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June 29, 2015  
NND-15-0389

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Washington, DC 20555

Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3  
Combined License Nos. NPF-93 and NPF-94  
Docket Nos. 52-027 & 52-028

Subject: Virgil C. Summer Nuclear Station Units 2&3 Status Update on the Updated  
Ground Motion Spectra and Foundation Input Response Spectra

- Reference:
1. NRC Letter, "Request for Submittal of Updated Ground Motion Spectra and Foundation Input Response Spectra," dated November 5, 2014 (Accession No. ML14302A180)
  2. SCE&G Letter, "Virgil C. Summer Nuclear Station Units 2&3 Response to Nuclear Regulatory Commission (NRC) Request for Submittal of Updated Ground Motion Spectra and Foundation Input Response Spectra," dated December 5, 2014 (Accession No. ML14342A467)
  3. APP-GW-GLR-115 Rev. 3 (TR115) "Effect of High Frequency Seismic Content on SSCs", dated March 8, 2011 (Accession No. ML110691052)

On November 5, 2014, the Nuclear Regulatory Commission (NRC) issued a voluntary request, Reference 1, to South Carolina Electric & Gas (SCE&G) requesting an updated Ground Motion Response Spectra (GMRS). SCE&G's response to this voluntary request (found in Reference 2) stated that SCE&G would provide the NRC with site specific results based on the site specific In-Structure Response Spectra (ISRS), or provide a status update, in the second quarter of 2015.

Enclosure 1 of this submittal provides a status update on the ISRS evaluation of the six (6) key locations described in the Updated Final Safety Analysis Report (UFSAR).

As noted in Enclosure 1, SCE&G is working to provide the NRC with a finalized evaluation by the end of the fourth quarter 2015.

Should you have any questions, please contact Mr. Justin Bouknight by telephone at (803) 941-9828, or by email at [justin.bouknight@scana.com](mailto:justin.bouknight@scana.com).

This letter contains no regulatory commitments.

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

Executed on this 29<sup>th</sup> day of June, 2015.

Sincerely,



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MHK/ARR/mhk

Enclosure 1: Update on the Status of VCSNS Units 2&3 In-Structure Response Spectra (ISRS) Evaluation

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**South Carolina Electric & Gas Company**  
**Virgil C. Summer Nuclear Station Units 2 and 3**

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**Enclosure 1**

**Update on the Status of VCSNS Units 2&3**  
**In-Structure Response Spectra (ISRS) Evaluation**

**(This enclosure contains two pages including this cover page)**

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Enclosure 1

Update on the Status of VCSNS Units 2&3 In-Structure Response Spectra (ISRS) Evaluation

On December 5, 2014 SCE&G provided the Nuclear Regulatory Commission (NRC) Staff a site specific Ground Motion Response Spectra (GMRS) for V.C. Summer Units 2 and 3 using the most recent Central Eastern United States (CEUS) seismic hazard models (hereafter referred to as the VCS 2.1 GMRS). The VCS 2.1 GMRS was compared to the AP1000 Certified Seismic Response Spectra (CSDRS) and showed some exceedances in the high-frequency range (above approximately 13 Hz). This letter is intended to provide a status of the In-Structure Response Spectra (ISRS) evaluation referenced in the December 5, 2014 letter.

VCS 2.1 GMRS-based ISRS are being generated at the six (6) key locations described in Subsection 3G.4.3 of the Updated Final Safety Analysis Report (UFSAR). These ISRSs are still in draft and have not been finalized by Westinghouse. However, comparisons of the preliminary VCS 2.1 GMRS ISRSs to the CSDRS and Hard Rock High Frequency (HRHF) ISRSs also show some exceedances, predominately in the high frequency range. SCE&G plans to perform force comparison analyses of the structures and primary equipment, as was done in APP-GW-GLR-115 (Reference 3). Preliminary force comparisons continue to demonstrate that the AP1000 CSDRS governs the design. This evaluation will be documented as a technical report and is currently planned for completion in the 4th quarter of 2015. Once complete, SCE&G will provide a finalized evaluation to the NRC staff. Any potential high frequency vulnerabilities associated with critical piping and electro-mechanical equipment will be identified through the ongoing Seismic Probabilistic Risk Assessment (SPRA) and mitigated as required to meet Regulatory Guide 1.174. The SPRA is currently scheduled for completion in 2017.