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SCE&G®
A SCANA COMPANY

July 14, 2008

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

Dear Sir / Madam:

Subject: VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12
LICENSEE EVENT REPORT (LER 2008-003-00)
INADVERTENT ACTUATION OF THE EMERGENCY DIESEL GENERATOR IN THE EMERGENCY START MODE DUE TO BUS UNDERVOLTAGE

South Carolina Electric & Gas Company (SCE&G), acting for itself and as agent for South Carolina Public Service Authority, hereby submits Licensee Event Report (LER) No. 2008-003-00, for the Virgil C. Summer Nuclear Station (VCSNS). This report documents the actuation of the "A" Emergency Diesel Generator (EDG) in the emergency start mode during post-maintenance testing due to bus undervoltage. This report is submitted in accordance with 10CFR50.73(a)(2)(iv)(A).

Should you have any questions, please call Mr. Bruce Thompson at (803) 931-5042.

Very truly yours,

Dan Dalton for JBA

Jeffrey B. Archie

GR/JBA/dr
Attachment

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NRC FORM 366 (9-2007) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 08/31/2010

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Virgil C. Summer Nuclear Station	05000 395	1 OF 3

4. TITLE

Inadvertent Actuation Of The Emergency Diesel Generator In The Emergency Start Mode Due To Bus Undervoltage

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
05	21	2008	2008	- 3 -	0	07	14	2008		05000
									FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE

Mode 5

10. POWER LEVEL

0%

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*

- ☐ 20.2201(b)
- ☐ 20.2201(d)
- ☐ 20.2203(a)(1)
- ☐ 20.2203(a)(2)(i)
- ☐ 20.2203(a)(2)(ii)
- ☐ 20.2203(a)(2)(iii)
- ☐ 20.2203(a)(2)(iv)
- ☐ 20.2203(a)(2)(v)
- ☐ 20.2203(a)(2)(vi)
- ☐ 20.2203(a)(3)(i)
- ☐ 20.2203(a)(3)(ii)
- ☐ 20.2203(a)(4)
- ☐ 50.36(c)(1)(i)(A)
- ☐ 50.36(c)(1)(ii)(A)
- ☐ 50.36(c)(2)
- ☐ 50.46(a)(3)(ii)
- ☐ 50.73(a)(2)(i)(A)
- ☐ 50.73(a)(2)(i)(B)
- ☐ 50.73(a)(2)(i)(C)
- ☐ 50.73(a)(2)(ii)(A)
- ☐ 50.73(a)(2)(ii)(B)
- ☐ 50.73(a)(2)(iii)
- ☑ 50.73(a)(2)(iv)(A)
- ☐ 50.73(a)(2)(v)(A)
- ☐ 50.73(a)(2)(v)(B)
- ☐ 50.73(a)(2)(v)(C)
- ☐ 50.73(a)(2)(v)(D)
- ☐ 50.73(a)(2)(vii)
- ☐ 50.73(a)(2)(viii)(A)
- ☐ 50.73(a)(2)(viii)(B)
- ☐ 50.73(a)(2)(ix)(A)
- ☐ 50.73(a)(2)(x)
- ☐ 73.71(a)(4)
- ☐ 73.71(a)(5)
- ☐ OTHER

Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER *(Include Area Code)*
Virgil C. Summer Nuclear Station	(803) 931-5042

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED

○ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ◉ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

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

On May 21, 2008 during post-maintenance testing of the "A" Emergency Diesel Generator, the voltage regulator did not respond as expected and control was switched from automatic to manual operation. When this occurred, the output voltage decreased resulting in actuation of the undervoltage relays on electrical bus 1DA. Actuation of these relays resulted in the "A" Emergency Diesel Generator being shifted from the test start mode to the emergency start mode. Bus voltage was immediately restored to normal and the emergency diesel generator response was verified to be appropriate. The plant was shutdown for refueling at the time of this event.

A root cause analysis of this event has been completed. The results of this analysis indicate that the root causes of this event are due to inadequate procedural guidance and training on operation of the voltage regulator in manual control. Corrective actions have been identified to develop procedure enhancements and provide operator training on operation of the voltage regulator with the manual control.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REV NO.	
Virgil C. Summer Nuclear Station	05000 395	2008	- 003	- 00	2 OF 3

NARRATIVE

PLANT IDENTIFICATION

Westinghouse - Pressurized Water Reactor

EQUIPMENT IDENTIFICATION

XEG0001A-E - "A" Emergency Diesel Generator

IDENTIFICATION OF EVENT

At 1704 on May 21, 2008 during Refuel 17, the "A" Emergency Diesel Generator (EDG) was placed in service to support post-maintenance testing. When the voltage regulator was taken from automatic control to manual control the electrical bus voltage decreased. The voltage decrease actuated the undervoltage relays on electrical bus 1DA and the EDG shifted from the test start mode to the emergency start mode. No other equipment changed state. Voltage was restored to normal and the EDG response was verified to be appropriate. The EDG was then unloaded and secured. The EDG change in state is considered to be a valid actuation and a reportable event under 10CFR50.72(b)(3)(iv)(A) and 10CFR50.73(a)(2)(iv)(A).

EVENT DATE

May 21, 2008

REPORT DATE

July 14, 2008

CONDITIONS PRIOR TO EVENT

Mode 5, 0% Power

DESCRIPTION OF EVENT

Post-maintenance testing was being performed on the "A" EDG to verify proper operation of a new speed governing system. During this testing when the EDG was loaded and paralleled to the grid, a voltage regulator adjustment was made, but the response was not as expected. Electrical bus 1DA was then isolated from the grid with the EDG carrying the bus load to further investigate the voltage regulator response. In an attempt to establish better voltage control, the voltage regulator was switched from automatic to manual control. When the voltage regulator was placed in manual, electrical bus1DA voltage decreased and the undervoltage relays were actuated. Actuation of the undervoltage relays resulted in the EDG being shifted from the test start mode to the emergency start mode. In the emergency start mode the voltage regulator control was restored to automatic and electrical bus 1DA voltage returned to its nominal value of 7200 Volts. The EDG responded normally to the actuation prior to being unloaded and secured. The voltage to electrical bus 1DA was never lost during this event. Subsequent inspection and testing of the voltage regulator could not recreate the initial voltage control issue. Numerous additional runs were performed prior to declaring the EDG operable without further issues.

CAUSE OF EVENT

A root cause analysis of the event that caused the EDG to shift from the test start to emergency start mode has been completed. The results of this analysis indicate that the root causes of this event are: 1) inadequate procedural guidance and 2) a lack of training on operation of the voltage regulator with the voltage regulator in manual control.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REV NO.	
Virgil C. Summer Nuclear Station	05000 395	2008	- 003	- 00	3 OF 3

NARRATIVE

ANALYSIS OF EVENT

At the time of this event, the "A" train EDG was out of service for testing. All systems and components necessary to maintain the reactor in safe shutdown and remove residual heat were being provided by the "B" Engineered Safety Features (ESF) train. None of the "B" ESF train components were affected by this event. Since the "A" EDG was operating at the time and only switched to the emergency start mode, it was still functional and would have been available in an emergency. Therefore, there were no potential safety consequences or implications as a result of this event.

CORRECTIVE ACTIONS

The corrective actions include: 1) Revise operations training lesson plans to provide training on the design of the EDG voltage control circuit to provide the knowledge required for use of the manual voltage regulator control, and 2) Revise operating procedures to provide precautions and guidance on when to use the voltage regulator manual control and what the expectations should be when the voltage regulator is switched to manual control.

Condition Report CR-08-02247 was generated to address the investigation, cause and corrective actions associated with this event.

PRIOR OCCURRENCES

There is no historical evidence of a prior occurrence.