



August 6, 2009  
NND-09-0236

U. S. Army Corps of Engineers  
Regulatory Division  
69-A Hagood Avenue  
Charleston, S. C. 29403

ATTN: Richard L. Darden, Ph.D.

Subject: V. C. Summer Nuclear Station Units 2 and 3  
Docket Numbers 52-027 and 52-028  
Combined License Application – Response to NRC  
Environmental Report (ER) Requests for Additional Information  
(RAI): USACE- 2, 3, 4, and 5

Reference: 1. Letter from Ronald B. Clary to Document Control Desk,  
Submittal of Revision 1 to Part 3 (Environmental Report) of the  
Combined License Application for the V. C. Summer Nuclear  
Station Units 2 and 3, dated February 13, 2009.  
2. Letter from Patricia J. Vokoun to Ronald B. Clary, Requests for  
Additional Information Related to the Environmental Review for  
the Combined License Application for the V. C. Summer  
Nuclear Station, Units 2 and 3, dated June 22, 2009.

By letter dated March 27, 2008, South Carolina Electric & Gas Company (SCE&G) submitted a combined license application (COLA) for V.C. Summer Nuclear Station (VCSNS) Units 2 and 3, to be located at the existing VCSNS site in Fairfield County, South Carolina. Subsequently the Environmental Report (ER), Part 3 of the application, was revised and submitted to the NRC (reference 1).

The enclosure to this letter provides the SCE&G response to RAI items USACE-2, 3, 4, and 5 transmitted by the NRC via reference 2.

Please address any questions to Mr. Alfred M. Paglia, Manager, Nuclear Licensing, New Nuclear Deployment, P. O. Box 88, Jenkinsville, S.C. 29065; by telephone at 803-345-4191; or by email at [apaglia@scana.com](mailto:apaglia@scana.com).

D083  
NRD

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

Executed on this 6<sup>th</sup> day of August 2009



Ronald B. Clary  
General Manager  
New Nuclear Deployment

ARR/RBC/ar

Enclosures

c (with Enclosures):

Patricia Vokoun  
Carl Berkowitz  
David Haddon  
USNRC Document Control Desk  
FileNet

c (without Enclosures):

Luis A. Reyes  
John Zeiler  
Chandu Patel  
Stephen A. Byrne  
Ronald B. Clary  
Bill McCall  
William M. Cherry  
Randolph R. Mahan  
Kathryn M. Sutton  
Rich Louie  
John J. DeBlasio  
April Rice

**VCSNS UNITS 2 and 3  
Environmental Report Review  
Response to NRC Requests for Additional Information**

**NRC RAI Letter Dated June 22, 2009**

**NRC RAI Number:** RAI USACE-2 **Revision:** 0

**Reference ER Information Needs Item:** N/A

**Question Summary (RAI):**

Provide a discussion of stream and wetland impacts for each alternative site evaluated, including stream and wetland type as well as length and area, respectively.

**Full Text (supporting information):**

Required for determination whether potential project alternatives would be in compliance with the 404(b)(1) Guidelines and for comparison of alternatives under NEPA.

**VCSNS Response:**

See attached response "SCANA Responses to U. S. Army Corps of Engineers (USACE) Requests for Additional Information (RAI) 2 and 3."

**Associated COLA Revisions:**

No COLA revision is required as a result of the response to this RAI.

**Associated Attachments:**

None

**VCSNS UNITS 2 and 3  
Environmental Report Review  
Response to NRC Requests for Additional Information**

**NRC RAI Letter Dated June 22, 2009**

**NRC RAI Number:** RAI USACE-3 **Revision:** 0

**Reference ER Information Needs Item:** N/A

**Question Summary (RAI):**

Provide a comparative discussion regarding impacts to wetlands and other waters of the U.S. from the various transmission lines which will be part of this project. The Corps recognizes that detailed assessments, characterizations and/or delineations are not feasible. However, use of a combination of available mapping resources should provide estimates of wetland area and stream length to be encountered within the corridors.

The Corps recognizes that SCE&G and Santee Cooper will construct independent transmission which will route power to their respective service areas. Information for these separate lines should probably be presented separately.

**Full Text (supporting information):**

Required for determination whether potential project alternatives would be in compliance with the 404(b)(1) Guidelines and for identification of the Least Environmentally Damaging Project Alternative.

**VCSNS Response:**

See attached responses "SCANA Responses to U. S. Army Corps of Engineers (USACE) Requests for Additional Information (RAI) 2 and 3" and "Supplement to Santee Cooper Transmission Line Siting Study Discussion of Alternative Sites."

**Associated COLA Revisions:**

No COLA revision is required as a result of the response to this RAI.

**Associated Attachments:**

None

## SCANA Responses to U.S. Army Corps of Engineers (USACE) Requests for Additional Information (RAI) 2 and 3

### V.C. Summer Nuclear Station (VCSNS) Units 2 and 3 Combined License Application (COLA) Environmental Review

#### RAI Number USACE-2

Please refer to the table in the “Alternative Sites Summary” section and its associated notes below.

#### RAI Number USACE-3

Please refer to the tables in the “Conceptual Transmission Line Corridors Summary by their Associated Alternative Site” section for a summary of waters by kind within each potential transmission line corridor. At the preparation of this document, it is not possible to quantify potential impacts to these waters since specific design criteria have not been developed for each transmission line. Unknown aspects, such as proposed support structure (pole) type and anticipated distance between structures, must be determined before impacts associated with potential fill activities can be calculated. However, it is fair to assume that all forested wetlands within proposed rights-of-way will be cleared for placement of the lines and their support structures, and will be permanently maintained once the lines are placed.

### Alternative Sites Summary

SCE&G site information associated with the Cope, Fairfield 1 (Fa-1), Saluda, Savannah River Site (SRS), and VC Summer Alternative Sites

	Cope	Fa-1	Saluda	SRS	VC Summer
<b>Acreage of Site*</b>	1,215.6 ac	1,589.8 ac	2,355 ac	1,518.8 ac	1988 ac
<b>Acreage of Wetlands*</b>	501.7 ac	60.6 ac	87.6 ac	50.7 ac	44.3 ac
<b>Linear Feet of Stream*</b>	26,070.7 lf	32,462.7 lf	31,149.8 lf	5,603.6 lf	49,288 lf
<b>Acreage of Open Waters*</b>	9.8 ac	337.6 ac	433.7 ac	6.0 ac	49 ac**
<b>Acreage of Impact to Wetlands†</b>	0	3.0 ac	0	0	0.26 ac
<b>Linear Feet of Impact to Streams†</b>	0	1,704.9 lf	0	0	774 lf

\*These figures include areas encompassed by the nuclear site, the intake/discharge area, and railroad tie-ins, where applicable.

\*\*Approximated.

†With the exception of the VC Summer Site, these numbers include potential impacts associated only with major site components footprints (cooling towers, power block, and switchyard), and excludes areas needed for fill slopes associated with these components. Numbers given for the VC Summer Site are actual numbers, as this is the preferred site and detailed engineering plans have been prepared for the site. Impacts would be to forested wetlands.

## Conceptual Transmission Line Corridors Summary by their Associated Alternative Site

### Cope Alternative

SCE&G Transmission Line Information Associated with the Cope Site Alternative Location\*

Transmission Line Segment	Length of Corridor (mi)	Acreage of Corridor	Acreage of Forested Wetlands	Acreage of Non-forested Wetlands	Acreage of Open Water	Linear Feet of Stream
Cope-Orangeburg	21.5	31.6	0.3	1.0	--	287.8
Cope-St. George	34.4	345.4	103.2	41.7	0.4	4,074.9
<b>TOTAL:</b>	<b>55.9</b>	<b>377.0</b>	<b>103.5</b>	<b>42.7</b>	<b>0.4</b>	<b>4,362.7</b>

\*Acreages of wetlands and linear footages of streams are those located within new rights-of-way only.

### Fairfield 1 (Fa-1) Alternative

SCE&G Transmission Line Information Associated with the Fa-1 Site Alternative Location\*

Transmission Line Segment	Length of Corridor (mi)	Acreage of Corridor	Acreage of Forested Wetlands	Acreage of Non-forested Wetlands	Acreage of Open Water	Linear Feet of Stream
Fairfield-St. George	137.0	1,535.0	214.4	41.1	18.6	22,428.4
Fairfield-Lake Murray	23.8	63.7	1.3	--	2.0	1,786.8
Fairfield-VC Summer	5.5	185.9	1.8	--	5.7	3,711.8
Fairfield-Killian	39.0	452.1	21.1	--	0.6	8,148.4
<b>TOTAL:</b>	<b>205.3</b>	<b>2,236.7</b>	<b>238.6</b>	<b>41.1</b>	<b>26.9</b>	<b>36,075.4</b>

\*Acreages of wetlands and linear footages of streams are those located within new rights-of-way only.

### Saluda Alternative

SCE&G Transmission Line Information Associated with the Saluda Site Alternative Location\*

Transmission Line Segment	Length of Corridor (mi)	Acreage of Corridor	Acreage of Forested Wetlands	Acreage of Non-forested Wetlands	Acreage of Open Water	Linear Feet of Stream
Saluda-Saluda Switching	14.4	156.7	5.7	0.3	0.1	5,248.7
Saluda Switching-St. George	100.9	1,143.3	180.4	40.2	3.7	13,351.9
Saluda-VC Summer-Parr	1.3	12.0	--	--	--	176.2
Saluda-VC Summer	30.4	336.8	11.4	1.0	13.9	7,680.1
<b>TOTAL:</b>	<b>147.0</b>	<b>1,648.8</b>	<b>197.5</b>	<b>41.5</b>	<b>17.7</b>	<b>26,456.9</b>

\*Acreages of wetlands and linear footages of streams are those located within new rights-of-way only.

**Savannah River Site (SRS) Alternative**

**SCE&G Transmission Line Information Associated with the SRS Alternative Location\***

<b>Transmission Line Segment</b>	<b>Length of Corridor (mi)</b>	<b>Acreage of Corridor</b>	<b>Acreage of Forested Wetlands</b>	<b>Acreage of Non-forested Wetlands</b>	<b>Acreage of Open Water</b>	<b>Linear Feet of Stream</b>
SRS-Cope-Edenwood	93.1	854.3	159.2	7.8	4.3	12,100.8
SRS-SRP	6.6	56.2	--	6.4	--	629.4
SRS-Urquhart	21.6	182.9	9.0	--	--	2,864.1
<b>TOTAL:</b>	<b>121.3</b>	<b>1,093.4</b>	<b>168.2</b>	<b>14.2</b>	<b>4.3</b>	<b>15,594.3</b>

\*Acreages of wetlands and linear footages of streams are those located within new rights-of-way only.

**VC Summer Nuclear Site (VCSNS) Alternative**

**SCE&G Transmission Line Information Associated with the VCSNS Alternative Location\***

<b>Transmission Line Segment</b>	<b>Length of Corridor (mi)</b>	<b>Acreage of Corridor</b>	<b>Acreage of Forested Wetlands</b>	<b>Acreage of Non-forested Wetlands</b>	<b>Acreage of Open Water</b>	<b>Linear Feet of Stream</b>
VC Summer-St. George	134.2	1,491.1	201.1	41.3	19.0	19,319.2
VC Summer-Killian	36.6	380.2	18.1	0.5	0.6	6,410.4
<b>TOTAL:</b>	<b>170.8</b>	<b>1,871.3</b>	<b>219.2</b>	<b>41.8</b>	<b>19.6</b>	<b>25,729.6</b>

\*Acreages of wetlands and linear footages of streams are those located within new rights-of-way only.

**Methodology in Determining Quantity of Jurisdictional Waters in Proposed Transmission Line Corridors and Alternative Sites**

The proposed transmission line corridors were created as shape files in ArcMap by Facilities Planning and Siting, PLLC (FPS). These corridors were overlain in ArcMap with US Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping, 2006 infrared aerial photography, and USGS 7.5 minute topographic quadrangles, the latter two being obtained from the South Carolina Department of Natural Resources' GIS Data Clearinghouse website. The NWI data set was downloaded from the USFWS website on July 2, 2009 (<http://www.fws.gov/wetlands/Data/Mapper.html>), and was supplemented by preliminary wetlands mapping (digital) provided by Charlie Storrs, Regional Wetlands Coordinator, USFWS. Hard copies of these maps were printed in panels and provided to Palmetto Environmental Consulting, Inc. (PEC) for jurisdictional waters/wetlands analysis.

PEC examined each panel, along with the appropriate United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) county soil survey and/or the on-line USDA-NRCS Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app/>). While analyzing all mapping sources simultaneously, PEC hand-drew approximate locations and limits of wetlands, streams, and open waters within each proposed transmission line corridor and alternative site. This analysis was supported by PEC's past experience in compiling waters/wetlands approximations based on mapping and remote sources, and their professional opinion from features/information seen on the various mapping sources.

As approximate locations and limits of waters/wetlands were drawn by PEC onto each panel, the completed panels were returned to FPS. FPS then scanned the panels electronically and rectified them to be correctly referenced in ArcMap. The polygons and lines representing waters and streams drawn by PEC on the panels were then digitized by FPS, allowing quantification of waters and streams within the proposed corridors and alternative sites.