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March 22, 2010
NND-10-0100

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

ATTN: Document Control Desk

Subject: Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3 Combined License Application (COLA) - Docket Numbers 52-027 and 52-028 Supplemental Response No. 2 to NRC Request for Additional Information (RAI) Letter No.055 Related to Introduction and Interfaces

- Reference:
1. Letter from Sujata Goetz (NRC) to Alfred M. Paglia (SCE&G), Request for Additional Information Letter No. 055, Related to SRP Section 01 for the Virgil C. Summer Nuclear Station Units 2 and 3 Combined License Application, dated July 14, 2009.
 2. Letter from Ronald B. Clary (SCE&G) to Document Control Desk (NRC), Response to NRC Request for Additional Information (RAI) Letter No. 055, dated September 4, 2009.

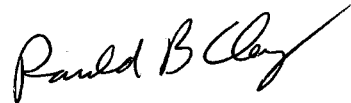
The enclosure to this letter provides the supplemental South Carolina Electric & Gas Company (SCE&G) response to the RAI 01-4 included in the above referenced letter (Reference 1). The enclosure also identifies any associated changes that will be incorporated in a future revision of the VCSNS Units 2 and 3 COLA.

Should you have any questions, please contact Mr. Al Paglia by telephone at (803) 345-4191, or by email at apaglia@scana.com.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 22nd day of March, 2010.

Sincerely,



Ronald B. Clary
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Enclosure

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NRC RAI Letter No. 055 Dated July 14, 2009

SRP Section: 01 – Introduction and Interfaces

QUESTION from AP1000 Projects Branch 1 (NWE1)

NRC RAI Number: 01-4

The applicant incorporated by reference Section 1.8 of the DCD. This section of the DCD identifies certain interfaces with the standard design that have to be addressed in accordance with 10 CFR 52.479(a)(1)(vii)(Note: following the update to Part 52, this provision has changed to 52.47(a)(25)). As required by 52.79(d)(2), the COL applicant must demonstrate how these interface items have been met. South Carolina Electric and Gas (SCE&G) must explicitly identify how these interfaces have been met.

VCSNS RESPONSE:

By letter NND-09-0233 dated September 4, 2009 (ML092530688), SCE&G provided a listing of FSAR subsections that address the interface requirements provided in DCD Table 1.8-1. In a future FSAR revision, the following information for Interface Item 8.2 will be added as new Table 8.2-201:

- Steady-state load
- Inrush kVA for motors
- Nominal voltage regulation
- Nominal frequency
- Allowable frequency fluctuation
- Maximum frequency decay rate
- Limiting under frequency value for RCP

This response is PLANT SPECIFIC.

ASSOCIATED VCSNS COLA REVISIONS:

The following FSAR changes will be made in a future revision of the COLA. For reviewing purposes, changes made are highlighted in red strikethrough text for deletions, and green underlined text for insertions.

- 1) Revise the fifth paragraph of FSAR Subsection 8.2.2 to read:

Table 8.2-201 shows ~~The grid stability analysis confirmed~~ that the interface requirements for steady-state load, nominal voltage, allowable voltage regulation, nominal frequency, allowable frequency fluctuation, maximum frequency decay rate, and limiting under frequency value for the RCP have been satisfied.

- 2) The last paragraph in FSAR Subsection 8.2.2 will be removed as follows:

~~Grid stability analysis includes the interface items identified in DCD Table 1.8-1, Item 8.2.~~

- 3) Revise FSAR Section 8.2 to include new Table 8.2-201 with a left margin annotation of VCS COL 8.2-2:

Table 8.2-201
Grid Stability Interface Evaluation

<u>DCD Table 1.8-1 Item 8.2 Parameter</u>	<u>WEC AC Requirements</u>	<u>VCSNS 2 & 3 Value Assumed</u>
<u>Steady-state load</u>	<u>"normal running values provided as input to grid stability"</u>	<u>(90.00 + j58.6) MVA*</u>
<u>Inrush kVA for motors</u>	<u>56,712 kVA**</u>	<u>56,712 kVA**</u>
<u>Nominal Voltage</u>	<u>Not provided</u>	<u>1.01 pu (232.3 kV)</u>
<u>Allowable voltage regulation</u>	<u>0.95-1.05 pu steady state 0.15 pu transient dip***</u>	<u>0.95-1.05 pu steady state 0.15 pu transient dip***</u>
<u>Nominal Frequency</u>	<u>60 Hz</u>	<u>Assumed 60 Hz</u>
<u>Allowable frequency fluctuation</u>	<u>±1/2 Hz indefinite</u>	<u>±1/2 Hz indefinite</u>
<u>Maximum frequency decay rate</u>	<u>5 Hz/sec</u>	<u>5 Hz/sec</u>

*Margin added to provide running values to account for site specific mechanical draft cooling tower loads.

**Based on the inrush of a single 10,000 HP feedwater pump assuming efficiency = 0.95, pf=0.9, and inrush =6.5x FLA.

***Applicable to Turbine Trip Only. The maximum allowable voltage dip from the pre-event steady state voltage value during the 3 second turbine trip event transient as measured at the point of connection to the high side of the generator step-up transformer and the reserve auxiliary transformer.

<u>DCD Table 1.8-1 Item 8.2 Parameter</u>	<u>WEC Acceptance Criteria</u>	<u>VCSNS 2&3 Value Calculated</u>
<u>Limiting under frequency value for RCP</u>	<u>≥57.7 Hz</u>	<u>≥57.7 Hz</u>

ASSOCIATED ATTACHMENTS:

None