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**JOINT APPLICATION  
PRE-CONSTRUCTION NOTIFICATION (PCN)  
PHASE 2 – MODIFIED REMOVAL ACTION  
SEDIMENT CAPPING PROJECT**

**CONGAREE RIVER SEDIMENTS  
COLUMBIA, SOUTH CAROLINA**

September 2016

**RECEIVED**

SEP 30 2016

**SITE ASSESSMENT,  
REMEDICATION &  
REVITALIZATION**

*Prepared for:*

**SCANA Services, Inc.**  
220 Operation Way  
Cayce, South Carolina 29033

*Prepared by:*

**Apex Companies, LLC**

326



SCANA  
Corporate Environmental Services  
220 Operation Way  
Cayce, SC 29033-3701

September 22, 2016

RECEIVED

SEP 30 2016

Mr. Brice McKoy  
Northwest Regulatory Branch Chief

Mr. Chip Ridgeway  
Project Manager  
U.S. Army Corps of Engineers  
Strom Thurmond Federal Building  
1835 Assembly Street, Room 865 B-1  
Columbia, South Carolina 29201

SITE ASSESSMENT,  
REMEDICATION &  
REVITALIZATION

**RE: Joint Application and Pre-Construction Notification (PCN) – Individual Permit  
Phase 2 – Modified Removal Action (MRA) – Sediment Capping Project  
SCE&G - Congaree River Sediments  
Columbia, South Carolina  
USACE Project Number: SAC-2011-01356-6NO**

Dear Sirs:

On behalf of SCANA Services, Inc., (SCANA) and their primary subsidiary, South Carolina Electric & Gas Company Inc. (SCE&G), enclosed please find the following documents in support of an Individual Permit Application for the Congaree River Sediments Project:

- Joint Federal and State Application Form for Activities Affecting Waters of the United States or Critical Areas of the State of South Carolina (Joint Application);
- Pre-Construction Notification (PCN);
- Nation Wide Permit - 38 (NWP-38) Hazardous and Toxic Waste Removal checklist (provided for convenience, if required); and
- A letter from the South Carolina Department of Health and Environmental Control (SCDHEC) directing SCE&G to "*pursue Alternative 3 – Sediment Capping and Institutional Controls as provided in the Final EE/CA*".

As you are aware, the Congaree River Sediment project is intended to address the presence of a tar-like material (TLM) that is comingled with sediment in Columbia, SC, in an area downstream of the Gervais Street Bridge, adjacent to the eastern shoreline. For implementation purposes and due to logistical issues, the project was to be completed in two phases that consisted of:

- Phase 1 – Field Demonstration Project (Phase 1 – FDP), as described in the June 12, 2015 Joint Application and Pre-Construction Notification (JA-PCN) ; and
- Phase 2 – Modified Removal Action (Phase 2 – MRA), (originally intended to address the removal of the TLM-impacted sediment via excavation, but will now involve the capping of the impacted sediment for reasons as explained herein).

The Phase 1 - Field Demonstration Project (FDP) was completed in the fall of 2015 and was conducted with coverage provided under the United States Army Corps of Engineers (USACE) NWP-38 - Hazardous and Toxic Waste Removal, General Permit. The "hazardous" condition was based on previously documented metal anomalies that exist in the project area that **may potentially be** unexploded ordnance (UXO) from the Civil War era. The FDP Documentation Report was submitted to the agencies on July 12, 2016 and provides the complete findings of Phase 1. Perhaps the most significant finding of the FDP was that for all of the metal anomalies positively identified (51), none (0) were found to be a UXO, material of explosive concern, or historical cultural resource.

For numerous reasons as detailed in the SCDHEC letter (dated August 16, 2016 - Attachment A), the excavation and removal approach has been abandoned and SCE&G has now been directed to pursue a capping approach. Therefore, the Phase 2 – MRA capping scope of work is described in the attached Joint Application and PCN and includes various plans, details and evaluations associated with the proposed capping alternative. Generally, the proposed Phase 2 – MRA Sediment Capping Project will consist of:

- Placement of an engineered cap (i.e., geotextile and articulated concrete blocks [ACB mats]) over the entire MRA area;
- Removal of the existing sandbar to facilitate capping and provide a more gradual transition to surrounding bottom surface contours; and
- Removal and replacement of existing rocks, boulders, tree stumps etc. to facilitate cap placement of the ACB mats.

For convenience, four previously-approved plans to address UXO management issues are incorporated by reference only. These plans are still relevant and applicable to the capping approach, but to a much lesser extent given the less intrusive nature of capping and the new layer of sediment that was deposited over the project area from the flooding that occurred in late 2015. The detailed plans, which have been developed, reviewed and approved by the appropriate USACE EOD/UXO specialists, will be generally adhered to for Phase 2 – MRA capping approach.

We would appreciate an opportunity to review the attached documents with you at your earliest convenience and sincerely appreciate your interest and assistance in this project. If you have any questions or require any additional information, please call Rusty Contrael at 412-829-9650 or me at 919-819-2748.

Sincerely,



Robert M. Apple  
Remediation Project Manager

cc: L. Berresford – SCDHEC (w/ enclosure)  
M. Giffin – SCDHEC (w/o enclosure)  
T. Effinger – SCANA (w/o enclosure)  
R. Contrael, B. Zeli, T. Wolf – Apex (w/o enclosure)

**JOINT FEDERAL AND STATE APPLICATION**

**Joint Federal and State Application Form  
For Activities Affecting Waters of the United States  
Or Critical Areas of the State of South Carolina**

**This Space for Official Use Only**

Application No. \_\_\_\_\_  
Date Received \_\_\_\_\_  
Project Manager \_\_\_\_\_  
Watershed # \_\_\_\_\_

**Authorities:** 33 USC 401, 33 USC 403, 33 USC 407, 33 USC 408, 33 USC 1341, 33 USC 1344, 33 USC 1413 and Section 48-39-10 et. Seq of the South Carolina Code of Laws. These laws require permits for activities in, or affecting, navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. The Corps of Engineers and the State of South Carolina have established a joint application process for activities requiring both Federal and State review or approval. Under this joint process, you may use this form, together with the required drawings and supporting information, to apply for both the Federal and/or State permit(s).

**Drawings and Supplemental Information Requirements:** In addition to the information on this form, you must submit a set of drawings and, in some cases, additional information. A completed application form together with all required drawings and supplemental information is required before an application can be considered complete. See the attached instruction sheets for details regarding these requirements. You may attach additional sheets if necessary to provide complete information.

1. Applicant Last Name: Harris		11. Agent Last Name (agent is not required): Contrael	
2. Applicant First Name: Donald (Rusty)		12. Agent First Name: Andrew	
3. Applicant Company Name: South Carolina Electric & Gas Co. (SCE&G)		13. Agent Company Name: Apex Companies, LLC	
4. Applicant Mailing Address: 220 Operation Way		14. Agent Mailing Address: 1600 Commerce Circle	
5. Applicant City: Cayce		15. Agent City: Trafford	
6. Applicant State: SC	7. Applicant Zip: 29033	16. Agent State: PA	17. Agent Zip: 15085
8. Applicant Area Code and Phone No.: 803-217-7055		18. Agent Area Code and Phone No.: 412-829-9650	
9. Applicant Fax No.: 704-810-3171		19. Agent Fax No.: 412-349-0350	
10. Applicant E-mail: rharris@scana.com		20. Agent E-mail: rcontrael@apexcos.com	
21. Project Name: Congaree River - Sediment Capping Project		22. Project Street Address: N/A - Congaree River (eastside) downstream of the Gervais Street Bridge.	
23. Project City: Columbia	24. Project County: Richland	25. Project Zip Code: 29201	26. Nearest Waterbody: Congaree River
27. Tax Parcel ID: R08911-01-14		28. Property Size (acres): Approximately 33 acres (landside), 2.13 acres (river)	
29. Latitude: 33 59 40.59N		30. Longitude: 81 02 56.80W	

31. Directions to Project Site (Include Street Numbers, Street Names, and Landmarks and attach additional sheet if necessary):  
Travel east on the Gervais Street Bridge, turn right onto Gist Street, and turn right onto the Senate St. Ext. Project site located at the terminus of Senate St. Ext. and within the Congaree River directly downstream of the Gervais Street Bridge.

32. Description of the Overall Project and of Each Activity in or Affecting U.S. Waters or State Critical Areas (attach additional sheets if needed)  
The Sediment Capping Project basically entails the placement of a physical barrier in the form of an engineered capping system (engineered cap) over top the newly deposited sediment (and the pre-existing, underlying TLM-impacted sediment) within the project area. Subsequent routine monitoring will also be a component of this project. Overall, the cap will consist of the new layer of sediment, which varies from 0 to 5 feet in thickness and the engineered cap placed in the near-shore area where human contact and erosion potential is greater. The engineered cap will consist of a geotextile fabric material overlaid by open-cell, articulated concrete blocks (ACBs) connected together to form a mat. Additional information is provided in the attachments.

33. Overall Project Purpose and the Basic Purpose of Each Activity In or Affecting U.S. Waters (attach additional sheets if needed):  
Based on the multiple storm events and the associated flooding that occurred in the fall of 2015, a large volume of "new" sediment now exists within and immediately above the project area. This newly deposited sediment will greatly reduce the potential for human contact with the tar-like material (TLM) that exists below the new sediment. By installing the engineered cap, the impacted material will be isolated from human contact and will prevent or minimize re-suspension and downstream movement of the impacted sediment. Continued routine monitoring of the project area will provide a means for insuring long-term integrity of the cap. Additional information is provided in the attachments.

34. Type and quantity of Materials to Be Discharged

Dirt or Topsoil:	_____	<input type="checkbox"/> cubic yards
Clean Sand:	_____	<input type="checkbox"/> cubic yards
Mud:	_____	<input type="checkbox"/> cubic yards
Clay:	_____	<input type="checkbox"/> cubic yards
Gravel, Rock, or Stone:	_____	<input type="checkbox"/> cubic yards
Concrete:	2,630	<input checked="" type="checkbox"/> cubic yards
Other (describe):	_____	<input type="checkbox"/> cubic yards
<b>TOTAL:</b>	<b>2,630</b>	<b>cubic yards</b>

35. Type and Quantity of Impacts to U.S. Waters (including wetlands).

Filling:	2.30	<input checked="" type="checkbox"/> acres	<input type="checkbox"/> sq.ft.	<input type="checkbox"/> cubic yards
Backfill & Bedding:	_____	<input type="checkbox"/> acres	<input type="checkbox"/> sq.ft.	330 <input checked="" type="checkbox"/> cubic yards
Landclearing:	_____	<input type="checkbox"/> acres	<input type="checkbox"/> sq.ft.	<input type="checkbox"/> cubic yards
Dredging:	_____	<input type="checkbox"/> acres	<input type="checkbox"/> sq.ft.	930 <input checked="" type="checkbox"/> cubic yards
Flooding:	_____	<input type="checkbox"/> acres	<input type="checkbox"/> sq.ft.	<input type="checkbox"/> cubic yards
Draining/Excavation:	_____	<input type="checkbox"/> acres	<input type="checkbox"/> sq.ft.	<input type="checkbox"/> cubic yards
Shading:	_____	<input type="checkbox"/> acres	<input type="checkbox"/> sq.ft.	<input type="checkbox"/> cubic yards
<b>TOTALS:</b>	<b>2.30</b>	<b>acres</b>	<b>sq.ft.</b>	<b>1,260</b> <b>cubic yards</b>

36. Individually list wetland impacts including mechanized clearing, fill, excavation, flooding, draining, shading, etc. and attach a site map with location of each impact (attach additional sheets if needed).

Impact No.	Wetland Type	Distance to Receiving Water body (LF)	Purpose of Impact (road crossing, impoundment, flooding, etc)	Impact Size (acres)
N/A				
Total Wetland Impacts (acres)				N/A

37. Individually list all seasonal and perennial stream impacts and attach a site map with location of each impact (attach additional sheets)

Impact No.	Seasonal or Perennial Flow	Average Stream Width (LF)	Impact Type (road crossing, impoundment, flooding, etc)	Impact Length (LF)
001 - Congaree River	Perennial	-600	Placement of Engineered Cap	900
Total Stream Impacts (Linear Feet)				900

38. Have you commenced work on the project site?  YES  NO If yes, describe all work that has occurred and provide dates.

Completed sediment investigation from June 2010 to February 2011 and Phase 1 Field Demonstration Project to assess potential for unexploded ordnances (UXOs) in late 2015.

39. Describe measures taken to avoid and minimize impacts to Waters of the United States:

Prior to commencing work, measures will be taken to relocate freshwater mussels to outside of the project area. Erosion and sediment control BMPs will be installed, as needed, and total suspended solids monitoring will be conducted. Shoreline impacts will be minimized to the extent practical and disturbed portions of the shoreline will be reconstructed, as may be required.

40. Provide a brief description of the proposed mitigation plan to compensate for impacts to aquatic resources or provide justification as to why mitigation should not be required (Attach a copy of the proposed mitigation plan for review).

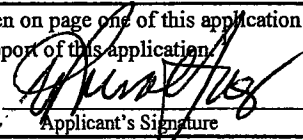
No mitigation plan is required since the proposed capping will not appreciably impact the project area's use or function. Placement of the cap will provide a benefit in the form of longer term protection from potential contact with the TLM by humans and other organisms, significant reduction of the potential for resuspension of the TLM and subsequent downstream movement and reduction of flux of dissolved phase constituents with the water column.

41. See the attached sheet to list the names and addresses of adjacent property owners.

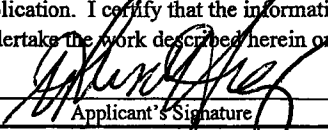
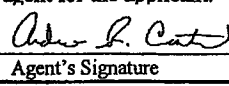
42. List all Corps Permit Authorizations and other Federal, State, or Local Certifications, Approvals, Denials received for work described in this application.

The USACE approved Phase 1 - FDP under NWP-38 on September 1, 2015. SCDHEC Bureau of Land Management has recently directed SCE&G to pursue the implementation of the sediment capping alternative. No other authorizations, approvals or denials have been received for the work proposed in this application.

43. Authorization of Agent. I hereby authorize the agent whose name is given on page one of this application to act in my behalf in the processing of this application and to furnish supplemental information in support of this application.

  
 Applicant's Signature 9/22/16  
 Date

44. Certification. Application is hereby made for a permit or permits to authorize the work and uses of the work as described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent for the applicant. <sup>1</sup>

   
 Applicant's Signature Date Agent's Signature Date

<sup>1</sup>The application must be signed by the person who desires to undertake the proposed activity or it may be signed by a duly authorized agent if the authorization statement in blocks 11 and 43 have been completed and signed. 18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

**JOINT FEDERAL AND STATE APPLICATION FORM FOR ACTIVITIES AFFECTING WATERS  
OF THE UNITED STATES OR CRITICAL AREAS OF THE STATE OF SOUTH CAROLINA  
(JOINT APPLICATION)**

**PHASE 2 – MODIFIED REMOVAL ACTION - SEDIMENT CAPPING PROJECT**

**CONGAREE RIVER SEDIMENTS  
COLUMBIA, SOUTH CAROLINA**

September 2016

*Prepared for:*

**SCANA Services, Inc.**  
220 Operation Way  
Cayce, SC 29033

*Prepared by:*

**Apex Companies, LLC**  
1600 Commerce Circle  
Trafford, PA 15085

## LIST OF ACRONYMS

ARARs	Applicable or Relevant and Appropriate Requirements
BMP	Best Management Practices
BTEX	Benzene, Toluene, Ethylbenzene, and total Xylenes
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act</i> (commonly known as Superfund)
CSM	Conceptual Site Model
CY	Cubic Yards
EE/CA	Engineering Evaluation/Cost Analyses
EOD	Explosive and Ordnance Demolition
FDP	Field Demonstration Project
FWS	U.S. Fish and Wildlife Service
GIS	Geographic Information System
MGP	Manufactured Gas Plant
MRA	Modified Removal Action
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NWP	Nationwide Permit
PAHs	Polynuclear Aromatic Hydrocarbons
PCN	Pre-Construction Notification
PDR	Project Delineation Report
RAWP	Remedial Action Work Plan
RD	Remedial Design
RSLs	Regional Screening Levels
RSSL	Rocky Shoal's Spider Lily
SCDHEC	South Carolina Department of Health and Environmental Control
SCDNR	South Carolina Department of Natural Resources
SCE&G	South Carolina Electric & Gas Company (primary subsidiary of SCANA Services, Inc.)
SCIAA	South Carolina Institute of Archeology and Anthropology
SHPO	South Carolina State Historic Preservation Office
SF	Square Feet
TLM	Tar-Like Material
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
UXO	Unexploded Ordnance
VCC	Voluntary Cleanup Contract



## **TABLES**

- 1 Summary of Federal and State Threatened and Endangered Species and Species of Concern
- 2 Listing of National Register of Historic Places

## **FIGURES**

- 1 Phase 2 - Site Location Map Modified Removal Action Area Sediment Capping
- 2 Phase 2 - Modified Removal Action (MRA) - Area to be Capped
- 3 Overall Project Area and Project Phases
- 4 Project Area Showing Waters of the State
- 5 Archeological Site Locations with Respect to the Project Area

## **ATTACHMENTS**

- Attachment A - Letter from L. Berresford (SCDHEC) to R. Apple (SCANA), Dated August 16, 2016  
Requesting SCE&G Pursue the Sediment Capping Alternative
- Attachment B - Conceptual Design of Sediment Capping Options Developed by Rizzo and Associates
- Attachment C - Engineered Capping System - SHORETEC® Example Specifications
- Attachment D - Cultural Resource Identification Survey (CRIS), Archaeological Data Recovery Plan and  
Memorandum of Agreement (MOA)
- Attachment E Adjacent Property Owners Map

## INTRODUCTION

This Joint Federal and State Application Form For Activities Affecting Waters Of The United States Or Critical Areas Of The State Of South Carolina (Joint Application) is being submitted on behalf of South Carolina Electric & Gas Company (SCE&G) to provide information pertaining to the proposed sediment remediation project located in a portion of the Congaree River in Columbia, South Carolina.

SCE&G is the respondent required to complete a remedial action for a tar-like material (TLM) that is commingled with sediment within the Congaree River. The actual project area is located along the eastern shoreline of the river, just south of the Gervais Street Bridge as shown on Figure 1.

Information regarding this project has been previously submitted under United States Army Corps of Engineers (USACE) Permit Number P/N 2011-01356-6NO. SCE&G had been working toward receiving authorization to complete a Modified Removal Action (MRA) to address impacted sediment, as directed by the South Carolina Department of Health and Environmental Control (SCDHEC). As originally envisioned, the MRA would have entailed constructing a temporary cofferdam to isolate the planned excavation area and physically removing the impacted sediment down to the underlying bedrock. Based on a recent letter from SCDHEC to SCE&G, dated August 16, 2016 (Attachment A), the excavation and removal approach has been abandoned [for reasons detailed in the letter] and SCE&G has been requested to pursue a capping alternative.

It is important to note that this project is further complicated by the potential presence of Civil War era unexploded ordinance (UXO) and/or historically significant items within the area impacted by the TLM. In order to gather additional information regarding the potential for UXO and to gain first-hand knowledge of the logistical and technical constraints associated with working in close proximity to the Congaree River, SCE&G submitted a permit application and received authorization to conduct a Field Demonstration Project (FDP) under the Nationwide Permit #38. This request was approved by the USACE on September 1, 2015 and the FDP Work Plan was approved by SCDHEC on September 2, 2015. The FDP work was referred to as Phase 1. The FDP Documentation Report was submitted to the agencies on July 12, 2016 and provides the details and findings of the completed field work.

In the correspondence dated August 16, 2016 (Attachment A), SCDHEC requested that SCE&G pursue the capping approach and begin the design and permitting process as soon as possible. This alternate approach would entail the installation of an engineered capping system over top of the sediment recently deposited during the October 2015 flooding event and the TLM impacted sediment. This capping approach will preserve and hold in place the newly deposited sediment and further isolate the TLM from potential human contact and downstream movement. The sediment capping approach (Alternative 3 – Sediment Capping and Institutional Controls) was identified as the second most effective option (other than physical removal) in the Engineering Evaluation/Cost Analysis (EE/CA) approved by SCDHEC on February 7, 2013.

Therefore, this Joint Application and the attached Preconstruction Notification is being submitted to obtain authorization from the USACE to complete Phase 2 of the MRA - the sediment capping alternative (Phase 2 – MRA Capping) as described herein.

**JOINT FEDERAL AND STATE APPLICATION FORM FOR ACTIVITIES AFFECTING WATERS OF  
THE UNITED STATES OR CRITICAL AREAS OF THE STATE OF SOUTH CAROLINA  
(JOINT APPLICATION)**

**DRAWINGS AND SUPPLEMENTAL INFORMATION**

**Applicant and Project Information**

Please refer to item numbers 1 thru 30 of the Joint Application form, which have been completed.

**Item #31 - Directions to the Project Site**

The project area is located along the eastern bank of the Congaree River and extends from approximately 200 feet south of the Gervais Street Bridge downriver (generally south) for approximately 1,000 feet. The nearest street intersection is Gist and Senate Streets. Figure 1 is a USGS 7½ minute quadrangle map that shows directions from Interstate I-126. Take interstate I-126 south and exit onto Huger Street. Stay on Huger Street for about one mile. Turn right onto Senate Street, which is located about 500 feet south of the Huger Street and Gervais Street intersection. Once on Senate Street, proceed about 1,000 feet west, where a steel gate exists across the access road and represents the entrance to the project site. The access road leads directly to the Congaree River and the Senate Street “alluvial fan”, which is a term used to describe a prominent site feature where sediment has accumulated near the end of the deteriorated access road (i.e., tow of slope). The alluvial fan was the site of the FDP activities. See Figure 2 for specific site details.

**Item #32 - Description of the Overall Project**

**Overview**

This Sediment Capping Project basically entails the placement of a physical barrier in the form of an engineered capping system over the impacted sediment within the project area. Figure 2 provides the limits of the Modified Removal Action (MRA) area, which SCE&G is proposing to cap. Based on the outline of the MRA area as shown on Figure 2, approximately 100,000 square feet or approximately 2.3 acres of the river sediment will be capped. The actual location, orientation and manufacturer of the capping materials will be determined during the detailed design phase of the project and in consultation with the construction contractor. Subsequent, post-MRA, long-term monitoring and institutional controls (i.e., permanent fence and signage) will also be a component of the overall remedy for the site, and will be developed at a later date as directed by SCDHEC.

Additionally, please note that the capping materials will also be installed from the bottom of the existing access road (i.e., approximate end of the pavement at the boat ramp) westward, into the river and integrated with the actual sediment cap, as shown in Figure 2. This extra boat ramp area is:

- Approximately 60 feet wide and 100 feet long (6,000 square feet);
- Has been a long-term, chronically-susceptible area for erosion due to run-off; and
- Must be addressed to help prevent future erosion under the planned sediment cap.

### **Conceptual Design**

A Conceptual Design of Sediment Capping Options was developed by Rizzo Associates, which is included in Attachment B. Based on the design criteria included in the evaluation, the selected capping approach will consist of a geotextile fabric material overlain by articulated concrete blocks (ACBs) connected together to form a mat. The individual concrete mats (ACBs) are approximately 20 feet long, 8 feet wide and 8 inches thick. A layout of the approximate area to be capped along with the conceptual orientation of the 8' x 20' concrete mats is shown on Figure 2. The 8-inch thickness of the blocks was determined by Rizzo to be acceptable to withstand the conservative maximum flow velocities, based on the stated assumptions included in the conceptual design. For the evaluation, Rizzo considered the ArmorFlex ACB's. Attachment C provides another readily available ACB mat product manufactured by SHORETEC®. The actual product and manufacture of the ACB's will be determined in the detailed design phase and/or in consultation with the construction contractor. At a minimum, the actual cap materials used for construction will meet or exceed the criteria used in the conceptual design evaluation.

### **Implementation - Capping**

It is currently envisioned that the ACBs will be placed from approximately the 116' elevation line and they will extend westward, out into the river from approximately 50 to 200 feet, depending on the location. The precise location, orientation, placement techniques and construction/deployment sequence will be at the discretion of the construction contractor and will likely be dictated by actual field conditions encountered during construction. With an average river flow elevation for the general project area over the last five years of approximately 116.5', most of the ACBs will be placed below normal river flow elevations, except for the erosion prevention area on the boat ramp as described above. The openings in the ACBs, also referred to as cores or cells, will be visible through the water, at low water levels. Even with the underlying geotextile material, it is anticipated that the capping system will settle a few inches into the soft sediment. It is also anticipated that the open cells within the ACB mats will fill with clean sediment [from the top] over time and result in a more natural looking surface.

The exact placement method for the cap will depend on a variety of factors including the location and flow/depth and river characteristics at that particular section of the area to be capped. Mat deployment is anticipated to proceed generally from north to south. Based on preliminary discussions with a marine contractor, very experienced with this type of work, small platform barges will be brought onto the site. After the barges are assembled on dry land and fastened together, they will be pushed into position in the river with heavy machinery. Temporary timbers will likely be used to facilitate movement and leveling of the barges.

As currently envisioned, the ACB mat placement scenario will include a crane and/or excavator working from land and the secured barge platforms or "work pads". Temporary access roads constructed on top of the existing river bank will permit the equipment to access and place the cap material over the extent of the impacted area. The capping material will likely be staged on flat bed trailers and transferred down the ramp for deployment by the crane, as needed. Access roads will be constructed, as needed, along the shoreline to allow placement, relocation and eventual removal of the barge sections. For portions of the project area located near the shoreline, the ACB mats will likely be placed with the equipment based on the shoreline. The boat ramp area will likely be the primary access point during construction. Disturbing the actual river bank will be minimized.

Sediment containment during active construction will be a critical element of the project. Mitigation plans include deploying a floating silt curtain around the active work area in an attempt to contain sediment that may be liberated during the actual cap installation activities. Also, large sand bags, similar to those used during implementation of the FDP, will be deployed into the river (almost perpendicular to the flow direction) to collect and help prevent downward migration of sediment that may be liberated during construction activities. Real-time, total suspended solids (TSS) monitoring will also be conducted to ensure that construction activities do not significantly increase TSS concentrations down-river of the active construction zone and a permitted “mixing” zone. Generally, there will be four areas for the sediment monitoring program:

- An up-stream, (background) zone;
- The active construction work area;
- An entrained sediment reduction area (i.e., mixing zone); and
- A down-stream monitoring area.

The active construction work area and the down-stream monitoring area will be separated by sediment reduction items (e.g., silt curtains, sand bags, etc.) as described above. The ultimate goal of the monitoring program is to ensure that the down gradient TSS monitoring results do not exceed the up gradient measurements.

The general sequence of activities will include deployment of the silt curtain/ big sand bags surrounding a designated work area, construction of the work platforms and installation of the engineered cap system. The mats will be staged in the landside support area on flatbed trailers area and transported to the work area for deployment as needed. For the ACB mats that are deployed on the eastern, or landside edge of the cap, a small anchor trench approximately three feet deep will be excavated and the edge of the mats will be laid into the anchor trench. The anchor trench will help secure the mats on the slope and serve to prevent erosion under the mats from upslope run-off areas. The geotextile material will likely be pre-cut and affixed to the bottom of the concrete mats (with some additional material left on the edges for overlap) in the landside support zone to facilitate placement. This method of deployment will allow for the mat and geotextile to be lifted and placed as a unit in one motion and was successfully utilized by SCANA at another river capping project in South Carolina.

In areas where large boulders or severely uneven river bottom sections prevent the effective use of the mats, pieces of geotextiles and singular concrete blocks (i.e., singular ACBs or “blocks”) will be hand placed. Additionally, some areas may require some limited grading of existing sediment to facilitate an even or smooth and continuous mat placement (e.g. the sandbar bar removal). Conversely, some small, irregularly shaped depressions in the river bottom may need to be filled to allow the mats to adequately cover the underlying sediment. To the extent practicable, clean, imported backfill will be used to fill low areas to minimize disturbance to the existing bottom sediment. These type of filling operations are anticipated to be minimal but may be required because the ACBs need to be in direct contact with the subgrade that it protects or it could lead to destabilizing processes (i.e., erosion or channeling under the mats, please refer to Appendix B for additional information).

Field implementation of this alternative will require limited land based construction support activities on the eastern shoreline to improve access to the project area for personnel, equipment and delivery of capping materials. These construction activities will include limited grading operations in the area of the Senate Street alluvial fan and the current asphalt access road (boat ramp). The access road and shoreline improvements will be necessary to allow delivery and staging of the capping materials and deployment equipment. The project support compound constructed for the FDP (e.g. office trailers, parking areas, laydown areas, etc.) will be re-established and secured with a temporary fence. Additional lay down or trailer parking areas within the total project area will be constructed as needed.

Once the cap is installed, the barges, work pads, and non-permanent road construction materials will be completely removed from the river and the disturbed river bank and shoreline will be restored to existing conditions, to the extent practicable. Additional requirements of the selected approach, but not necessarily covered under this permit application, is the need to erect permanent fencing and install signs in the project area. The details related to the fencing and signage will be discussed between SCDHEC, the property owner and SCE&G and addressed at a later date.

### **Implementation - UXOs / Artifacts**

It is important to note that this project is further complicated by the potential presence of Civil War era unexploded ordinance (UXO) and/or historically significant items within the area impacted by the TLM. In order to gather additional information regarding the potential for UXO and to gain first-hand knowledge of the logistical and technical constraints associated with working in close proximity to the Congaree River, SCE&G submitted a permit application and received authorization to conduct a Field Demonstration Project (FDP) under the Nationwide Permit #38. This request was approved by the USACE on September 1, 2015 and the FDP Work Plan was approved by SCDHEC on September 2, 2015. The FDP work was referred to as Phase 1.

The field work associated with the FDP was initiated in the fall of 2015. Completion of the FDP was hampered by significant rainfall events within the Congaree River drainage basin and subsequent severe increases in the river level elevations. The storm and flooding of early October 2015 and the related breach of the Columbia Canal resulted in the deposition of thousands of tons of “new” sediment in the river and shoreline of the project area. However, several key findings into the potential UXO component of the project were identified and are applicable to the proposed future capping options. The findings include:

1. No potential UXO or historically significant items were identified;
2. Of the 51 previously identified Magnetic Anomalies investigated – Zero (0) were UXOs;
3. 5 ‘negative finds’ – meaning nothing was found at the previously identified metal anomaly location (i.e., no object found at approximately 10% of the locations);
4. There was a relatively large amount of “cultural debris” (i.e., metallic junk) unearthed; and
5. Evaluating the metal anomalies was a time consuming and meticulous process due to the volume of subsurface metallic debris that existed within the study area.

The FDP Documentation Report was submitted to the agencies on July 12, 2016 and provides the complete details and findings of the completed field work.

With respect to the potential UXOs and/or historical items in the project area, SCE&G believes that any artifact and/or UXO that may have been present in the area to be capped is now covered by an additional layer of sediment (of varying thickness) deposited during the flood of 2015. Placement of the engineered capping materials on top of the project area is intended to NOT disturb any potential UXO or historical item and once installed, the engineered cap will provide an added layer of protection or isolation with respect to potential human contact.

The detailed plans developed to address potential UXO management issues for the FDP are still relevant and will be adhered to for implementation of the capping alternative, with only a very minor modification as to when the plans get implemented as discussed below. The four “UXO” plans were included within the PCN for the FDP and are included in this application by reference:

- Draft Final Work Plan for Munitions Response Removal Action and Construction Support;
- Explosives Safety Submission, Munitions and Explosives of Concern, Removal Action and Construction Support;
- Diving Operations Plan; and
- Diving Safe Practices Manual.

Regarding the historical artifacts, Attachment D provides a copy of the Cultural Resource Identification Survey (CRIS), Archaeological Data Recovery Plan and the Memorandum of Agreement (MOA) between the parties. These detailed plans have been previously developed and reviewed in consultation with the appropriate entities (i.e., South Carolina Institute of Archeology and Anthropology (SCIAA), State Historic Preservation Office (SHPO).

All work will be completed in accordance with the approved plans as listed above with the following exception: SCE&G plans to have one member of the UXO team and one member of the archeologist’s staff present on-site during intrusive activities (e.g. anchor trench excavation, sandbar removal etc.). Should either the UXO team member or the archeologist’s representative observe any UXO and or artifact or other item or issue of concern (or historical significance, the capping/construction work will immediately stop and the plans described above will be implemented to the maximum extent practicable. Work will not be restarted until all parties are satisfied that the intent of the plans have been fulfilled.

### **Schedule**

As with the prior removal approach, it is anticipated that the permitted construction season will be limited to May 1<sup>st</sup> through October 31<sup>st</sup> as previously approved by the National Marine Fisheries (NMFS), United States Fish and Wildlife Service (USFWS) and SC Department of Natural Resources (SCDNR). This six-month in-the-river construction schedule should provide ample time to enter the river, complete the work and withdraw from the river, assuming normal river elevations weather conditions are encountered while completing the work. As currently envisioned, site preparatory activities will be completed during the first and early second quarters of next year. The required mussel relocation plan will likely be implemented in mid-April, or immediately prior to the May 1st date. Barring any unforeseen extreme weather conditions, the work should be completed within four to five months.

### **Item #33 - Overall Project Purpose and the Basic Purpose of Each Activity**

Placement of the sediment cap will greatly reduce the potential for human health exposure by serving to prevent direct contact with the TLM material in the near shore areas. From an environmental perspective, the impacted material will be further isolated and the cap will prevent re-suspension and potential downstream migration of impacted sediment. Typical marine construction activities are required to install the engineered capping system.

### **Item #34 - Type and Quantity of Materials to be Discharged**

As currently planned, the engineered cap will consist of geotextile overlain by 8-inch thick articulating concrete blocks connected together into mat. Example pictures, drawings and specifications are provided in Attachments B & C. The current outline of the MRA area is shown on Figure 2 and SCE&G currently envisions utilizing mats approximately 8' wide x 20' long. Singular concrete blocks will be utilized in areas where large boulders, pipe obstructions, or severely uneven river bottom sections prevent the effective use of the full-size mats. These singular blocks will be hand placed, by divers if required. A total of approximately 106,000 square feet of capping materials are planned for placement (river cap – 100,000 SF and boat ramp erosion protection – 6,000 SF). The total quantity of material to be “discharged” or placed is approximately 2,630 CY (106,000 SF x 0.67 SF [mat thickness] / 27). Additionally, it is assumed that 10 truckloads of imported sand will be used to level low or non-uniform areas under the cap, or approximately 330 CY of fill. Therefore, a total a total quantity of material to be discharged is approximately 3,000 CY (say 2,650 CY of concrete mats and 350 CY of sand fill).

### **Item #35 - Type and Quantity of Impacts to U.S. Waterways (including wetlands)**

Installation of the cap will conservatively raise the riverbed elevation in the project area by approximately 8-inches based on the thickness of the capping material (ACB mats). However, it is anticipated that the capping system may settle a few inches into the soft sediment, in some areas. Removal of the sand mound, approximately 930 cubic yards of material, will also alter the flow characteristics near shore, in that localized area. Installation of the cap will alter the current benthic habitat and bathymetric characteristics of the project area. These impacts will be mitigated somewhat since the concrete mats are expected to settle and/or compress the sediment directly below the mat, which will lessen the effect on the increase in river bottom elevation. In addition, the concrete mats, as shown in Attachment C, contain cells or voids which are expected to fill with depositional sediment and that will result in a more natural river bottom within the capped area. There are still large amounts of sediment abundantly present upstream of the project area. As stated above, a total of approximately 100,000 SF (approximately 2.3 acres) of riverbed will be impacted by the cap.

Clearing and grading along the river bank in order to provide access to the work area and install the anchor trench will be minimized to the extent practical and will be limited to the approximately 900 linear feet of the eastern shore directly adjacent to the project area. These construction related impacts are temporary and will be mitigated by removing the work pad/road components at the end of the project and restoring vegetation to all disturbed areas.



### **Item #36 - Individually List Wetland Impacts**

Figure 4 provides the project area and the nearby Waters of the State. The Congaree River within the project area will be the only wetland impacted by the activity. As shown on Figure 3, two unnamed tributaries (#1 and #2) lie to the north and south of the project area. No activities are proposed that will impact these tributaries. A relatively large palustrine wetland is also located to the south of Unnamed Tributary #2 and will not be disturbed or impacted by these activities. Placement of the engineered capping system will cover the river bottom in the project area with geotextile and the 8-inch thick articulated concrete mat.

Road and work pad construction as well as clearing and grading along the river bank will also temporary impact approximately 900 linear feet of the eastern shore of the river. Once the project is completed, these impacts will be mitigated by removing the work pad/road components and revegetating the disturbed areas.

### **Item #37 - Individually List Seasonal and Perennial Stream Impacts**

The Congaree River is the main perennial water body located within the project area. Placement of the capping material and completion of the project will impact approximately 100,000 square feet of the river bottom and approximately 900 linear feet of the riverbank. There are two perennial streams located adjacent to the project area, as shown on Figure 3. The planned construction activities covered under this permit request will have no impact on these streams.

### **Item #38 - Have You Completed Work on the Project Site?**

Yes, the TLM delineation activities were completed from June 2010 through February 2011. The sampling methods and findings of the sediment investigation activities were provided in the Project Delineation Report (PDR) [MTR, March 2012], which was submitted to SCDHEC for review and approval. The PDR was approved by SCDHEC on April 23, 2012. A brief summary of the PDR and a copy of the approval letter were provided in previous submittals.

The first phase of the overall sediment MRA project was the Field Demonstration Project (FDP), which was completed in the fall of 2015 under a NWP-38 permit. A summary of the findings of the FDP are provided in the Introduction section of this application and more detailed information is included in the FDP Documentation Report, submitted in July 2016.

Previously, the USACE approved an NWP-14 permit for linear construction projects to construct the "Southern Access Route" to allow major truck traffic to enter and exit on Blossom Street. The PCN for this permit request was submitted on July 8, 2014 and was approved on October 20, 2014 (SAC-2014-728-6NO). However, no work was completed under this permit. Since the remedial approach has changed from cofferdam/exaction to capping, the "Southern Access Route" is no longer required and will not be installed.

### **Item #39 - Describe Measures Taken to Avoid and Minimize Impacts to Waters of the United States**

Placement of the capping material and construction of the temporary work pads will impact benthic organisms such as freshwater mussels. As shown in Table 1, a number of higher value mussel species are potentially located in the project area. As currently planned, a freshwater mussel relocation contractor will be employed to scan the area to be capped for mussels and perform relocation activities prior to commencement of construction activities. This will greatly lessen the impact of the cap placement on the mussels. With the relocation of the mussels, it is anticipated that the capping material will not necessarily be detrimental to the overall habitat quality of the project area since the mats will likely settle somewhat and the voids will fill with sediment to create a more natural river bottom.

Erosion and sediment control measures and best management practices (BMPs) such as deployment of the silt curtain and big bags will be employed during construction as well as the TSS monitoring discussed above. Standard E&S controls will also be installed on the upland areas of the project, as required. These activities will allow for construction activities to be completed without an increase in sediment generation/movement from the overall project area.

### **Item #40 - Justification as to Why Mitigation Should not be Required**

No mitigation plan should be required since the proposed capping will not appreciably impact the project areas use or functions. Placement of the cap will provide a benefit in the form of protection from contact with the TLM by humans and other organisms, significant reduction of the potential for resuspension of the TLM and subsequent downstream movement and reduction of flux of dissolved phase constituents with the water column.

### **Item #41 - Adjacent Property Owners**

**Tax Map Number:** R08911-01-01

**Owner:** City of Columbia, 1737 Main St., Columbia, SC 29201

**Property Location:** 1105 Gist St.

**Tax Map Number:** R08911-01-17

**Owner:** The Guignard Partnership, PO Box 8509, Columbia, SC 29202

**Property Location:** Senate St.

**Tax Map Number:** R08911-01-14

**Owner:** The Guignard Partnership, PO Box 8509, Columbia, SC 29202

**Property Location:** Senate St.

Attachment E provides a map depicting the locations of these properties.

### **Item #42 - List All Corps Permit Authorizations ... and Other State ... Approvals**

Information regarding this project has been previously submitted under United States Army Corps of Engineers (USACE) Permit Number P/N 2011-01356-6NO. SCE&G had been working toward receiving authorization to complete a Modified Removal Action (MRA) to address impacted sediment, as directed

by the South Carolina Department of Health and Environmental Control (SCDHEC). As originally envisioned, the MRA would have entailed constructing a temporary cofferdam to isolate the planned excavation area and physically removing the impacted sediment down to the underlying bedrock. Based on a recent letter from SCDHEC to SCE&G, dated August 16, 2016 (Attachment A), the excavation and removal approach has been abandoned [for reasons detailed in the letter] and SCE&G has been requested to pursue a capping alternative. The SCDHEC and SCE&G have executed a Voluntary Cleanup Contract (VCC) for the former Huger Street MGP site which has been extended to cover the Congaree River Sediment Project.

The recently completed Field Demonstration Project (FDP) described above was implemented under the Nationwide Permit #38.

Previously, the USACE approved an NWP-14 permit for linear construction projects to construct the “Southern Access Route” to allow major truck traffic to enter and exit on Blossom Street. The PCN for this permit request was submitted on July 8, 2014 and was approved on October 20, 2014 (SAC-2014-728-6NO). The need for this alternate route was predicated on an anticipated large number of truck movements associated with the removal action. At this time, completion of the sediment capping alternative will result in significantly reducing the number of overall truck movements associated with the project and will not require construction of the southern access route.

#### **Additional Permit and Approval Requirements**

In addition to the requested USACE permit, the following permits and/or approvals [have been] or will be obtained prior to implementation:

- SCDHEC 401 Water Quality Certification;
- SCDHEC approval of the Sediment Capping Work Plan;
- SCIAA/SHPO - Data Recovery License;
- SCIAA/SHPO Intensive Survey License; and
- City of Columbia approvals.

These licenses and approvals [have been] or will be obtained in accordance with their applicable requirements and copies will be included in the Final Documentation Report for the project, which will be submitted to the USACE.

**This completes the additional responses and attachments for the Joint Application.**

**CHECKLIST – PCN CONTENTS**

## Required Preconstruction Notification Contents

**SAC #:**

**NWP:** \_\_\_\_\_

**Date Application Complete:**

Determination of completeness must be made within 30 days of the date of receipt. If all required information is not provided, the prospective permittee will be notified that the preconstruction notification (PCN) is still incomplete and the review will not commence until all requested information has been received. If the applicant has not received written notice from the DE within **45 days** of the date of receipt of a complete PCN, **the verification is issued by default**. However, if the permittee was required to notify the Corps pursuant to GC #17 (the activity may have an effect on listed species or critical habitat) or GC #18 (the activity may have the potential to cause effect to historic properties), then the activity cannot proceed until written notification from the Corps. Also, for NWPs 21, 49, or 50, work cannot proceed until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, work cannot begin until the district engineer issues the waiver.

All PCNs must be in writing, clearly indicate the document is a PCN, and include the following information:

ITEM#

- #1  Name, address and telephone numbers of prospective permittee.
- #2  Location of proposed project. This should include the following:
  - Latitude and Longitude (use center of project site)
  - County and nearest municipality
  - Street address, if available and directions to the site
- #3  Brief description of the proposed action to include:
  - 3A  Project purpose
  - 3B  Direct and indirect adverse environmental effects the project would cause.
  - 3C  List any other Corps of Engineers (Corps) permits or verifications used or intended to be used to authorize any part of the proposed project or any related activity. Sketches of the proposed activities should be provided when necessary to show that the activity complies with the terms of the NWP.
- #4  Description of the aquatic resources that will be adversely impacted by the activity
- #5  Location of each proposed impact See attached Figures
- #6  For activities involving discharges of dredged or fill material into waters of the United States, the application must include a statement describing how impacts to waters of the United States are to be avoided and minimized.
- #7  The application must also include either a statement describing how impacts to waters of the United States are to be compensated for or a statement explaining why compensatory mitigation should not be required for the proposed impacts.
- #8  For non-Federal applicants, if listed species or critical habitat might be affected or is in the vicinity of the project, the PCN must include the names(s) of those listed species that might be affected or utilize critical habitat. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act.
- #9  For non-Federal applicants, if any activity may affect a historic property, the PCN must state the name of the historic property. Federal applicants are required to provide documentation demonstrating compliance with Section 106.

- A delineation of affected special aquatic sites and other waters of the United States is **required** if the project requires notification under General Condition 27. **NOTE:** *The 45-day default time clock does not start until the wetland delineation has been completed and submitted to the Corps.*
- For **NWP 3**, where maintenance dredging is proposed, the pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals.
- For **NWP 3**, paragraph a activities. The permittee must notify the DE in accordance with GC 27, if the discharge of dredged or fill material causes the loss of greater than 1/10 acre of waters of the U.S or there is a discharge in a special aquatic site, including wetlands and riffle pool complexes.
- For **NWP 12**, where the proposed utility line is constructed or installed in navigable waters of the United States (i.e. section 10 waters), copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and atmospheric Administration (NOAA), National Ocean service (NOS), for charting the utility line to protect navigation.
- For **NWP 12**, construction techniques to prevent draining, such as anti-seep collars, will be required for utility lines buried in wetlands, when necessary. If no construction techniques to prevent draining are proposed, the applicant must provide appropriate documentation that such techniques are not required to prevent wetland drainage.
- For **NWP 12**, all notifications must include:
- Specifications of how pre-construction contours will be re-established and verified after construction;
  - A justification for the required width of all maintained utility crossings impacting waters of the U.S.;
  - A justification for the loss of waters of the U.S. impacted by utility line sub-stations.
  - The acreage of impacts to waters of the U.S indefinitely converted from a forested wetland to a herbaceous wetland and a compensatory mitigation proposal.
- For **NWP's 14, 29, 39 and 46**, all notifications must include appropriately sized and located culverts for crossings of waters of the U.S. that meet the requirements of General Conditions 2, 9 and 10.
- For **NWP 27**, notifications for aquatic habitat *restoration*, establishment, and enhancement activities will require coordination with appropriate Federal, State, and local agencies. The coordination activity will be conducted by the Corps of Engineers. Agencies will generally be granted 15 days to review and provide comments unless the District Engineer determines that an extension of the coordination period is reasonable and prudent.
- For **NWP 31**:
- Prospective permittee must notify the District Engineer with a PCN prior to conducting any maintenance activity. The PCN may be for activity-specific maintenance or for maintenance of the entire flood control facility by submitting a five-year (or less) maintenance plan.
  - The PCN must include sufficient baseline information to identify the approved channel depths and configuration of existing facilities.
  - The PCN must specify the location of the dredged material disposal site.
- For **NWP 33**, the preconstruction notification must include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.
- For **NWP 38**, notifications require the following information:
- Documentation that the specific activities are required to effect the containment, stabilization, or removal of hazardous or toxic waste materials as performed, ordered, or sponsored by a government agency with established legal or regulatory authority; *See Attachment*
  - A narrative description indicating the size and location of the areas to be restored, the work involved and a description of the anticipated results from the restoration; *See attached text*

A plan for the monitoring, operation, or maintenance of the restored area. See attached PCN text

For **NWP 41**, notification must be submitted for projects that require mechanized land clearing in waters of the U.S., including wetlands, in order to access or perform reshaping activities.

For **NWP 44**, if reclamation is required by other statutes, then a copy of the reclamation plan must be submitted with the pre-construction notification.

For **NWP 45**, the permittee must submit a pre-construction notification within 12 months of the date of damage to uplands. The PCN should include documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration.

**PRE-CONSTRUCTION NOTIFICATION (PCN)  
SEDIMENT CAPPING PROJECT**

**CONGAREE RIVER SEDIMENTS  
COLUMBIA, SOUTH CAROLINA**

September 2016

*Prepared for:*

**SCANA Services, Inc.**  
220 Operation Way  
Cayce, SC 29033

*Prepared by:*

**Apex Companies, LLC**  
1600 Commerce Circle  
Trafford, PA 15385



## DOCUMENT FORMAT

See the attached Joint Federal and State Application Form for Activities Affecting Waters of The United States or Critical Areas of The State of South Carolina (Joint Application) for information on the project background, and the proposed project details. The Joint Application will be referenced in this brief Pre-Construction Notification (PCN) in order expedite review of the project. Information required for the PCN and not included in the Joint Application will be summarized in this document.

### REQUIRED PRE-CONSTRUCTION NOTIFICATION (PCN) CONTENTS

The following information is provided as supplemental information based on the "Required Pre-Construction Notification (PCN) Contents" checklist. For convenience, "Item Numbers" were assigned to each box on the PCN Application.

#### **Item #1 - Name, Permittee**

See Items 1 – 10 of the attached Joint Application.

#### **Item #2 - Location of Proposed Project**

See item #31 of the attached Joint Application.

#### **Item #3 - Brief Description of Proposed Action**

See Item #32 of the attached Joint Application.

#### **Item #3A - Project Purpose**

See Item #33 of the attached Joint Application.

#### **Item #3B - Direct and Indirect Adverse Environmental Effects**

Installation of the cap would raise the riverbed elevation by approximately 8-inches based on the thickness of the capping material. As a result, the project area benthic habitat and bathymetric characteristics would be directly altered. These impacts will be mitigated somewhat since the concrete mats are expected to sink and/or compress the sediment directly below the mat, which will lessen the effect on the increase in river bottom elevation. In addition, the concrete mats, as shown in Attachments B and C, contain voids which are expected to quickly fill with depositional sediment that will result in a more natural river bottom within the capped area.

Placement of the capping material and construction of the temporary work pads will impact benthic organisms such as freshwater mussels. As shown in Table 1, a number of imperiled or vulnerable mussel species are located in the project area. As currently planned, a freshwater mussel relocation contractor will be employed to scan the area to be capped for mussels and relocate them to a suitable area prior to commencement of construction activities. This will greatly lessen the impact of the cap placement on the mussels. With the relocation of the mussels it is anticipated that the capping material will not necessarily

be detrimental to the overall habitat quality of the project area since the mats will likely sink somewhat with time and the voids will fill with sediment to create a more natural river bottom.

Clearing and grading along the river bank in order to provide access to the work area will be minimized to the extent practical and will be limited to the approximately 900 linear feet of the eastern shore directly adjacent to the project area. Once the project is completed these impacts will be mitigated by removing the work pad/road components at the end of the project and reconstruction of the bank area, as required.

In addition, some of the capping materials in some portions of the project area may be visible during low water conditions. This will change the visual aesthetic of a portion of the project area. It is currently envisioned that the ACBs will be placed along the approximate 116' elevation line and they will extend out into the river from approximately 50' to 200' depending on the location, as seen on Figure 2. With an average river flow elevation for the project area over the last five years of approximately 116.5', the ACBs will be placed below normal river flow elevations. As a result, the majority of the cap will be well below the water level for most days of the year, which will reduce its visibility. The voids in the mat are also expected to fill with sediment, which will also aid in reducing its visibility.

Erosion and sediment control measures and best management practices (BMPs) such as deployment of the silt curtain will be employed during construction as will total suspended solids (TSS) monitoring. These activities will allow for construction activities to be completed without an increase in sediment movement outside of the project area.

#### **Item #3C - List Any Other Corps Permits to Be Used**

See Item #42 of the attached Joint Application.

#### **Item #4 - Description of the Aquatic Resources that will be Adversely Impacted by the Activity**

See Item #36 of the attached Joint Application

#### **Item #5 - Location of Each Proposed Impact**

The location of each proposed impact is provided in the attached figures.

#### **Item #6 - How Impacts to Waters of the United States are to be Avoided and Minimized**

See Item #39 of the attached Joint Application

#### **Item #7 - Compensatory Mitigation Not Required**

See Item #40 of the attached Joint Application.

#### **Item #8 - Endangered Species Act - Animals**

A number of sources were used to assess the potential presence of endangered or threatened species in the project area and include:

- U.S. Fish and Wildlife Service (FWS);
- U.S. National Marine Fisheries Service (NMFS);
- South Carolina Department of Natural Resources (SCDNR); and
- The Rare, Threatened and Endangered Species Assessment developed by Kleinschmidt (March, 2008) prepared for the Saluda Hydroelectric Relicensing Project (FERC project no. 516).

The Kleinschmidt report was primarily focused on Lake Murray and the Lower Saluda River and the downriver extent was generally terminated at the confluence with the Broad River or the headwaters of the Congaree River (Figure 1). However, the shortnose sturgeon study and the freshwater mussels study conducted as part of the assessment activities extended into the upper Congaree River including the area adjacent to the FDP area. Review of these assessments and the available information from the FWS and SCDNR identified a number of federal and state threatened and endangered species, federal candidate species and other species of concern. Table 1 provides a summary of these species.

Of specific interest to this general project area, are the Rafinesque's big-eared bat, shortnose sturgeon and several species of freshwater mussels. The Rafinesque's big-eared bat and shortnose sturgeon are listed as state endangered species and state and federal endangered species, respectively. The five species of freshwater mussels range from "vulnerable" to "imperiled" at either the national or state level in the NatureServe database. The shortnose sturgeon have been documented to be present in the vicinity of the project area during spawning runs. Based on prior submittals and correspondence with the USFW and others, the planned project, if completed between months of June through December, will have no impact on potential sturgeon migration. Mussel relocation operations will significantly reduce the potential for negative impacts.

The Rafinesque's big-eared bat's range includes the sandhills region and it is known to roost under I-beam and T-beam bridges. The Gervais Street Bridge may provide a roosting site for this bat. However, project activities will occur downstream of the bridge and should not impact potential roosting sites within the structure.

#### **Item #8 - Endangered Species Act - Plants**

Potential habitat exists within the project area for the occurrence of one federal endangered species (smooth coneflower) and one federal candidate species (Georgia Aster). The potential habitat for the smooth coneflower and Georgia Aster would be along the power line corridor located directly east of the river based project area. Current plans include the use of a limited portion of the power line corridor for land based support activities (Figure 2) including staging of capping material. Due to the relatively small footprint of the support zone that will be located in the powerline corridor any potential impact is expected to be extremely limited.

#### **Item #9 - Historic Property**

A Cultural Resources Identification Survey (CRIS) was conducted by TRC (Attachment D) that covered the overall planned project area and the general vicinity. In addition, potential historical sites were researched using ArchSite, which is a geographic information system (GIS) maintained by SHPO and SCIAA.

Two separate sites are located in the general vicinity of the project area that are designated as historically significant. The sites consist of the Gervais Street Bridge and the Columbia Canal. Both properties are listed in the National Register of Historic Places and are shown on Figure 5 and listed on Table 2. The Gervais Street Bridge is located directly upstream of the project area. Implementation of the capping project is not expected to adversely impact the Gervais Street Bridge. Figure 5 shows that the approximate extent of the Columbia Canal area (as defined by the National Historic Register. Although the activities described in this PCN are located within the historical designation area as defined by the National Register (Figure 5), project related activities are not expected to adversely impact this historic property.

The cultural resources survey identified a number of archeological sites located in the vicinity of the area to be capped. These areas are shown on Figure 5 with their applicable descriptions and site ID numbers. Possible ruins from a saw mill (site ID: 38RD224) and a former structure foundation (site ID: 38RD234) are located directly adjacent to the FDP area. The archeologist will locate these sites in the field and they will be avoided during completion of sediment capping project. An underwater deposit of historic items (site ID: 38RD278) is located within the planned capping area. This area will be impacted by sediment cap installation operations and an archeologist will be on-site to properly document and secure any potential historical items. The items will be transferred to SCIAA/SHPO, as needed.

The Civil War era dump site (site ID: 38RD286) located in the river is of primary concern for the overall sediment remediation project. The FDP was conducted in order to potentially identify historical items or UXO in the alluvial fan area and none were found. Fifty one previously identified metallic anomaly locations were investigated and only cultural debris and trash was uncovered. As a result, it is expected that a minimal amount of historically significant items and/or UXO is still present within the planned project area. As currently envisioned, the cap will be placed on top of the undisturbed sediment and will not have the potential to uncover historical items. SCE&G currently plans to minimize sediment disturbance as much as possible and should not impact any remaining historical items. In the unlikely event that historical items are identified during completion of the project an archeologist will document the finding and secure the item for transmittal to SCIAA/SHPO. SCIAA/SHPO require two licenses that will be obtained prior to implementing the removal action. The licenses include an Intensive Survey License and a Data Recovery License. These were obtained for Phase 1 and will cover Phase 2.

## REFERENCES

- Kleinschmidt, 2007. Status of the Shortnose Sturgeon in the Lower Saluda and Upper Congaree Rivers, 2007 Final Summary Report.
- Kleinschmidt, 2008. Rare, Threatened and Endangered Species Assessment.
- MTR, March 2012. Project Delineation Report – Congaree River Sediments Investigation.
- MTR, May 2012. Draft Engineering Evaluation/Cost Analyses (EE/CA) – Congaree River Sediments. South Carolina Department of Natural Resources, Inc. (SCDNR) Rare, Threatened and Endangered Species Inventory.
- U.S. EPA, 1993. Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA.
- U.S. Fish and Wildlife Service (USFWS), Endangered Species Program; Species Reports.

**CHECKLIST – NWP-38**

**U.S. Army Corps of Engineers - Charleston District  
Checklist for 2007 Nationwide Permit Review  
Nationwide Permit 38**

**Cleanup of Hazardous and Toxic Waste  
(10/404)**

SAC #: 2011-01356-6NO

Applicant Name: South Carolina Electric & Gas Company

Waterway/Location: Congaree River

Project Name: Congaree River - Phase 2 - Modified Removal Action Sediment Capping Approach

1. Is the discharge in association with specific activities required to effect the containment, stabilization, or removal of hazardous or toxic waste materials?  
 Yes\*                       No
  
2. Are the activities performed, ordered, or sponsored by a governmental agency with established legal or regulatory authority?  
 Yes\*                       No
  
3. Are the activities the result of a court ordered remedial action plan or related settlement?  
 Yes\*                       No
  
4. Are the activities proposed in designated critical resource waters or their adjacent wetlands?  
 Yes\*                       No
  
5. Are the activities proposed for the establishment of new disposal sites or the expansion of existing sites used for the disposal of hazardous or toxic waste?  
 Yes                       No
  
6. Are the activities undertaken entirely on a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site by authority of CERCLA as approved or required by EPA?  
 Yes<sup>1</sup>                       No
  
7. Are all of the applicable NWP General and Regional Conditions satisfied, including, endangered species, and cultural resources, and if any Federally listed species and/or designated critical habitat occurs in the action area, have you made an effect determination and properly documented it in the administrative record?  
 Yes                       No

8. Does the discharge cause the loss of greater than 300 linear feet of streambed?

Yes  No

TO QUALIFY FOR THE NWP, UNLESS OTHERWISE NOTED, EVERY NUMBERED ITEM MUST HAVE A CHECKED BOX.

\* - REQUIRES A PRE-CONSTRUCTION NOTIFICATION (PCN) TO THE DISTRICT ENGINEER. **SEE THE SEPARATE PCN CHECKLIST TO ENSURE THE PROSPECTIVE PERMITTEE SUBMITS THE REQUISITE INFORMATION.**

**NOTE: THE PCN MUST INCLUDE A DELINEATION OF SPECIAL AQUATIC SITES AND OTHER WATERS OF THE UNITED STATES. WETLAND DELINEATIONS MUST BE PREPARED IN ACCORDANCE WITH THE CURRENT METHOD REQUIRED BY THE CORPS.**

Remember, determination of completeness must be made within 30 days of the date of receipt. If all required information is not provided, the prospective permittee will be notified that the preconstruction notification (PCN) is still incomplete and the review will not commence until all requested information has been received. If the applicant has not received any written notice from the DE within **45 days** of the date of receipt of the PCN, **the verification is issued by default.**

**IN ADDITION, The PCN MUST INCLUDE THE FOLLOWING:**

- **Documentation that the specific activities are required to effect the containment, stabilization, or removal of hazardous or toxic waste materials as performed, ordered, or sponsored by a government agency with established legal or regulatory authority;**
- **A narrative description indicating the size and location of the areas to be restored, the work involved and a description of the anticipated results from the restoration;**
- **A plan for the monitoring, operation, or maintenance of the restored area.**

<sup>1</sup> - Activities undertaken entirely on a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site by authority of CERCLA as approved or required by EPA, do not require permits under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.

Reviewed by:  
Date:

## TABLES



TABLE 1

## SUMMARY OF FEDERAL AND STATE THREATENED AND ENDANGERED SPECIES AND SPECIES OF CONCERN

Congaree River Sediments  
Columbia, South Carolina

Common Name	Scientific Name	Federal Listed and Status <sup>(2)</sup>	State Protection and Status <sup>(3)</sup>	Potential Occurrence
<b>Mammals</b>				
Rafinesque's Big-Eared Bat	<i>Corynorhinus Rafinesquii</i> / <i>Plecotus Rafinesquii</i>	No	Yes - Endangered	Potential for occurrence in project vicinity under the Gervais and Blossom Street bridges.
Red-Cockaded Woodpecker	<i>Picoides Borealis</i>	Yes - Endangered	Yes - Endangered	No - habitat not suitable.
Wood stork	<i>Mycteria Americana</i>	Yes - Threatened	Yes - Endangered	No - habitat not suitable, extremely rare and if present likely from dispersion or migration.
Bald Eagle	<i>Haliaeetus Leucocephalus</i>	No	Yes - Threatened	No - habitat not suitable.
<b>Fish/Amphibians</b>				
Pine Barrens Treefrog	<i>Hyla Andersonii</i>	No	Yes - Threatened	No - found in the sandhills region located northeast of the project area.
Shortnose Sturgeon	<i>Acipenser Brevirostrum</i>	Yes - Endangered	Yes - Endangered	Yes - though if present numbers likely limited
Robust Redhorse Sucker	<i>Moxostoma Robustum</i>	N1 - Critically Imperiled	SNR - Not Ranked	Yes - stocked by SCDNR below Parr Shoals dam.
<b>Freshwater Mussels</b>				
Carolina Heelsplitter	<i>Lasmigona Decorata</i>	Yes - Endangered	Yes - Endangered	No - found in rivers and tributaries other than the Congaree River.
Roanoke Slabshell	<i>Elliptio Roanokensis</i>	N3 - Vulnerable	S2 - Imperiled	Yes - potential for occurrence in project vicinity
Yellow Lampmussel	<i>Lampsilis Cariosa</i>	N3N4 - Vulnerable, Apparently Secure	S2 - Imperiled	Yes - potential for occurrence in project vicinity
Carolina Slabshell	<i>Elliptio Congaraea</i>	N3 - Vulnerable	S3 - Vulnerable	Yes - potential for occurrence in project vicinity
Carolina Lance	<i>Elliptio Angustata</i>	N4 - Apparently Secure	S3 - Vulnerable	Yes - potential for occurrence in project vicinity
Fatmucket	<i>Lampsilis Splendida</i>	N3 - Vulnerable	S2 - Imperiled	Yes - potential for occurrence in project vicinity
<b>Plants</b>				
Canby's Dropwort	<i>Oxypolis Canbyi</i>	Yes - Endangered	S2 - Imperiled	No - habitat not suitable
Georgia Aster	<i>Symphyotrichum Georgianum</i>	Yes - Candidate	SNR - Not Ranked	Yes - but only if area near power line is used for general support activities.
Rough-Leaved Loosestrife	<i>Lysimachia Asperulaefolia</i>	Yes - Endangered	S1 - Critically Impaired	No - habitat is not suitable.
Smooth Coneflower	<i>Echinacea Laevigata</i>	Yes - Endangered	S3 - Vulnerable	Yes - but only if area near power line is used for general support activities.

**Notes:**

(1) Kleinschmidt, March 2008.

(2) If species was not listed in the USFWS Endangered Species Database the NaturServe National Status is shown.

(3) If species was not listed in the SCDNR SC Rare, Threatened &amp; Endangered Species Inventory the NatureServe State or Subnational Status is shown.

**TABLE 2**

**LISTING OF NATIONAL REGISTER OF HISTORIC PLACES**

**Congaree River Sediments  
Columbia, South Carolina**

<b>Historic Place</b>	<b>Location</b>	<b>Level of Significance</b>	<b>Area of Significance</b>
Gervais Street Bridge	Spans Congaree River in West Columbia, SC	State	Architecture
Columbia Canal	East bank of the Broad and Congaree Rivers from the diversion dam to the southern railroad bridge in Columbia, SC	National	Industry

**Notes:**

1. Table includes properties near to or coinciding with the Congaree River removal actions and included on the National Register of Historic Properties.
2. Source: South Carolina Institute of Archeology and Anthropology & South Carolina Department of Archives and History.

## FIGURES

