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SOUTHERN COMPANY
Energy to Serve Your World℠

February 12, 1998

Docket Nos. 50-424, 425

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

LCV-1167

Ladies and Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT
LICENSEE EVENT REPORT 1-98-2
SOLID STATE PROTECTION SYSTEM
SURVEILLANCE TESTING INADEQUATE

Southern Nuclear Operating Company hereby submits a licensee event report for Vogtle Electric Generating Plant in accordance with 10 CFR 50.73 concerning a condition that was determined to be reportable on January 22, 1998.

Please contact this office if you have any questions.

Sincerely,

C. K. McCoy

CKM/TEW/afs

Enclosure: LER 1-98-2

cc: Southern Nuclear Operating Company
Mr. J. B. Beasley, Jr.
Mr. M. Sheibani
NORMS

U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator
Mr. D. H. Jaffe, Senior Project Manager, NRP.
Mr. J. Zeiler, Senior Resident Inspector, Vogtle

IE22

NRC FORM 366 (4-95)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES: 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REQUIRED REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1): Vogtle Electric Generating Plant - Unit 1

DOCKET NUMBER (2): 05000424

PAGE (3): 1 OF 4

TITLE (4): SOLID STATE PROTECTION SYSTEM SURVEILLANCE TESTING INADEQUATE

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 NAME	DOCKET NUMBER(S)
01	22	98	98	002	00	02	12	98	VEGP - UNIT 2	05000425
									FACILITY NAME	05000

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
POWER LEVEL (10)	100	20.2201(b)	20.2203(a)(2)(v)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)
		20.2203(a)(1)	20.2203(a)(3)(i)	50.73(a)(2)(ii)	50.73(a)(2)(x)
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)	50.73(a)(2)(iii)	73.71
		20.2203(a)(2)(ii)	20.2203(a)(4)	50.73(a)(2)(iv)	OTHER
		20.2203(a)(2)(iii)	50.36(c)(1)	50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (include area code)
Mehdi Sheibani, Nuclear Safety and Compliance	AREA CODE 706 826-3209

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

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-space typewritten lines) (16)

On November 14, 1997, it was found that solid state protection system (SSPS) functions may have been inadequately tested. As a precaution, changes were made to the appropriate procedures and testing of circuits for the three functions was completed in both Unit 1 and Unit 2.

Following receipt of information from the vendor, discussions held on January 22 and 23, 1998, determined that some of the untested circuits are solely relied on to initiate a feedwater isolation under certain conditions. Therefore, the failure to previously test these functions represents inadequately performed surveillance testing.

The cause of this event is that the original testing design was inadequate because it did not fully verify proper operation of the SSPS logic circuits. When surveillance testing procedures were initially written during plant startup, these procedures were also deficient.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
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TEXT (If more space is required, use additional copies of NRC Form 366A)(17)

A. REQUIREMENT FOR REPORT

This report is required per 10 CFR 50.73 (a)(2)(i) because the unit operated in a condition prohibited by the Technical Specifications (TS) when surveillance testing was inadequate.

B. UNIT STATUS AT TIME OF EVENT

At the time of the discovery of this event, both Unit 1 and Unit 2 were operating in Mode 1 (power operation) at 100 percent of rated thermal power. Other than that described herein, there was no inoperable equipment that contributed to the occurrence of this event.

C. DESCRIPTION OF EVENT

On November 14, 1997, an instruments and controls assistant team leader (ATL) received E-mail information of a condition that existed at another nuclear plant. This condition concerned inadequate surveillance testing of Westinghouse type solid state protection system (SSPS) functions. Specifically, these were: source range automatic P-10 block, feedwater isolation (FWI) on P-14 steam generator (SG) high-high level, and FWI on safety injection. The ATL believed that testing of these same functions at the Vogtle Electric Generating Plant's SSPS may also be inadequate. The control room was notified at 1500 EST. As a precaution, changes were made to the appropriate procedures and testing of circuits for the three functions was completed in both Unit 1 and Unit 2 by 1744 EST.

Westinghouse was contacted and plant personnel were advised that a letter would be issued to explain this issue. On January 6, 1998, Westinghouse Technical Bulletin #ESBU-TB-97-09-R0 was received. Although the issue was clarified to a degree, it remained unclear if the failure to test these functions represented inadequate surveillance testing. Additional guidance was received at a Westinghouse owners group meeting on January 13 and 14, 1998. During follow-up discussions held on January 22 and 23, 1998, it was determined that at least some of the untested circuits are relied on to provide FWI signals under certain conditions. Therefore, the failure to test these functions represents inadequately performed surveillance testing.

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D. CAUSE OF EVENT

The cause of this event is that the original testing design was inadequate because it did not fully verify proper operation of the SSPS logic circuits. When surveillance testing procedures were initially written during plant startup, these procedures were also deficient.

E. ANALYSIS OF EVENT

Two of the three untested circuits represent inadequately performed surveillances as described below:

1) Upon receipt of a safety injection (SI) signal, a unique FWI signal would not be sent if the untested circuit failed in both trains. However, SI also initiates a P4 reactor trip signal, and this P4 signal will, in turn, initiate the FWI signal. Therefore, the FWI would occur, but at a slightly later time. Per the Westinghouse Technical Bulletin #ESBU-TB-97-09-R0, this additional time delay does not have significant impact on the results of the transient analysis.

2) Upon receipt of a SG high-high water level while less than 50 percent reactor power, a FWI signal would not be sent if the untested circuit failed in both trains. However, the main feedwater pumps would stop, effectively negating the failure of the main feedwater valves to isolate.

Based on these considerations, there has been no adverse affect on plant safety or on the health and safety of the public as a result of this event.

F. CORRECTIVE ACTION

1) Procedures were changed and testing of the circuits for the three functions was completed.

2) The SSPS universal logic boards were evaluated and no similar conditions of untested circuits were found.

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

G. ADDITIONAL INFORMATION

1) Failed Components:
None

2) Previous Similar Events:
None

3) Energy Industry Identification System Code:
Solid State Protection System - JG