



**Ronald B. Clary**  
Vice President  
New Nuclear Deployment

January 28, 2010  
NND-10-0038

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  
January 28, 2010 Submittal of the Combined License Application for V. C. Summer Nuclear Station Units 2 and 3, Including Revision 2 of the Final Safety Analysis Report (FSAR)

References:

1. Letter from Ronald B. Clary (SCE&G) to Document Control Desk (NRC), Submittal of Revision 1 of the Combined License Application for V.C. Summer Nuclear Station Units 2 and 3, dated July 30, 2009.
2. Letter from Ronald B. Clary (SCE&G) to Document Control Desk (NRC), Endorsement of Standard RAI Content from March 31, 2009 to October 31, 2009, dated January 20, 2010.
3. Letter from Ronald B. Clary (SCE&G) to Document Control Desk (NRC), Endorsement of Standard Open Item Response Content through October 31, 2009, dated January 20, 2010.

By letter dated March 27, 2008, South Carolina Electric & Gas Company (SCE&G) submitted an application to the U.S. Nuclear Regulatory Commission (NRC) requesting combined licenses (COLs) for two AP1000 advanced passive pressurized water reactors designated V. C. Summer Nuclear Station (VCSNS) Units 2 and 3 to be located at the existing VCSNS site in Fairfield County, South Carolina. The application was submitted in accordance with the requirements contained in 10 CFR Part 52, "Licenses, Certifications and Approvals for Nuclear Power Plants," and the associated material licenses under 10 CFR Parts 30, 40, and 70.

On July 31, 2008, the NRC notified SCE&G of its acceptance and docketing of the VCSNS Units 2 and 3 COL Application and commencement of its detailed technical/environmental review of the application. This update includes the annual update of the docketed Final Safety Analysis Report (FSAR), COL Application Part 2 as required by 10 CFR 50.71(e)(3)(iii). Part 7, titled Departures and Exemptions, is submitted as Revision 2 with this update and also serves as the semi-annual update of the Departures Report as required by X.B.1 and X.B.3.b of Appendix D to 10 CFR Part 52. Additionally, Parts 1, 4, 5, 9, and 10 of the COL Application are updated in this submittal. Also, Part 14 is provided in this application as Revision 0. Revisions to the

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COL Application in this submittal are identified by change bars positioned in the right hand margin.

This application revision incorporates by reference Appendix D to 10 CFR 52 and the Westinghouse Electric Company's (Westinghouse's) application for amendment to portions of the AP1000 Design Control Document (DCD), Revision 17.

This submittal includes changes identified by SCE&G previous correspondence, including responses to NRC requests for additional information (RAIs), through October 16, 2009 for site specific material and through October 31, 2009 for standard material. Additional site specific material submitted after October 16, 2009 that was incorporated into this submittal due to the relationship to RAIs that were submitted on or before October 16, 2009 is contained in the following SCE&G Letters: NND-09-0312, dated November 12, 2009, NND-09-0313, dated November 13, 2009, NND-09-0331, dated December 1, 2009, NND-10-0006, dated January 6, 2010 and NND-10-0001, dated January 6, 2010. Additional updates were made in this submittal as required to incorporate SCE&G endorsed standard RAI and open item responses through October 31, 2009 (References 2 and 3), as well as various other updates such as miscellaneous errata items, and standard and site-specific changes necessary to reflect the incorporation by reference of the AP1000 DCD Revision 17. This update also includes changes as necessary to address appropriate standard and site-specific material to reflect the incorporation by reference of template revisions submitted by the Nuclear Energy Institute (NEI). The changes due to NEI templates are only updated after the final, NRC approved version of the template is issued. Some standard content has been updated in the VCSNS Units 2 and 3 COL Application through the errata process described in a Tennessee Valley Authority letter to the NRC dated March 14, 2008. These updates were reviewed and concurred with by the AP1000 Design Centered Working Group (DCWG). Certain portions of the new 10 CFR 73 rule package, such as cyber security, have not been included in this update due to ongoing interactions with the NRC concerning guidance and standard information being developed in coordination with NEI. A future submittal will be provided that reflects responses to NRC RAIs and the associated revisions to the corresponding documents.

This application is composed of fourteen parts. Each of these Parts is identified below along with indication of any revision contained in this document update.

- Part 1 – General and Administrative Information (Revision 2, included)
- Part 2 – Final Safety Analysis Report (Revision 2, included)
- Part 3 – Applicant's Environmental Report–Combined License Stage (Environmental Report) (Revision 1, submitted separately February 13, 2009)
- Part 4 – Technical Specifications (Revision 2, included)
- Part 5 – Emergency Plan (Revision 2, included)
- Part 6 – [Not used in this COLA. Reserved for applicants requesting a Limited Work Authorization]
- Part 7 – Departures and Exemptions (Revision 2, included)

- Part 8 – Safeguards/Security Plans (Revision 1, submitted separately April 2, 2009)
- Part 9 – Withheld Information (Revision 2, included)
- Part 10 – Proposed License Conditions and ITAAC (Revision 2, included)
- Part 11 – COLA Enclosure 1 – Subsurface Reports (Revision 0 dated March 27, 2008, not included)
- Part 12 – COLA Enclosure 2 – Seismic Technical Advisory Review Letter (Revision 0 dated March 27, 2008, not included)
- Part 13 – COLA Enclosure 3 – Quality Assurance Program Description (Revision 1 dated July 30, 2009, not included)
- Part 14 – Mitigative Strategies Description and Plans (Revision 0, included)

Part 1 of this application revision contains a limited amount of proprietary information that was submitted as a response to NRC RAI 01-01 in SCE&G correspondence (NND-09-0007) dated January 15, 2009 and has not changed in this revision. This proprietary information has been located in Part 9 while the redacted information is presented in Part 1. Part 1 has been revised to incorporate organizational changes and relocation of SCANA headquarters.

Part 2 has been revised as described above to reflect changes due to site-specific and standard RAI responses, Revision 17 of the AP1000 DCD, NEI Template revisions, and miscellaneous errata. Part 2, Chapter 13 has been revised to reflect minor organizational changes.

Part 3, Revision 1 has been revised and submitted separately by SCE&G Letter NND-09-0023 to the Document Control Desk, dated February 13, 2009.

Part 4 has been revised to incorporate DCD and RAI-related changes and includes revision bars to show where revisions have been made to support NRC review. A final copy (without revision bars) will be prepared and submitted once the NRC review is completed to support the issuance of the COLs.

Part 5 has been revised to incorporate RAI-related changes as well as minor editorial changes. The Evacuation Time Estimate (ETE), which is included in Part 5, has been revised to incorporate RAI-related changes.

Part 7 of this application revision contains requests for certain exemptions and departures from the referenced DCD. Note that one departure and exemption have been added in this submittal as a result of RAI 02.03.01-7.

Part 8 of this application revision contains safeguards information and has been provided in a separate submittal on April 2, 2009 under SCE&G Letter NND-09-0070 to the Document Control Desk. Note that the letter submitting Part 8 refers to the document as proposed Revision 1; however, SCE&G considers that revision to be the final Revision 1.

Part 9 of this application revision contains certain figures that are considered Sensitive Unclassified Non-Safeguards Information (SUNSI). Part 9 also contains a security related document submitted by SCE&G Letter NND-09-0162. Therefore, SCE&G requests that these figures and that document be withheld from disclosure in accordance with 10 CFR 2.390(d). In addition Part 9 includes certain financial information that was provided in a response to NRC RAI 01-01. The affidavit for withholding that information was submitted with the RAI response and is considered relevant for this application as well. SCE&G requests that this information be withheld from disclosure in accordance with 10 CFR 2.390(b).

Part 10 of this application revision includes a listing of ITAAC beyond those identified in Tier 1 of the AP1000 DCD, as well as proposed License Conditions.

Parts 11 and 12 of this application were submitted by letter dated March 27, 2008 (Reference 1). Since they did not require revision, they are not included with this submittal.

Part 13 is not included with this submittal.

Part 14 is included as described in SCE&G Letter NND-09-0162.

A document identifying each change, as well as its source or basis, is being provided as an aid to the NRC reviewers and will be submitted by separate letter. This document clearly identifies the basis for each change made in Revision 2 for the Parts specifically included in this submittal.

Consistent with common licensing practice, most of the application text is written in the present tense, active voice, including discussions of facilities and programs not yet built or implemented. Exceptions to this approach are the discussions of operating experience and completed studies and evaluations, which are written in the past tense. It should be understood, however, that statements regarding facilities (e.g., structures, systems and components) and pre-construction, pre-operational, and operational activities (e.g., procedures and programs) typically address activities that have not yet been performed and will not be performed until it is reasonable and appropriate to do so.

A complete set of application documents (identified above), with the exception of Part 3, Part 8, Part 11, Part 12, and Part 13 is provided in electronic file format on the enclosed disk. Appropriate pre-submission checks have been successfully performed on the files to ensure compliance with the guidelines provided on the NRC web site and they have been found acceptable for electronic submittal. The disk includes a "packing slip" describing its contents, pursuant to NRC instructions for electronic filing.

Should you have any questions, please contact Mr. Alfred M. Paglia by telephone at (803) 345-4191, or by email at [apaglia@scana.com](mailto:apaglia@scana.com).

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

Executed on this 26<sup>th</sup> day of January, 2010.

Sincerely,



Ronald B. Clary  
Vice President  
New Nuclear Deployment

JMG/RBC/jg

Enclosure – V.C. Summer Nuclear Station Units 2 and 3 COLA Revision 2,  
Sensitive Version (DVD)

c (w/ enclosure):

FileNet  
Joseph M. Sebrosky

c (w/o enclosure):

Luis A. Reyes  
John Zeiler  
Stephen A. Byrne  
Jeffrey B. Archie  
Ronald B. Clary  
Bill McCall  
William M. Cherry  
Randolph R. Mahan  
Kathryn M. Sutton  
Amy M. Monroe  
Daniel Patton  
Frederick P. Hughes  
William E. Hutchins  
William A. Fox  
Grayson Young