PMSummerCoIpEM Resource

From: RICE, APRIL R [ARICE@scana.com]
Sent: Wednesday, November 30, 2011 3:27 PM
To: Vokoun, Patricia; Sebrosky, Joseph
Subject: FW: PN 2007-1852-SIR (R) / SCE&G / VCSNS Units 2 and 3 / Notice of Department Decision on 401
Attachments: PN2007-1852-SIR_VCSummer_NODD.pdf

Per your request.
April

From: WALLER JR, JOHNNIE
Sent: Wednesday, November 30, 2011 2:59 PM
To: RICE, APRIL R; SUMMER, STEPHEN E; London, Eileen; PAGLIA, ALFRED M JR; TORRES, ALAN D; MONROE, AMY
Subject: FW: PN 2007-1852-SIR (R) / SCE&G / VCSNS Units 2 and 3 / Notice of Department Decision

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From: Rowe, Alicia M. [mailto:roweam@dhec.sc.gov]
Sent: Wednesday, November 30, 2011 2:58 PM
To: Preston, Heather; HADDON, FRANK D (DAVID); WALLER JR, JOHNNIE; Robert Bunch; Richard.Darden@usace.army.mil; richard@enviropermit.com; Lake, Chris; Jeff Thompson; Hightower, Charles
Subject: PN 2007-1852-SIR (R) / SCE&G / VCSNS Units 2 and 3 / Notice of Department Decision

All,
Attached is the Notice of Department Decision (NODD) for the subject project. The NODD will end December 15, 2011. Please let me know if you have any questions, and have a great day!

--
Alicia M. Rowe
Project Manager
Water Quality Certification and Wetlands Section
Bureau of Water - Water Quality Division
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201
Ph: (803) 898-4333
roweam@dhec.sc.gov

Hearing Identifier: VCSummer_COL_Public
Email Number: 371

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Sent Date: 11/30/2011 3:27:17 PM
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From: RICE, APRIL R

Created By: ARICE@scana.com

Recipients:
"Vokoun, Patricia" <Patricia.Vokoun@nrc.gov>
Tracking Status: None
"Sebrosky, Joseph" <Joseph.Sebrosky@nrc.gov>
Tracking Status: None

Post Office: EXCHANGE06.CORP.SCANA.com

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PROMOTE PROTECT PROSPER
South Carolina Department of Health
and Environmental Control

Bureau of Water
2600 Bull St
Columbia SC 29201

Public Notice # 2007-1852-SIR (R) Public Notice Date: November 30, 2011

NOTICE OF PROPOSED DECISION – STATE CERTIFICATION

The Department, acting on an application for Water Quality Certification pursuant to Section 401 of the Federal Clean Water Act and for certification of consistency with the SC Coastal Zone Management Program in accordance with R. 48-39-10 et. seq. and 15 CFR 93 has reached a proposed decision for the project described below:

South Carolina Electric & Gas
Placement of fill in waters of the US
Broad River
Fairfield County
P/N 2007-1852-SIR (R)

After reviewing the project plans, staff of the Ocean and Coastal Resource Management determined that the proposed work is consistent with the Coastal Zone Management Program (48-39-10 et. seq. and 15 CFR 93).

After reviewing the project plans, staff of the Division of Water Quality determined that there is a reasonable assurance that the proposed project will be conducted in a manner consistent with the certification requirements of Section 401 of the Federal Clean Water Act. Accordingly, the Department proposes to certify the project with conditions as follows:

1. The applicant must implement appropriate best management practices that will minimize erosion and migration of sediments on and off the project site during and after construction. These practices should include the use of appropriate grading and sloping techniques, mulches, silt fences, or other devices capable of preventing erosion, migration of sediments, and bank failure. All disturbed land surfaces and sloped areas affected by the project must be stabilized.

2. Prior to beginning any land disturbing activity, appropriate erosion control measures, such as silt fences, silt barriers, or other devices, must be placed between the disturbed area and the affected waterway or wetland; and maintained in a functioning capacity until the area is permanently stabilized.

3. Construction activities must avoid to the greatest extent practicable, encroachment into any waterbody/wetland areas not designated as impact areas.

4. All necessary measures must be taken to prevent oil, tar, trash, debris and other pollutants from entering the adjacent waters or wetlands, and offsite areas.

5. Once the project is initiated, it must be carried to completion in an expeditious manner in order to minimize the period of disturbance to the environment.

6. Any riprap used at the project must consist of clean stone or masonry material free of all potential sources of pollution.

7. Excavated material must not be stockpiled in the adjacent wetlands, but placed on barges or on high ground, when possible. If the excavated material is temporarily placed in wetlands, it must be placed at intervals to allow for adequate circulation of water in the marsh.

8. All excavated materials not used as backfill must be hauled off site or placed on high land and properly contained and permanently stabilized to prevent erosion.

9. Only clean earthen material free of all potential sources of pollution must be used as backfill.

10. Any equipment used within wetlands must be equipped with high floatation tires when possible to minimize rutting and compaction.

11. Upon project completion, all disturbed riverbed areas and wetlands not designated as permanent impact areas must be restored to their original contours and conditions, and stabilized with vegetative cover, riprap, or other erosion control methods as appropriate.

12. Construction activities in Monticello Reservoir and Parr Reservoir must be minimized during the months of March, April, May, and June because of potential impacts to fish spawning.

13. SCE&G must notify the South Carolina Department of Natural Resources in the event of a water quality excursion.

14. SCE&G must perform the proposed water quality, fish population, macroinvertebrate population, and sediment monitoring as proposed in the submission dated September 16, 2011, with the subsequent revisions agreed to in coordination with the commenting resources agencies.

15. SCE&G and Santee Cooper must provide compensatory mitigation for unavoidable impacts in accordance with the proposed compensatory mitigation plan dated May 24, 2011, and the subsequent revisions dated July 19, 2011, and September 16, 2011.

The SC Department of Health and Environmental Control reserves the right to impose additional conditions on this Certification to respond to unforeseen, specific problems that might arise and to take any enforcement action necessary to ensure compliance with State standards.

The evaluation of the proposed work was conducted by the Bureau of Water and the Office of Ocean and Coastal Resource Management. A copy of the staff assessment supporting the proposed decision is enclosed. A copy of plans submitted by the applicant is available for review in the office of the Division of Water Quality, Bureau of Water or at the Office of Ocean and Coastal Resource Management. Additional information about the technical aspects of this application is available from Alicia M Rowe, the project manager, at 803-898-4333.

The final State Certification will be issued if a request for an adjudicatory hearing is not granted by the Department.

Persons wishing to appeal of this proposed certification impacts must submit in writing a request for an adjudictory hearing which contains the following: an identification of the requestor, a statement of the grounds for the request, the relief sought and an indication of whether or not the requestor proposes to proffer witnesses, evidence or exhibits.

Requests for adjudicatory hearing must be served on the Board of Health and Environmental Control within fifteen (15) days following the date of this notice.

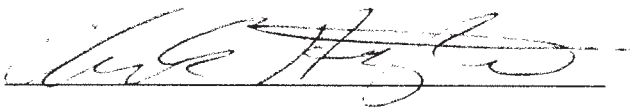
The Department will grant or deny a request for the adjudicatory hearing after considering whether the person making the request has standing to seek a determination under the definition of "Contested Case" and other pertinent definitions as contained in Code of Laws of South Carolina 1976, Chapter 61, Rule 61-72 entitled "Procedures for Contested Cases".

The adjudicatory hearing request and 2 copies thereof must be submitted to the Board of Health and Environmental Control, Attn: Clerk of the Board, Office of the Commissioner, 2600 Bull St, Columbia, SC, 29201. A request must be received by 5:00pm on December 15, 2011. A copy of such request must also be submitted to the project manager.

In addition, the Administrative Law Judge Division requires that a person requesting a contested case hearing must file a copy of the request and a filing fee in the amount of $250.00 with the Administrative Law Judge Division at the following address:

Clerk of Administrative Law Court
1205 Pendleton St, Ste 224
PO Box 11667
Columbia, SC 29211

Additional information on the adjudicatory hearing may be obtained by contacting the Legal Office, Department of Health and Environmental Control, 2600 Bull St, Columbia, SC 29201, or by calling 803-898-3350.



Chuck Hightower, Manager
Water Quality Certification,
and Wetland Programs Section

cc: US Army Corps of Engineers
Charleston District Office
SC DHEC, Columbia EQC Office District Office

Notice of Appeal Procedure
Pursuant to S.C. Code Section 44-1-60

1. This decision of the S.C. Department of Health and Environmental Control (Department) becomes the final agency decision 15 calendar days after notice of the decision has been mailed or otherwise sent to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of $100 is filed with the Department by the applicant, permittee, licensee, or affected person.

2. An applicant, permittee, licensee, or affected person who wishes to appeal this decision must file a timely written request for final review with the Clerk of the Board at the following address or by facsimile at 803-898-3393. A filing fee in the amount of $100 made payable to SC DHEC must also be received by the Clerk within the time allowed for filing a request for final review. However, if a request for final review is filed by facsimile, the filing fee may be mailed to the Clerk of the Board if the envelope is postmarked within the time allowed for filing a request for final review.

   Clerk of the Board
   SC DHEC
   2600 Bull Street
   Columbia, SC 29201

3. In order to be timely, a request for final review must be received by the Clerk of the Board within 15 calendar days after notice of the decision has been mailed or otherwise sent to persons entitled to receive notice. If the 15th day occurs on a weekend or State holiday, the request is due to be received by the Clerk of the Board on the next working day. The request for final review must be received by the Clerk of the Board by 5:00 p.m. on the date it is due. A request for final review will be returned to the requestor if the filing fee is not received on time as described above.

4. The request for final review should include the following:
   a. the grounds on which the Department's decision is challenged and the specific changes sought in the decision
   b. a statement of any significant issues or factors the Board should consider in deciding whether to conduct a final review conference
   c. a copy of the Department's decision for which review is requested

5. If a timely request for final review is filed with the Clerk of the Board, the Clerk will provide additional information regarding procedures. If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within 30 calendar days after notice is mailed that the Board declined to hold a final review conference.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.

STAFF ASSESSMENT

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (SCDHEC)
DIVISION OF WATER QUALITY
WATER QUALITY CERTIFICATION AND WETLANDS SECTION

I. Background Information

Applicant: South Carolina Electric & Gas (SCE&G) **P/N Number:** PN 2007-1852-SIR (Revised)

P/N Date: June 7, 2011 **Date Received:** June 7, 2011 **P/N Close:** July 7, 2011

Section of Applicable Federal Law: **(x)** Section 10
(x) Section 404
(x) Section 401

Section of Applicable State Law: **(x) Coastal Zone Consistency**
(x) Construction in Navigable Waters

Brief explanation and purpose of activity:

The proposed activity consists of placement of fill in Waters of the United States (WUS) for the construction of two (2) new nuclear power units and their ancillary facilities at the site of the existing V.C. Summer Nuclear Station (VCSNS). The proposed activity also includes the clearing of wetlands and the crossing of State Navigable Waters for the construction of six (6) new transmission lines. According to the applicant, the project purpose is to provide additional baseload electric generating capacity by 2016 and 2019 within the service territories of SCE&G and Santee Cooper.

Waterbody Names:
Fill Impacts: Unnamed tributary to Mayo Creek and adjacent wetlands, Monticello Reservoir, and Parr Reservoir (Broad River).

Aerial Crossing Impacts: Big Cedar Creek, Broad River, Bull Swamp Creek, Catawba River, Caw Caw Swamp, Congaree Creek, Edisto River, Fishing Creek, Fourteenmile Creek, Little River, Little Rocky Creek, Little Salkehatchie River, North Fork Edisto River, Parr Reservoir, Rocky Creek, Salkehatchie River, Saluda River, and Twelve Mile Creek.

Water Classification: FW

Waterbody Location: The project is located at 14368 State Highway 213, near the town of Jenkinsville, in Fairfield County, South Carolina (Latitude: 34° 17.903' N, Longitude: -81° 17.923' W). The proposed transmission lines will pass through Calhoun, Chester, Colleton, Dorchester, Fairfield, Hampton, Lancaster, Lexington, Newberry, Orangeburg, and Richland Counties.

Waterbody on 2010 303(d) List?
(x) Yes
See Table 1 below for more information.
( ) No

Table 1. SCDHEC Monitoring Stations in the Vicinity of the Proposed Project on the 2010 303(d) List.

WATERBODY	STATION ID	COUNTY	USE*	CAUSE*
Big Cedar Creek	*B-320*	Richland	REC*	FC*
Broad River	*B-236*	Fairfield	AL	CU
Catawba River	*CW-016F*	Chester	AL	TN, TP
Congaree Creek	*C-070*	Lexington	REC	FC
Fishing Creek	*CW-233*	Chester	REC*	FC*
Fourteenmile Creek	*S-294*	Lexington	AL, REC*	BIO, FC*
Little River	*B-145*	Fairfield	REC*	FC*
Little River	*B-350*	Richland	REC*	FC*
Little Salkehatchie River	*CSTL-120*	Colleton	FISH	HG
Monticello Reservoir	*RL-04374*	Fairfield	AL	pH
North Fork Edisto River	*E-007*	Orangeburg	AL, FISH	pH, HG
North Fork Edisto River	*E-007B*	Orangeburg	REC	FC
Parr Reservoir	*B-346*	Newberry	AL	TP
Saluda River	*S-149*	Lexington	AL, REC*	TURBIDITY, FC*
Saluda River	*S-298*	Lexington	REC	FC
Twelve Mile Creek	*S-052*	Lexington	AL	BIO

LEGEND

USE: Use support impairment for aquatic life and/or recreational uses.
AL: Aquatic Life Use REC: Recreational Use (Swimming) FISH: Fish Consumption

CAUSE: Parameter(s) that resulted in impaired use denoted as follows:
FC: Fecal Coliform Bacteria HG: Mercury TN: Total Nitrogen
CU: Copper TP: Total Phosphorus BIO: Macroinvertebrate
pH: Hydrogen Ion Concentration TURBIDITY: Turbidity

*Indicates that a Total Maximum Daily Load (TMDL) has been developed and approved for the listed impairment.

II. Project Description

The proposed project was previously advertised in a Public Notice issued on April 28, 2010, and has been revised as described below. The proposed work consists of the construction of two (2) new nuclear power units and their ancillary facilities at the site of the existing VCSNS. The proposed work also includes the construction of six (6) new transmission lines to be installed within five (5) different routes, totaling approximately 396 miles through portions of 11 counties in South Carolina. Transmission line routes are as described below:

1) VCS1-Killian 230kV Line—ties to SCE&G's existing Killian substation, located approximately 1.5 miles south of the intersection of SC Highway 555 and Killian Road in Richland County.
2) VCS2-Lake Murray 230 kV Line—ties to SCE&G's existing Lake Murray 230 kV substation; adjacent to the Saluda Hydro and McMeekin generating stations.
3) VCS2-St. George 230 kV Line #1;
4) VCS2-St. George 230 kV Line #2—Routes 3 and 4 (both St. George lines) will run in separate, existing SCE&G right of way (ROW) corridors to a location near SCE&G's existing Lake Murray 230 kV substation. These two (2) lines will not tie to the Lake Murray substation, but will converge and then

run in a common, existing SCE&G ROW corridor until they reach SCE&G-owned property in St. George, where the future St. George 230 kV substation will be constructed. The future substation will be located approximately one (1) mile east of the intersection of Interstate 95 and US Highway 78 in Dorchester County.

5) VCSNS-Flat Creek 230 kV Line—extending approximately 72 miles in a generally northeast direction from VCSNS to the existing Flat Creek station located in Lancaster County. This proposed line will connect the existing Winnsboro and Richburg 69 kV stations prior to terminating at the existing Flat Creek 230/69 kV station. Approximately 55 miles of this line are located within existing Santee Cooper-maintained ROW, with the remaining 17 miles requiring new ROW parallel and adjacent to the existing ROW.
6) VCSNS-Varnville 230 kV Line—extending approximately 167 miles in a generally southern direction from VCSNS to the existing Varnville station located in Hampton County. The proposed line will connect and have taps along the way at an existing 69 kV station at Pomaria, and at the existing 115 kV stations at Sandy Run, Orangeburg, and Byrds, prior to terminating at the Varnville 230/69 kV station. Approximately 145 miles of this line are located within existing Santee Cooper-maintained ROW. A majority of the remaining 22 miles of the Varnville line consists of new ROW parallel and adjacent to existing ROW.

The proposed project will result in impacts to 30.87 acres of wetlands and WUS. In detail, the proposed project will involve: 1) Permanent impacts to 774 linear feet (0.11-acre) of stream and 0.26-acre of freshwater wetlands to construct one (1) of four (4) cooling towers associated with a proposed water circulating system; 2) Excavation and fill within open waters of Monticello Reservoir and Parr Reservoir (Broad River) that would result in 0.83-acre of temporary impact and 0.14-acre of permanent impact from the installation of a proposed raw water system intake structure and a proposed wastewater discharge diffuser; 3) Construction of the transmission lines described above will require converting 29.53 acres (22.72 acres of SCE&G ROW, and 6.81 acres of Santee Cooper ROW) of forested wetlands to non-forested wetlands due to clearing; 4) The new transmission lines will cross 18 State Navigable Waters at 30 different locations. Of these 30 crossings, 15 will involve the removal and replacement of existing transmission line crossings within existing ROWs; ten (10) will involve the addition of new transmission line crossings within existing ROWs; and five (5) will involve the expansion of existing ROWs and the addition of new transmission line crossings. The proposed impacts will be explained in further detail later in this section.

Mitigation for the above impacts is proposed to be provided through the combination of permittee-responsible mitigation and purchase of credits from Grove Creek Mitigation Bank. A total of 3,745 stream compensatory mitigation credits will be required for stream impacts, all of which occur on the VCSNS site. Additionally, 326.2 wetland compensatory mitigation credits will be required for wetland fill and clearing impacts on the nuclear station site and within the transmission line ROWs. Of the 326.2 wetland credits, 3.25 credits are required as a result of impacts on the nuclear station site. The remaining 322.95 credits are associated with transmission line clearing impacts.

The applicant has applied for a Section 401 Water Quality Certification from the SCDHEC, a Section 404 Permit from the United States Army Corps of Engineers (USACE), and a combined Construction and Operating License (COL) from the Nuclear Regulatory Commission (NRC). Pursuant to the requirements of the National Environmental Policy Act (NEPA), the NRC, along with the USACE as a cooperating agency, completed and issued a Final Environmental Impact Statement (FEIS) for the proposed work associated with this project. The FEIS was made available to the public on April 19, 2011, and addresses the project's purpose and need; a comparative analysis of the range of project alternatives considered by the applicant as well as by the agencies in preparing the FEIS; and identifies environmental impacts that would likely result from the construction of each reasonable alternative. Information in the FEIS was used in the SCDHEC's review of the proposed project.

Description of Proposed Impacts

Cooling Tower Construction: SCE&G is proposing to construct and operate two (2), new Westinghouse AP1000 advanced light water reactors, which require a 150-acre "tabletop" area—a continuous development footprint, over which an essentially constant topographic elevation is necessary for the construction of the new nuclear units and their associated support buildings (including cooling towers). The construction of this "tabletop" area will involve the filling of 0.26-acre of wetlands and 774 linear feet (0.11-acre) of an unnamed tributary to Mayo Creek in order to create the needed grade. The impacted stream and wetland areas will be excavated to a designed channel shape, lined with geotextile fabric, filled bank run sand, and covered with the native material used for the construction of the "tabletop" area. Additionally, an eight (8)-inch, perforated Schedule 80 PVC pipe wrapped in a fabric sock will be installed in the contour of the channels. These measures will allow water to drain from the impacted stream and wetland areas.

Intake Structure and Discharge Diffuser: SCE&G is proposing to construct a raw water system (RWS) intake structure, an offsite water system (OWS) intake structure, and an OWS discharge pipe within Monticello Reservoir. Additionally, SCE&G is proposing to construct a waste water system (WWS) discharge diffuser in the Parr Reservoir. These structures will involve excavation and fill within Monticello Reservoir and Parr Reservoir, temporarily impacting 0.83-acre of open waters, and permanently impacting 0.14-acre of open waters.

Specifically, the RWS intake structure will permanently impact 0.11-acre, and temporarily impact 0.07-acre of Monticello Reservoir. A temporary 181' by 85' (25' thick on one [1] side, 10' thick on the other two [2] sides) sheet pile cofferdam will be constructed prior to the installation of the intake structure, and will be removed upon completion. Fill associated with the RWS intake structure will extend approximately 85' beyond Monticello Reservoir's Ordinary High Water Mark (OHWM), and will consist of 54.5' wide concrete channel. The top of the concrete structure will be angled to mimic the lake floor (sloping up toward the lakeshore), and the bottom will be angled down toward the shoreline (cutting into the natural lake bottom) in order to create a gravity fed channel into a 58.5' by 39.5' by 60' intake structure with a pump deck. Permanent sheet piling wing walls will be constructed on either side of the RWS intake structure.

The OWS intake structure will permanently impact 0.01-acre, and temporarily impact 0.64-acre of Monticello Reservoir. A temporary 252' by 110' by 25' rock-filled sheet pile cofferdam will be constructed prior to the installation of the intake structure, and will be removed upon completion. The intake structure will extend approximately 186.7' beyond OHWM with a 14" intake pipe. A maintenance access pier will be constructed over the pipeline and intake structure, with five (5) sets of concrete pile below the OHWM.

The OWS discharge pipe will extend approximately 118 feet into Monticello Reservoir with an eight (8)-inch diameter pipe and an upright outlet. Approximately 52.9 cubic yards (0.02-acre) of material will be dredged for the installation of the pipe, and 50.2 cubic yards of material will be backfilled once the pipe is installed. The discharge pipe's outlet will be approximately ten (10) feet below the OHWM.

The WWS discharge diffuser will permanently impact 0.02-acre, and temporarily impact 0.1-acre of Parr Reservoir (Broad River). The applicant is proposing to dredge 4,030.1 cubic yards of material in order to install the 36-inch WWS high-density polyethylene discharge pipe. 1,332.6 cubic yards of seal concrete will be placed below the proposed discharge pipe, and 2,697.5 cubic yards of dredged material will be backfilled once the concrete and pipe is installed. A 50' by 200' temporary stockpile area with erosion control measures will be located on uplands adjacent to the work area to store dredged materials until it is needed for backfill. The discharge pipe will extend approximately 258 feet beyond Parr Reservoir's OHWM, and the diffuser ports will be approximately 20' below the OHWM. 25.9 cubic yards of riprap will be placed in a 10' by 70' area around the discharge header and diffuser ports, flush with the existing reservoir bottom. A temporary 20' by 258' sheet pile cofferdam will be constructed around the installation area, and will be removed upon completion of the diffuser.

New/Expanded Transmission Line ROW: SCE&G and Santee Cooper will construct approximately 396 corridor miles of new transmission lines to transmit the additional baseload electricity that will be provided by the two (2) new nuclear units. Approximately 350.5 of the 396 corridor miles will be located within existing transmission line ROWs. SCE&G will construct approximately 157 corridor miles of transmission lines, with approximately 151 miles being within existing ROW. SCE&G will clear and maintain the ROWs, which will involve converting 22.72 acres of forested wetlands to non-forested wetlands. Santee Cooper will construct approximately 239 corridor miles transmission lines, with approximately 199.5 corridor miles within existing ROW, 38.9 corridor miles adjacent and parallel to existing maintained ROW, and 0.6-corridor mile of new ROW not adjacent to existing ROW. Santee Cooper will also clear and maintain the ROWs, which will involve converting 6.81 acres of forested wetlands to non-forested wetlands. A total of 29.53 acres of forested wetlands will be converted to non-forested wetlands for the maintenance of the new or expanded transmission line ROWs.

Transmission Line Crossings Over State Navigable Waters: The new transmission lines will cross 18 State Navigable Waters at 30 different locations. Of these 30 crossings, 15 will involve the removal and replacement of existing transmission line crossings within existing ROWs; ten (10) will involve the addition of new transmission line crossings within existing ROWs; and five (5) will involve the expansion of existing ROWs and the addition of new transmission line crossings.

Table 2. Proposed Transmission Line Crossings Over State Navigable Waters.

X-ING #	WATERBODY	COUNTY	LATITUDE	LONGITUDE	ROW	CLEARANCE
1	Little River	Fairfield	N34° 19' 6.5"	W81° 15' 20.6"	Existing[1]	68.23'
2	Broad River	Fairfield/ Richland	N34° 14' 15.39"	W81° 18' 23.85"	Existing[1]	59.54'
3*	Broad River	Fairfield/ Newberry	N34° 15' 26.37"	W81° 19' 41.3"	Existing[1]	72.60'
4	Saluda River	Lexington	N34° 2' 47.61"	W81° 10' 59.37"	Existing[1]	47.76'
5	Twelve Mile Creek	Lexington	N34° 2' 6.91"	W81° 9' 41.05"	Existing[1]	51.28'
6*	Saluda River	Lexington/ Richland	N34° 1' 10.09"	W81° 6' 1.56"	Existing[1]	39.72'
7	Saluda River	Lexington/ Richland	N34° 0' 42.98"	W81° 4' 55.93"	Existing[1]	57.36'
8	Congaree Creek	Lexington	N33° 55' 47.46"	W81° 5' 17.89"	Existing[1]	46.76'
9	Caw Caw Swamp	Orangeburg	N33° 36' 35.8"	W80° 52' 48.46"	Existing[1]	34.82'
10	Little River	Fairfield	N34° 16' 26.4"	W81° 14' 38.4"	Existing[1]	76.6'
11	Rocky Creek	Chester	N34° 36' 0"	W80° 57' 57.6"	Existing[2]	59.3'
12	Little Rocky Creek	Chester	N34° 35' 24"	W80° 58' 1.2"	Existing[2]	83.5'
13	Fishing Creek	Chester	N34° 40' 12"	W80° 56' 31.2"	Expanded[3]	39.8'
14	Catawba River	Chester/ Lancaster	N34° 40' 26.4"	W80° 52' 48"	Expanded[3]	63.66'
15	Little Salkehatchie River	Colleton	N32° 54' 39.6"	W80° 52' 22.8"	Existing[1]	48.3'
16	Bull Swamp Creek	Orangeburg	N33° 37' 15.6"	W81° 2' 52.8"	Existing[1]	40.7'
17	Fourteenmile Creek	Lexington	N34° 1' 22.8"	W81° 10' 19.2"	Existing[2]	37.5'
18	Saluda River	Lexington	N34° 2' 42"	W81° 10' 1.2"	Existing[2]	50.5'
19	Broad River	Richland	N34° 14' 13.2"	W81° 18' 50.4"	Existing[1]	63.5'
20	Broad River	Richland	N34° 5' 24"	W81° 6' 18"	Existing[1]	50.3'
21	Salkehatchie River	Colleton/ Hampton	N32° 51' 43.2"	W80° 55' 44.4"	Existing[1]	35.89'
22	North Fork Edisto River	Orangeburg	N33° 30' 15.19"	W80° 54' 21.22"	Existing[2]	43.5'

23	North Fork Edisto River	Orangeburg	N33° 30' 16.91"	W80° 54' 20.62"	Existing[2]	43.5'
24	North Fork Edisto River	Orangeburg	N33° 30' 23.75"	W80° 54' 18.6"	Existing[2]	42.3'
25	North Fork Edisto River	Orangeburg	N33° 27' 25.2"	W80° 52' 26.4"	Existing[2]	43.9'
26	North Fork Edisto River	Orangeburg	N33° 27' 18"	W80° 52' 8.4"	Existing[2]	40.9'
27	Edisto River	Dorchester/ Colleton	N33° 6' 32.4"	W80° 40' 26.4"	Existing[1]	40.37'
28	Big Cedar Creek	Richland	N34° 10' 58.8"	W81° 6' 50.4"	Expanded[3]	45.7'
29	Little River	Fairfield/ Richland	N34° 12' 57.6"	W81° 10' 48"	Expanded[3]	43.6'
30	Parr Reservoir	Newberry	N34° 16' 48"	W81° 20' 31.12"	Expanded[3]	51.3'

CLEARANCE refers to the height of the lowest sag point of the proposed transmission line's conductor over the OHWM of the crossed waterbody.
*These crossings are over two (2) different channels of the same waterbody, separated by an island. For the purposes of this Staff Assessment, these crossings are counted as only one (1) crossing.
[1]The existing transmission line crossing in an existing ROW will be removed and rebuilt, and the proposed new lines will be added to the rebuilt poles.
[2]The existing transmission line crossing in an existing ROW will remain, and the proposed new transmission line crossings will be added to the existing ROW.
[3]The existing transmission line crossing in an existing ROW will remain, the existing ROW will be expanded in width, and the proposed new transmission line crossings will be added.

A. Fill

1. Is fill required?

(x) Yes

Amount	Cubic Yards	Acres
Total	26,705.2	1.34
Wetlands	10,903.2	0.26
Open Waters of U. S.	15,802	1.08

( ) No. If no, proceed to Section II. B.

2. Is the fill temporary?

(x) Yes

8,111.1 cubic yards of fill will be placed in Open Waters of the U.S. to construct a temporary cofferdam during the installation of the OWS intake structure in Monticello Reservoir. The fill materials used to construct the temporary cofferdam will be completely removed upon completion of the intake structure. The rest of the proposed fill will be permanent.

( ) No

B. Excavation

1. Is excavation required?

(x) Yes, temporarily

Amount	Cubic Yards	Acres
Total	11,715.5	0.71
Wetlands	2,450	0.26
Open Waters of U. S.	9,265.5	0.45

( ) No. If no, proceed to Section II. C.

2. Is dredge spoil site adequately sized for the amount of material?

(x) Yes

( ) No

C. Other Impacts

(x) Yes

(x) Cleared wetlands

The creation of new or expanded maintained transmission line ROW will involve the permanent clearing of 29.53 acres of forested wetlands.

( ) Flooding wetlands

( ) Navigation

( ) No

D. Project Modification

1. Was the project modified from the original public notice?

( ) Yes

(x) No

E. Compensatory Mitigation

1. Is compensation required by SCDHEC?

(x) Yes

As compensatory mitigation for unavoidable impacts associated with the proposed project, the applicant must provide a total of 3,745 stream compensatory mitigation credits, and 326.2 wetland compensatory mitigation credits. Of the 326.2 wetland credits, 3.25 credits are required as a result of impacts on the nuclear station site. The remaining 322.95 credits are associated with transmission line clearing impacts. All of the stream impacts will occur on the VCSNS site. All of the required stream credits, as well as the 3.25 wetland credits required for impacts at the VCSNS site, will be obtained from Grove Creek Mitigation Bank. Since there was not a sufficient quantity of wetland mitigation credits available at existing mitigation banks, the remaining 322.95 wetland credits associated with transmission line clearing impacts will be provided through a proposed Permittee-Responsible Mitigation (PRM) plan.

A total of 329.44 wetland mitigation credits will be generated from three (3) sites located in the Broad and Saluda River Watersheds. The Crane Creek tract, located northeast of the intersection of Fairfield Road and Sharp Road, north of Columbia in Richland County, serves the Lower Broad River watershed, which comprises a total drainage area of 67 square miles. The Sandy Fork tracts are located north of the intersection of South Carolina Highway 215 North and Harden Road in Fairfield County, approximately ten (10) miles upstream of the Upper Broad River. Sandy Fork is a headwater stream that discharges to Beaver Creek and then the Upper Broad River. The Bush River tract is located south of the intersection of North Main Street and Whitmire Highway, near the town of Joanna in Laurens County, within the Saluda River watershed.

Of the total mitigation credits provided in the PRM plan, 288.88 (88%) credits will be generated from either restoration or enhancement activities at the three (3) mitigation sites listed above, which will include: 1) plugging ditches to restore or enhance hydrology; 2) removal of fill material to restore natural topographic features; 3) removing pine plantation vegetation and replacing with bottomland hardwood species to restore wetland vegetation characteristics; and 4) enhancing existing wetlands by removal and control of exotic and invasive species. The remaining 40.56 credits will be obtained by preserving wetlands with appropriate upland buffers. The applicant provided a mitigation work plan, maintenance plan, definitive performance standards, and a monitoring plan in the "Permittee-Responsible Conceptual Mitigation Plan" dated May 24, 2011. A five (5) year overall schedule for detailed monitoring events will be set up for each of the three (3) locations. Water quality parameters, vegetation growth rates, presence of exotics and invasive plant species, and hydrologic characteristics will be measured and the data provided for review on an annual basis. A long-term management plan, adaptive

management measures, and financial assurances are also provided in the May 24, 2011, PRM plan. Restrictive covenants or conservation easements will be used as permanent protective mechanisms for each property. During the course of the monitoring period, adaptive management measures will include: manipulating ground water levels to provide a lower or higher water table; replacing dead or dying planted trees and shrubs; and/or finding additional mitigation opportunities to meet the credit requirement in the event of failure of one (1) or more of the mitigation tracts.

( ) **No**

F. Remediation

1. **Is remediation required?**
   ( ) **Yes**
   (x) **No**

G. Nonpoint Source Concerns

1. **Are water quality impacts from nonpoint sources expected?**
   ( ) **Yes**
   (x) **Temporary**
   Water quality impacts from non-point sources will be minimized and should not contravene the water quality standards or existing and classified uses of the involved waterbodies, if the applicant adheres to the conditions in Section VIII of this Staff Assessment during and after the project.
   ( ) **No**

2. **Are any enforceable nonpoint controls required by SCDHEC?**
   (x) **Yes**
   Water quality impacts from nonpoint sources will be minimized and should not contravene the water quality standards or existing and classified uses of the involved waterbodies, if the applicant adheres to the conditions in Section VIII of this Staff Assessment during and after the project. Additionally, the applicant has prepared Storm Water Pollution Prevention Plans, and coverage under the SCDHEC's Stormwater General Permit has been authorized.
   ( ) **No**

III. Environmental Assessment

A. Is the proposed activity water dependent?
(x) **Yes**
( ) **No**

B. Are there feasible alternatives to the proposed activity?
( ) **Yes**
(x) **No**
According to the applicant, the No Action Alternative would prevent SCE&G and Santee Cooper from providing an increase in baseload power. Electricity demand in South Carolina is expected to increase about 2.0% annually for the foreseeable future. If SCE&G and Santee Cooper are unable to maintain an adequate reserve margin through an increased baseload, they would not be able to handle unexpected load requirements from events such as unit outages, adverse weather conditions, unexpected demand, or an unplanned loss in the transmission system. SCE&G and Santee Cooper would also be at potential variance with their public service obligations to provide sufficient power within their respective service territories. For these and

other reasons provided by the applicant, the No Action Alternative was not determined to be a feasible alternative to the proposed project.

According to the applicant, site selection for the proposed nuclear units was conducted in accordance with the overall process outlined in the Electric Power Research Institute (EPRI) Siting Guide: Site Selection and Evaluation Criteria for an Early Site Permit Application (EPRI 2002). Using this process, SCE&G considered multiple types of sites to include a federal nuclear facility site (Savannah River Site), an existing nuclear power plant site (VCSNS), and 18 other candidate sites with no existing nuclear facilities. There were 10 categories of screening-level criteria for the site selection process: cooling water supply, flooding, population, hazardous land uses, ecology, wetlands, railroad access, transmission access, geology/seismic, and land acquisition. Each site was assigned a score of one (1), least suitable, to five (5), most suitable, for each criterion, and each criterion was weighted based on importance. Overall, the VCSNS site received the highest composite score and was found to be a superior location. The information for each site and the site selection process can be found in the report "Nuclear Plant Site Selection Study" (Tetra Tech 2009). According to the applicant, the benefits of utilizing the existing VCSNS site included: 1) The environmental conditions and the environmental impacts of the VCSNS are known, which would make it easier to estimate the impacts of additional units; 2) Construction of extensive new transmission corridors could be avoided if the existing transmission system can accommodate the increased power generation, reducing the impacts of constructing the new plant; 3) The site has already been subject to the alternative review process mandated by NEPA and found to be acceptable; 4) Site physical criteria, including primarily geologic/seismic suitability, have already been characterized at VCSNS; 5) No additional land acquisitions would be necessary if a new transmission corridor could be avoided, and the site can accommodate the land requirements of the new units; 6) Plant construction, operation, and maintenance costs would be reduced because of existing site infrastructure and maintenance.

Once it was determined that the existing VCSNS would be the best site for the new nuclear units, three (3) alternate "tabletop" locations within the VCSNS Project Boundary Line (PBL) were considered. As discussed in the Project Description above, the "tabletop" is the 150-acre continuous development footprint, over which an essentially constant topographic elevation is necessary for the construction of the new nuclear units and their associated support buildings. The three (3) tabletop sites considered were the only potential areas within the PBL of at least 150 acres that have optimal geotechnical features (level rock throughout) and would not involve extensive relocation and moving of existing overhead transmission lines or extensive jurisdictional waters impacts. Alternate Site 1 was determined to be unfeasible because a 1.44-acre wetland would have probably had to be filled to obtain proper grading, the terrain slopes down to Parr Reservoir and away from structurally sound ground, and the cooling tower would be significantly further from the cooling water source (Monticello Reservoir) than the preferred alternative. Alternate Site 2, which encompasses the preferred alternative and an additional small area to the southeast, would avoid all jurisdictional impacts. However, this alternative would require more extensive filling and grading to achieve the needed topography, and the cooling towers would be located too far from the proposed reactors, which would result in a dramatic decrease of the cooling system's efficiency. Therefore, Alternate Site 2 was deemed to be unfeasible. Alternate Site 3 was determined to be unfeasible because it would have impacted 4,500 linear feet of stream (including Mayo Creek), the cooling tower would also have to be significantly further from Monticello Reservoir than the preferred alternative, and using the site would require the construction of a new rail spur from the existing line to the site, which would likely result in further impacts to Mayo Creek for a railroad crossing. Therefore, the proposed "tabletop" location, with its associated impacts of 774 linear feet of an unnamed tributary to Mayo Creek and 0.26-acre wetlands, was determined to be the only feasible alternative for the location

of the reactors and cooling towers.

The proposed transmission line corridors have also been determined to be the least environmentally damaging feasible alternative. In August 2008, SCE&G conducted transmission line siting studies and completed a report entitled "V.C. Summer Nuclear Station Units 2 and 3 Transmission Line Siting Study," that described potential routes for the four (4) new 230 kV transmission line circuits that must be built to add the generated electrical capacity of VCSNS Units 2 and 3. SCE&G engineers, transmission system planners, and real estate professionals conducted comprehensive investigations to determine how existing SCE&G transmission line ROWs could be utilized to the maximum extent practicable as routes for the four (4) new 230 kV circuits. This study found that virtually all of the new lines could be built on existing ROWs. Only one (1), six (6) mile long segment of the proposed VCS1-Killian 230 kV Line will require new ROW, and SCE&G completed a comprehensive transmission line siting study to select the route for this segment.

Santee Cooper also performed a feasible alternatives analysis for its portion of the proposed transmission lines. Santee Cooper considered economics, environmental impact, safety, system reliability, and long-range implications to the transmission system while selecting the route for the new transmission lines. Santee Cooper considered the following general options when evaluating transmission line routing alternatives: underground, overhead in a new ROW, overhead in new ROW adjacent and parallel to existing maintained ROW, or overhead within an existing maintained ROW. Santee Cooper determined that routing transmission lines within existing ROW corridors to the greatest extent possible would be the best option to reduce impacts to natural resources. Utilizing the existing VCSNS site will allow Santee Cooper to use more existing ROW than the other nuclear station site options. A total of 199.5 miles of the combined proposed VCSNS-Flat Creek and VCSNS-Varnville transmission lines currently consist of maintained transmission ROW. The remaining 39.5 miles of proposed new ROW primarily consists of wooded areas and agricultural properties adjacent and parallel to existing maintained transmission ROW. Santee Cooper determined that its proposed transmission line routes are the least damaging environmentally feasible alternative.

C. Water Quality Assessment

1. Numeric Standards Contraventions?

( ) Yes

( ) No

(x) Temporary

Ambient conditions should resume once work is completed. Water quality standards will not be contravened, and designated uses will not be changed. Potential adverse impacts to water quality can be minimized through the use of best management practices, and the conditions described in Section VIII of this Staff Assessment. Additionally, the applicant is currently going through the review process for its application for a National Pollutant Discharge Elimination System (NPDES) Permit from the SCDHEC. This process will ensure that the discharge from the WWS discharge diffuser will not cause water quality standard contraventions. The applicant has also submitted a water quality monitoring plan, which will involve measuring temperature, dissolved oxygen, specific conductivity, and pH on a monthly basis at various locations within Parr Reservoir and the Broad River beginning in 2011 and continuing for five (5) years after full power operation of both Units 2 and 3. SCE&G will present the water quality data in an annual report, which will also include USGS data for that year. This water quality monitoring should also ensure that the proposed project does not cause water quality standard contraventions.

IV. Public Comments Received and Summary of Comments

A. S. C. Department of Natural Resources (SCDNR)
Date: July 21, 2011, October 19, 2011

In a letter dated July 21, 2011, the SCDNR described its coordination with the applicant throughout the application process to resolve concerns about evaporative losses from the cooling towers and why Monticello Reservoir was not an alternative for the proposed WWS discharge diffuser. The SCDNR also discussed several concerns the agency still has regarding the subject project. These included the potential for adverse water quality impacts in Parr Reservoir and the Lower Broad River from the thermal and chemical effluent to be discharged into the Parr Reservoir from the WWS discharge diffuser, including the potential for heavy metals and other constituents to accumulate in sediments where they may become resuspended in the water column. SCDNR also discussed concerns that the thermal plume and sedimentation may limit fish passage in the right side channel of Parr Reservoir during low flows. SCDNR requested information regarding a sediment management plan to address sediment buildup in the Parr Reservoir. SCDNR stated that they have requested consultation with the SCDHEC during its review of the NPDES Permit application, as well as courtesy notification of water quality excursions and ongoing communication with the SCDHEC to ensure that appropriate monitoring and safeguards are in place to protect water quality. The SCDNR stated that they coordinated with the applicant and its consultants during the transmission line corridor site selection, and were assured that neither state or federal rare, threatened, or endangered species nor state conservation priority species were discovered within the proposed transmission line corridors. The SCDNR requested consultation in the event that any state threatened, endangered, or priority conservation species are discovered during construction or maintenance of the corridor. The SCDNR noted several deficiencies in the applicant's mitigation credit calculations, particularly regarding the temporal loss and net improvement factors. The SCDNR noted that it attended an interagency meeting and site visit on July 7, 2011, and July 12, 2011, respectively, and that consultants for the applicants had stated that the mitigation calculations would be revised to reflect adjusted temporal loss and net improvement factors. The SCDNR noted that these revisions would bring the total number of proposed wetland mitigation credits below the required 326.2 credits, and that additional mitigation would be necessary. Finally, the SCDNR stated that given assurance of the applicant's commitment to continued coordination and consultation, the SCDNR does not object to permit issuance, as long as seven (7) stipulations are included as certification conditions.

In an email submitted to the SCDHEC on September 16, 2011, the applicant provided a list of chemical constituents and effluent characteristics that will be present in the WWS discharge; an Additional Information Request response sent to the Federal Energy Regulatory Commission (FERC) in March 2011, which includes additional technical information about the blowdown discharge that will be released from the WWS discharge diffuser; a list of proposed monitoring plans for water quality, fish populations, macroinvertebrate populations, and sediment characteristics; and responses to each agency's specific concerns.

The applicant stated that an additional 2.39 wetland preservation credits will either be purchased from Grove Creek Mitigation Bank, or will be added to one of the three (3) sites in the PRM plan. The applicant also concurred with all of the SCDNR's requested certification conditions, with the exception of the condition that states, "*To the greatest extent practicable, clearing of riparian vegetation within wetlands and waters of the U.S. must be conducted manually and low growing, woody vegetation and shrubs must be left intact to maintain stream bank stability and reduce erosion. Right-of-ways through and adjacent to wetlands should be maintained by hand clearing rather than with chemicals to reduce the potential for contamination of downstream aquatic resources.*" According to the applicant, it maintains a Right-of-Way Management Plan, which outlines the Transmission Vegetative Management Program. One of the practices listed in the document is the use of United States Environment

Protection Agency (USEPA)-approved herbicides. The applicant stated that it plans to continue this practice in the future, and that it has made every effort to minimize impacts to jurisdictional waters of the U.S. with the siting and routing process, as well as the careful management of construction and significant restrictions on maintenance. The applicant stated that it avoided impacts to jurisdictional waters by using existing transmission corridors, some of which have been maintained for over 60 years. Therefore, the applicant stated that "*any further restriction of the current regulated, safe, prudent, and limited application of herbicides should be unnecessary.*" The applicant declined the request for the elimination of herbicide use for the management and maintenance of transmission corridors.

In a letter to the SCDHEC dated October 19, 2011, the SCDNR stated that through additional coordination with the applicant, SCE&G has revised the proposed Macroinvertebrate Study Plan to include an additional transect in Parr Reservoir. The applicant also revised the Fish Survey Study Plan to include an additional five (5) years of fish sampling after the commencement of operation of a fish passage facility, in the event that a fish passage facility is installed at Parr Dam. SCDNR stated that their concerns have been adequately addressed, as long as the original seven (7) stipulations are included as certification conditions, and that an additional stipulation stating that the SCDNR will be notified in the event of a water quality excursion is added. The SCDHEC will include the new stipulation, as well as six (6) of the other requested stipulations as certification conditions. The SCDHEC has reasonable assurance that as long as the applicant is using USEPA-approved herbicides in a recommended, responsible, and limited manner, water quality standards and existing uses of waterbodies adjacent to ROW maintenance areas will be maintained.

B. U. S. Fish and Wildlife Service (USFWS)
Date: August 1, 2011

In a letter dated August 1, 2011, the USFWS stated that they concur that the proposed project is not likely to adversely affect federally endangered, threatened, or proposed species nor result in adverse modification to designated or proposed critical habitat. The USFWS discussed its coordination with applicant throughout the various permitting processes, and stated that the current project proposal addressed their concerns with the location of the proposed transmission lines. However, the USFWS stated that it remains concerned over the proposed thermal and chemical discharges to the Parr Reservoir, and how they will affect migrating and spawning diadromous fish. The USFWS also stated that they remain unclear about the amount of discharged chemicals that will enter the Parr Reservoir from the WWS Discharge Diffuser, and recommended a thorough evaluation of the proposed chemical constituents associated with the project's discharge into Parr Reservoir. The USFWS stated that they believe macrobenthic populations downstream of the discharge will be impaired by the proposed chemical discharges, and stated that the discharge may be inconsistent with the *Santee River Basin Accord*. The USFWS offered no objection to the construction of the reactors or transmission lines, but stated that they remain concerned about the effluent discharge in the Parr Reservoir, and that they believe there has been an inadequate evaluation of the impacts to aquatic and terrestrial species from the proposed thermal and toxic chemical effluents. The USFWS recommended that alternatives that reduce the impacts to aquatic communities of the Broad River be investigated, and that the applicant seek less damaging alternatives for a thermal and chemical discharge in the Parr Reservoir.

In the September 16, 2011, submission discussed above, the applicant provided a complete list of effluent constituents, and mentioned that the additional effluent analysis was submitted in the NPDES permit application to the SCDHEC, and is currently under technical review at the SCDHEC. The applicant stated that even at low flows, up to 29,000 acre-feet/day in both generation and pump back water is exchanged between Monticello Reservoir and Parr Reservoir, which increase the mixing of the discharge, and will reduce its impacts on the Parr Reservoir and Broad River during low flow periods. Additionally, a chronic toxicity evaluation completed by Tetra Tech NUS determined that "*the relatively low modeled concentrations of blowdown constituents suggest negligible impacts from cumulative toxicity.*" The applicant stated that the thermal mixing zone for the blowdown discharge is small, and

that any thermal impacts would probably be highly localized. The applicant also referenced the Additional Information Request response submitted to FERC, which stated that chemicals in the discharge will not pose acute or chronic toxicological risks to aquatic receptors, including macroinvertebrates. Additionally, SCE&G has committed to initiate sediment monitoring, as mentioned above, that will focus on metals in sediments in the discharge area compared to data from a control location upstream. The applicant's evaluation also shows that the thermal plume should not block even the eastern channel of Parr Reservoir, and therefore does not believe that the discharge is inconsistent with the Santee Basin Diadromous Fish Accord.

In an email dated October 21, 2011, the USFWS stated that they will comment on the NPDES permit application, as the majority of their concerns will be addressed in the NPDES permitting process, and are not within the purview of the Section 401 Water Quality Certification process. However, the USFWS wished to reiterate its concern with the proposed discharge into Parr Reservoir and its potential and cumulative impacts on aquatic species. The SCDHEC believes the USFWS' concerns have been sufficiently addressed as they pertain to our review of the Section 401 Water Quality Certification application.

C. United States Environmental Protection Agency (USEPA)
Date: August 4, 2011

In a letter dated August 4, 2011, the USEPA stated that they appreciate the avoidance and minimization efforts of the applicant. However, the USEPA did have concerns about the mitigation plan, especially regarding the temporal loss and net improvement factors used in the applicant's calculations, and stated that the applicant had revised the calculations satisfactorily in a letter from the applicant's consultant dated July 19, 2011. The USEPA recommended that the additional 2.39 wetland credits be purchased from an existing mitigation bank. The USEPA stated that it was also concerned about the difference in the hydrological success criteria for wetland enhancement versus wetland restoration. The proposed success criteria for restoration were tied to jurisdictional status and comparison to reference wetland conditions, while the success criterion for enhancement was an increase in hydrology. The USEPA recommended that the enhancement success criteria also be tied to reference conditions to ensure that the proper hydrology is achieved at the enhanced sites. The USEPA also recommended that a specific performance criterion be set for privet removal at the Sandy Fork tract.

In the above-referenced response from the applicant, dated September 16, 2011, the applicant stated that an additional 2.39 wetland preservation credits would either be purchased from Grove Creek Mitigation Bank, or will be added to the PRM plan to increase the number of credits generated at the PRM sites. The applicant agreed to tie the enhancement success criteria to reference conditions, as requested, and stated that the enhancement reference wetland will likely be in the Gill's Creek watershed, just upstream of Bluff Road, where permanent protection of the reference area can be assured. The applicant stated that the wetlands at the enhancement reference site will be of similar kind to enhanced wetlands on the Crane Creek tract. The applicant stated that the restoration reference wetland will still be located on Crane Creek, just downstream of Wilson Boulevard. The applicant also agreed to make 100% removal of privet from the enhancement area on the Sandy Fork tract a success criterion.

In an email to the SCDHEC from the USEPA dated October 11, 2011, the USEPA stated that between the applicant's response and additional coordination between the USEPA and the applicant, all the concerns in the USEPA's August 4, 2011, letter had been addressed.

D. National Marine Fisheries Service (NMFS)

Date: July 25, 2011

In a letter dated July 25, 2011, the NMFS stated that they agree with the Charleston District of the USACE's determination that the project would not have substantial individual or cumulative adverse impacts on essential fish habitat (EFH) or federally managed fishery species, because the proposed project is upstream of areas designated as EFH. Therefore, the NMFS offered no comments under the Magnuson-Stevens Fishery Conservation and Management Act. The NMFS did provide comments and recommendations pursuant to authorities of the Fish and Wildlife Coordination Act. In previous letters to the NRC and the USACE, the NMFS indicated concerns regarding fish impingement and entrainment; thermal impacts; and water quality and quantity. On June 27, 2011, the NMFS' Protected Resources Division provided a letter completing consultation under the Endangered Species Act, which concluded that shortnose and Atlantic sturgeon are not likely to be adversely affected by the proposed action; and the analyses leading to that conclusion included assessments of thermal plumes, water quality and quantity, and likelihood of entrainment and impingement of eggs and larvae. The NMFS stated that its Habitat Conservation Division expects to continue to work with the applicant during the next several years regarding the operation of the Parr Shoals Dam and the Fairfield Pump Storage Facility, tied to the relicensing of the FERC license for those projects. In an email dated October 20, 2011, the NMFS provided a copy of the above-referenced June 27, 2011, letter for the SCDHEC. No response from the applicant was required.

V. Consistency with the Coastal Zone Management Program, R. 48-39-10 *et seq.*

A. Did the staff of the Office of Ocean and Coastal Resource Management (OCRM) find the project consistent with the S.C. Coastal Zone Management Program?

(x) Yes ( ) No ( ) N/A Date: October 18, 2011

( ) Per revisions

( ) Per conditions included in Section VIII.

( ) If no, provide Sections of Coastal Zone Management Program cited.

VI. Conclusion on Water Quality Impacts and Classified Uses

When evaluating the proposed work, the SCDHEC followed procedures for implementing Regulation 19-450 *et seq.*, 1976 Codes of Laws, Construction in Navigable Waters Permitting Program, as well as State 401 Water Quality Certification regulations pursuant to Section 401 of the Clean Water Act, 33 U.S.C. Section 1341, and the requirements of Regulation 61-101, Water Quality Certification.

Previous sections of this staff assessment have provided a description and evaluation of specific project impacts to jurisdictional waters of the State, and provided recommendations and modifications, when necessary, to ensure that the proposed work will not contravene water quality standards or change classified uses. The following analysis will address additional measures intended to avoid adverse impacts to water quality and other resources in the project area. The following analysis may also address other concerns raised by resource agencies or other commenting parties:

Feasible Alternatives

As discussed in Section III of this Staff Assessment, the proposed project is the least environmentally damaging feasible alternative, and is necessary to provide for future electricity demand in South Carolina.

Avoidance and Minimization

During the initial conceptual design of the arrangement and location of the cooling towers, a cluster of six (6) round mechanical draft towers (three [3] per unit) was expected to be necessary. Conceptual design evolution

resulted in decreasing the number of needed cooling towers to four (4) (two [2] per nuclear unit), which reduced the area needed for the "tabletop" by one-third, and therefore reduced the need for additional wetland and stream fill. The proposed location and arrangement of the cooling towers minimized the impacts to the onsite jurisdictional waters to the maximum extent possible.

Potential routes considered for SCE&G's portion of the new transmission line corridor would have resulted in approximately 127.8 acres of clearing impacts to wetlands, and would have required the acquisition of new ROW. By utilizing existing ROW to the maximum extent possible (of 157 corridor miles of proposed new transmission lines, 151 miles will be located within existing ROW), SCE&G's proposed transmission corridors will result in clearing impacts to approximately 22.72 acres, impacting 105 acres less than other considered alternative routes. Santee Cooper also minimized impacts for their portion of new transmission line corridor by utilizing existing ROWs to the maximum extent possible. Of the approximately 239 corridor miles of proposed new transmission lines, approximately 39.5 miles consist of new ROW. The majority of this new ROW was designed to be adjacent and parallel to existing Santee Cooper-maintained ROW, reducing the impacts of creating new ROW in a previously undisturbed area. Less than one (1) mile of corridor required new ROW not adjacent to existing maintained ROW. The entire proposed 239-mile project will result in clearing impacts to 6.8 acres of forested wetlands, which were unavoidable impacts.

Mitigation

Through coordination with the USACE, the SCDHEC, and the commenting resource agencies, the applicant provided a compensatory mitigation plan with acceptable compensation for the unavoidable impacts to WUS. As discussed in Section II, the applicant will provide a total of 3,745 stream compensatory mitigation credits and 326.2 wetland compensatory mitigation credits. All of the required stream credits, as well as the 3.25 wetland credits required for impacts at the VCSNS site, will be obtained from Grove Creek Mitigation Bank. The remaining 322.95 wetland credits associated with transmission line clearing impacts will be provided through a proposed PRM plan, which involves restoration, enhancement, and preservation activities at three (3) sites in the Broad River and Saluda River watersheds.

United States Nuclear Regulatory Commission Environmental Impact Statement

The NRC's FEIS, made available to the public on April 19, 2011, included: 1) The results of the NRC review team's preliminary analyses, which considered and weighed the environmental effects of the proposed action and of constructing and operating two (2) new nuclear units at the VCSNS; 2) Mitigation measures for reducing or avoiding adverse affects; 3) The environmental impacts of alternatives to the proposed action; and 4) The NRC staff's recommendation regarding the proposed action based on its environmental review. Following the practice of the *Generic Environmental Impact Statement for License Renewal of Nuclear Plants* (NUREG-1437) (NRC 1996) and supplemental license renewal EISs, the NRC evaluates environmental issues using the three-level standard of significance—SMALL, MODERATE, or LARGE—developed by the NRC using guidelines from the Council on Environmental Quality (CEQ) (40 CFR 1508.27). The definitions of the three significance levels are as follows:

> SMALL—Environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource.
>
> MODERATE—Environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.
>
> LARGE—Environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

The NRC concluded that the impacts from construction on land use will be MODERATE for transmission lines, SMALL for other offsite areas, and SMALL for NRC-authorized construction activities; impacts on water use will be SMALL; impacts on water quality will be SMALL; impacts on aquatic ecology will be SMALL; impacts on

terrestrial ecology will be MODERATE, but SMALL for NRC-authorized construction activities; and that all impacts from operation of the new facilities will be SMALL.

The NRC concluded that the No Action Alternative could lead to a failure to supply needed electricity, and would have significant adverse impacts within the region of interest; that none of the alternative power production options were both practical and environmentally preferable to the proposed action; that none of the alternative sites were environmentally preferable or obviously superior to the proposed VCSNS site; and that none of the alternative system designs were environmentally preferable to the proposed design.

Based on the Environmental Report (ER) submitted to the NRC in 2010 by SCE&G; consultation with Federal State, Tribal, and local agencies; the NRC review team's independent review; the NRC staff's consideration of comments related to the environmental review that were received during the public scoping process; the NRC staff's consideration of comments on the draft EIS; and the assessments summarized in the FEIS, including potential mitigation measures identified in the ER and FEIS, the NRC staff recommended that the requested COLs should be issued for the proposed project.

The SCDHEC's Conclusion

The water quality impacts of the proposed project will be temporary provided the applicant adheres to the conditions in Section VIII. The SCDHEC has reasonable assurance that the water quality standards of Regulation 61-68 will not be contravened as a result of the proposed work. The proposed activity will result in no significant degradation to the aquatic ecosystem, or remove existing and classified uses of the affected water bodies, and is in compliance with the above regulations, provided the applicant adheres to the conditions in Section VIII. The above assessment also ensures that the proper sequencing of avoidance, minimization, and appropriate compensation for unavoidable impacts has been demonstrated. Information about the technical aspects of this application is available from Alicia Rowe, the project manager, by calling 803-898-4333, or by emailing roweam@dhec.sc.gov.

The SCDHEC reserves the right to impose additional conditions on this Certification/Permit to respond to unforeseen, specific problems that might arise, and to take any enforcement action necessary to ensure compliance with State water quality standards.

VII. Staff Recommendation

Issue 401 Water Quality Certification with conditions, and with provisions consistent with the Permits for Construction in Navigable Waters Regulations.

VIII. Conditions to be Placed on Water Quality Certification When Issued

1. The applicant must implement appropriate best management practices that will minimize erosion and migration of sediments on and off the project site during and after construction. These practices should include the use of appropriate grading and sloping techniques, mulches, silt fences, or other devices capable of preventing erosion, migration of sediments, and bank failure. All disturbed land surfaces and sloped areas affected by the project must be stabilized.

2. Prior to beginning any land disturbing activity, appropriate erosion control measures, such as silt fences, silt barriers, or other devices, must be placed between the disturbed area and the affected waterway or wetland; and maintained in a functioning capacity until the area is permanently stabilized.

3. Construction activities must avoid, to the greatest extent practicable, encroachment into any waterbody/wetland areas not designated as impact areas.

4. All necessary measures must be taken to prevent oil, tar, trash, debris, and other pollutants from entering the adjacent waters or wetlands, and offsite areas.

5. Once the project is initiated, it must be carried to completion in an expeditious manner in order to minimize the period of disturbance to the environment.

6. Any riprap used at the project must consist of clean stone or masonry material free of all potential sources of pollution.

7. Excavated material must not be stockpiled in the adjacent wetlands, but placed on barges or on high ground, when possible. If the excavated material is temporarily placed in wetlands, it must be placed at intervals to allow for adequate circulation of water.

8. All excavated materials not used as backfill must be hauled off site or placed on high land and properly contained and permanently stabilized to prevent erosion.

9. Only clean earthen material free of all potential sources of pollution must be used as backfill.

10. Any equipment used within wetlands must be equipped with high floatation tires when possible to minimize rutting and compaction.

11. Upon project completion, all disturbed riverbed areas and wetlands not designated as permanent impact areas must be restored to their original contours and conditions, and stabilized with vegetative cover, riprap, or other erosion control methods as appropriate.

12. Construction activities in Monticello Reservoir and Parr Reservoir must be minimized during the months of March, April, May, and June because of potential impacts to fish spawning.

13. SCE&G must notify the South Carolina Department of Natural Resources in the event of a water quality excursion.

14. SCE&G must perform the proposed water quality, fish population, macroinvertebrate population, and sediment monitoring as proposed in the submission dated September 16, 2011, with the subsequent revisions agreed to in coordination with the commenting resources agencies.

15. SCE&G and Santee Cooper must provide compensatory mitigation for unavoidable impacts in accordance with the proposed compensatory mitigation plan dated May 24, 2011, and the subsequent revisions dated July 19, 2011, and September 16, 2011.

Prepared By: Alicia M. Rowe **Date:** 11/29/11

Reviewed & Approved By: [signature] **Date:** 11/29/11