF actuation signals, before the removal of jumpers from the SSPS slave relay output contacts.

The involved I&C personnel have been counseled regarding their failure to follow procedure. Also, procedures 24831-1/2 will be revised to require sign-off for performance of the step that was missed.

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TEXT

A. REQUIREMENT FOR REPORT

This report is required per 10 CFR 50.73 (a)(2)(iv) because unplanned situations of Engineered Safety Feature (ESF) components occurred.

B. UNIT STATUS AT TIME OF EVENT

Unit 2 was in Mode 5 (Cold Shutdown) with the reactor coolant loops filled and a bubble established in the pressurizer. Reactor coolant temperature and pressure were approximately 180 degrees Fahrenheit and 350 psig, respectively. There was no inoperable equipment which contributed to the occurrence of this event.

C. DESCRIPTION OF EVENT

On 10-26-90, an Instrumentation and Controls (I&C) crew was assigned to restore Train B of the Solid State Protection System (SSPS). This task was to be accomplished per the "Restore to Service" section of procedure 24831-2, "Reactor Trip and ESF Logic Response Time Test." On arrival in the Control Room, the I&C crew requested that the SSPS Train B be taken to "Test." At 0715 CDT, the SSPS Train B was taken to "Test" as requested and the I&C crew then divided up the restoration tables of procedure 24831-2 and began the restoration process. One Georgia Power Company (GPC) I&C technician began repositioning the SSPS bistable card jumpers, while another GPC I&C technician began restoring certain SSPS inputs and a third GPC I&C technician began removing temporary jumpers installed on the SSPS slave relay output contacts. A fourth GPC I&C technician performed independent verification of the repositioning of the bistable card jumpers.

At 0827 CDT, the Unit 2 Balance of Plant (BOP) operator observed a Train B containment isolation valve, located in the reactor coolant normal letdown line, showing dual position indication followed by fully closed indication. A Plant Equipment Operator (PEO) was dispatched to the valve to investigate. Shortly thereafter, another Train B containment isolation valve was observed to have closed and this prompted an investigation to determine what other valves may have changed position. At 0835 CDT, several additional Train B containment isolation valves and several Train B containment ventilation isolation valves were found closed. At this point, the I&C crew was informed of the ESF component operations and the SSPS restoration was discontinued until further investigation could be performed.

D. CAUSE OF EVENT

The root cause of this event was determined to be cognitive personnel error involving a failure to follow procedure. Procedure 24831-2 requires that the restoration steps be performed in sequence rather than in parallel. The removal of the temporary jumpers installed on the SSPS slave relay output contacts was performed out of the sequence as specified by the procedure. Prior to the removal of these jumpers, the procedure required the I&C technician to request the Reactor Operator (RO) to restore

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blocks and reset ESF actuation signals as necessary. The I&C technicians failed to request the RO to perform this step since they did not refer back to the body of the procedure in performing the restoration, but rather relied only on the restoration tables for guidance. Since the slave relays were still actuated as a result of performing the ESF logic response time test, the removal of the jumpers allowed the ESF signals to be sent to the associated plant components. There were no unusual characteristics of the work location that contributed to the failure to follow procedure.

A contributing cause of this event was a misconception that taking the SSPS output relay test panel "Mode Selector" switch to "Test" would prevent any spurious ESF signals from being generated. The apparent mindset of the I&C technicians was that any of the restoration steps could be performed simultaneously as long as this switch was in "Test".

E. ANALYSIS OF EVENT

By the time the SSPS Train B restoration was discontinued, 52 jumpers had been removed from the SSPS slave relay output contacts. A review was conducted of the 52 jumpers that were removed versus the components that operated. The review determined that all ESF components that should have operated under the existing plant conditions did in fact operate. Also, while the operation of the ESF components did create some operator inconvenience (e.g., isolation of reactor coolant normal letdown), no unsafe plant configuration resulted since the components assumed their "safe" position. Based on these considerations, there was no adverse effect on plant safety or public health and safety as a result of this event.

F. CORRECTIVE ACTIONS

1. The involved I&C technicians have been counseled regarding their failure to follow procedure.
2. As a method of providing increased emphasis on the procedure step for restoring blocks and resetting ESF actuation signals, procedures 24831-1/2 will be revised to require the I&C technician to initial off after performance of this step and to also obtain the RO's signature. The respective procedure revisions will occur prior to performance of the next Unit 1/Unit 2 reactor trip and ESF logic response time test.
3. Training will be provided to appropriate I&C and Operations personnel addressing the effects of operation of the SSPS "Mode Selector" test switch on the SSPS slave relays and their outputs.

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G. ADDITIONAL INFORMATION

1. Failed Components Identification
None
2. Previous Similar Events
None
3. Energy Industry Identification System Codes
Engineered Safety Features Actuation System - JE