

Jeffrey B. Archie  
Vice President, Nuclear Operations  
803.345.4214



March 17, 2009

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

Dear Sir / Madam:

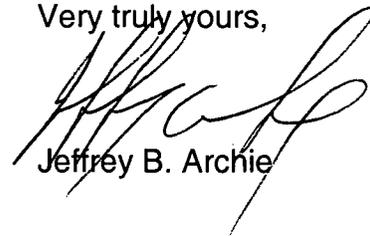
Subject: VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)  
DOCKET NO. 50-395  
OPERATING LICENSE NO. NPF-12  
LICENSEE EVENT REPORT (LER 2008-004-01)  
TECHNICAL SPECIFICATION VIOLATION DUE TO ALTERNATE AC  
UNAVAILABILITY

Attached is Licensee Event Report (LER) No. 2008-004-01, for the Virgil C. Summer Nuclear Station (VCSNS). The revised report describes subsequent corrective actions in addition to the sequence of actions that led to a violation of Technical Specification LCO 3.8.1.1. This report is submitted in accordance with 10CFR50.73(a)(2)(i)(B).

Revisions are identified by vertical bars in the right side margin of the attached report.

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

Very truly yours,



Jeffrey B. Archie

JW/JBA/sr  
Attachment

c: K. B. Marsh  
S. A. Byrne  
N. S. Carns  
J. H. Hamilton  
R. J. White  
K. J. Browne  
L. A. Reyes  
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INPO Records Center  
J&H Marsh & McLennan  
NSRC  
RTS (CR-08-02381/02477)  
File (818.07)  
DMS (RC-09-0025)

IE22  
LRR

# LICENSEE EVENT REPORT (LER)

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

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.

<b>1. FACILITY NAME</b> Virgil C. Summer Nuclear Station	<b>2. DOCKET NUMBER</b> <b>05000 395</b>	<b>3. PAGE</b> <b>1 OF 3</b>
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**4. TITLE**  
Technical Specification Violation due to Alternate AC Unavailability

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
02	15	2007	2008	- 4 -	1	03	17	2009		<b>05000</b>
									FACILITY NAME	DOCKET NUMBER
										<b>05000</b>

<b>9. OPERATING MODE</b> Mode 1	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:</b> (Check all that apply)									
<b>10. POWER LEVEL</b> 100%	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER						
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A						

**12. LICENSEE CONTACT FOR THIS LER**

FACILITY NAME Virgil C. Summer Nuclear Station	TELEPHONE NUMBER (Include Area Code) (803) 931-5042
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**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

<b>14. SUPPLEMENTAL REPORT EXPECTED</b> <input type="radio"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="radio"/> NO	<b>15. EXPECTED SUBMISSION DATE</b> MONTH:    DAY:    YEAR:
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**ABSTRACT** (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On three occasions during Cycle 17, Virgil C. Summer Nuclear Station (VCSNS) extended Emergency Diesel Generator outages beyond 72 hours for maintenance by taking credit for the Alternate AC (AAC) power source as allowed by LCO 3.8.1.1 Action b.4. AAC testing during Refueling Outage 17 called into question the availability of AAC. On August 11, 2008 after a review of the past operability determination, it was determined that the AAC may not have been available during these periods. Therefore, VCSNS is reporting this Technical Specification violation in accordance with 10CFR50.73(a)(2)(i)(B).

The AAC unavailability resulted from voltage regulation problems, an inadequately designed Reverse Power Relay (351S-7), and improperly installed wiring on the 387 bus differential relay.

To address the voltage regulation issues, an enhanced prejob brief and procedural guidance have been put in place for controlling the Parr hydro units when adding VCSNS loads to the AAC. The reverse power trip function will be permanently removed to prevent recurrence of AAC unavailability due to a reverse power trip. The improperly installed bus differential relay wiring has been corrected.

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Virgil C. Summer Nuclear Station	05000 395	YEAR	SEQUENTIAL NUMBER	REV NO.	2 OF 3
		2008	- 004	- 01	

**NARRATIVE**

**PLANT IDENTIFICATION**

Westinghouse - Pressurized Water Reactor

**EQUIPMENT IDENTIFICATION**

XTF5052, Alternate AC Transformer

**IDENTIFICATION OF EVENT**

On three occasions during Cycle 17, Virgil C. Summer Nuclear Station (VCSNS) extended Emergency Diesel Generator outages beyond 72 hours for maintenance by taking credit for Alternate AC (AAC) as allowed by LCO 3.8.1.1 Action b.4. Surveillance testing during Refueling Outage 17 identified voltage regulation problems and an incorrectly installed reverse power relay which tripped the AAC supply breaker to the VCSNS vital buses. These test results called into question the availability of AAC, and a subsequent past operability determination led to the discovery, on August 11, 2008, that the AAC power source may not have been available during these periods.

**EVENT DATES**

2/15/2007, 3/01/2007, 3/27/2008

Condition Reports CR-08-02381 and CR-08-02477 were initiated to address this event.

**REPORT DATE**

10/09/08, Revision 0  
03/17/09, Revision 1

**CONDITIONS PRIOR TO EVENT**

Mode 1, 100% Power

**DESCRIPTION OF EVENT**

On three separate occasions VCSNS entered LCO 3.8.1.1 Action b.4. for Emergency Diesel Generator (EDG) outages:

EDG1A: 02/12 - 02/18/2007

EDG1B: 02/26 - 03/01/2007

EDG1B: 03/24 - 03/30/2008

In accordance with Technical Specification LCO 3.8.1.1, the EDG must be restored to operable status within 72 hours. However, the requirement for restoration of the EDG to operable status within 72 hours may be extended to 14 days if the AAC power source is or will be available within 1 hour. Since past availability of the AAC could not be assumed, VCSNS violated Technical Specification LCO 3.8.1.1 anytime an EDG was inoperable greater than 72 hours. Therefore, VCSNS violated Technical Specification LCO 3.8.1.1 on 2/15/2007, 3/01/2007, and 3/27/2008.

**LICENSEE EVENT REPORT (LER) U.S. NUCLEAR REGULATORY COMMISSION  
CONTINUATION SHEET**

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Virgil C. Summer Nuclear Station	05000 395	YEAR	SEQUENTIAL NUMBER	REV NO.	3 OF 3
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**NARRATIVE**

**CAUSE OF EVENT**

The AAC unavailability resulted from voltage regulation problems, an inadequately designed Reverse Power Relay (351S-7), and improperly installed wiring on the 387 bus differential relay.

**ANALYSIS OF EVENT**

The incorrectly installed reverse power relay called into question the past availability of the AAC. During the RF-17 testing the relay actuated and tripped the AAC supply breaker to VCSNS, when a load was being added to the AAC. Further investigation determined that the relay had been installed incorrectly. Even with the relay installed incorrectly, post modification testing and subsequent surveillance testing were successful.

Although the potential unavailability of the AAC resulted in a Technical Specification violation, a PRA evaluation determined that the safety significance was low (< 1E-6/yr).

**CORRECTIVE ACTIONS**

To address the voltage regulation issues, an enhanced prejob brief and procedural guidance have been put in place for controlling the Parr hydro units when adding VCSNS loads to the AAC.

The reverse power relay trip function has been interimly addressed by jumpering out this function. To prevent recurrence of AAC unavailability due to a reverse power trip, an engineering modification has been initiated to permanently remove the reverse power trip function.

The improperly installed bus differential relay wiring has been corrected.

**PRIOR OCCURRENCES**

There have been no other instances of Technical Specification violations related to AAC unavailability in the past three years.