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Sent: Tuesday, April 21, 2020 8:19 PM

To: Berresford, James <berresjl@dhec.sc.gov>

Cc: Cassidy, Greg <cassidga@dhec.sc.gov>; THOMAS EFFINGER <thomas.effinger@dominionenergy.com>; dennis.a.slade@dominionenergy.com <dennis.a.slade@dominionenergy.com>; Rusty Contrael <rcontrael21@outlook.com>; Reece, Myra <reecemc@dhec.sc.gov>; Porter, Henry <porterhj@dhec.sc.gov>; Taylor, G. Ken <taylorgk@dhec.sc.gov>; PAUL BIERY <paul.biery@dominionenergy.com>; HAMILTON, J. HAGOOD JR (SEG Services - 6) <JHAMILTON@scana.com>; Congaree Riverkeeper <crk@congareriverkeeper.org>; Charles Thompson <cthompson@thompsonsc.com>; Tucker, Gregory G <Gregory.Tucker@columbiasc.gov>; Plowden, Mark <mplowden@governor.sc.gov>

Subject: Congaree River - Revised Permit Application Strategy (4/21/2020)

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Mr. Berresford,

Please see the attached revised Permit Application Strategy document, as request by SCDHEC on April 7, 2020.

As always, please do not hesitate to reach out to me if you have any questions, or if any item in the attached document requires clarification.

Paul Biery
Senior Project Manager

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April 21st, 2020

Mr. Lucas Berresford
Program Manager
State Voluntary Cleanup Section
Bureau of Land and Waste Management
S.C. Department of Health & Environmental Control

RE: Congaree River – Stakeholder-Developed MRA
Revised Permit Application Strategy per SCDHEC request dated April 7, 2020

On April 7, 2020 DESC received a letter from SCDHEC, that requested two specific items relating to the Congaree River Project:

1. Submit a Revised Permit Application Strategy (for the stakeholder-developed MRA) to SCDHEC by April 21, 2020; and
2. Submit a “Completed” Permit Application to the USACE (for implementation of the stakeholder-developed MRA) by June 30, 2020.

1. Revised Permit Application Strategy

The Revised Permit Application Strategy is attached. The original submittal dated July 24, 2019 has been revised and updated as requested.

2. Submit a “Completed” Permit Application to the USACE by June 30, 2020

Please refer to the attached Revised Permit Application Strategy for the current status of work products associated with the permit application. It should be noted that the USACE determines when a permit application is complete. There are a few items that will not be fully refined by the SCDHEC requested submittal date of June 30th, 2020. Therefore, DESC is proposing two options in response to this request:

- Option 1 – submit a complete as possible permit application by June 30th, 2020; or
- Option 2 – submit a permit application once those outstanding items have been addressed, which is anticipated by September 30th, 2020.

Please advise as to the Department's direction. DESC's efforts to obtain a United States Army Corps of Engineers (USACE) permit for the Stakeholder-Developed Modified Removal Action will continue in the interim while we await response from the Department.

Sincerely,

A handwritten signature in blue ink that reads "T. N. Effinger". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Thomas N. Effinger, PE
Director, Environmental Services

Ec: Myra Reece, Henry Porter, Ken Taylor, Greg Cassidy, SCDHEC
Paul Biery, Dennis Slade, Hagood Hamilton, Dominion Energy
Rusty Contrael, ACE Inc.
Bill Stangler, Congaree River Keeper
Charlie Thompson, Guignard Associates, LLC.
Greg Tucker, City of Columbia
Mark Plowden, Office of the Governor

Congaree River Project – Permit Application Strategy

Updated on April 21, 2020

The completion of the Congaree River Project is outlined in 5 major components below. With few exceptions, each component must be completed in a sequential and practical manner:

1. **Riverside Operations** – This task consists of defining everything that needs to be completed within the flowing waters of the river and includes the following major tasks:
 - a. **Objective - Obtain USACE concurrence for a cofferdam / removal approach.**
 - i. Determine precise footprint(s) of the area(s) to be removed – completed via stakeholder-developed Modified Removal Action (MRA). **Completed** - Submitted December 12, 2018 with final SCDHEC/Stakeholder approval received on February 7, 2019.
 - ii. Backwater Analysis – (assumed a rock-filled cofferdam approach) – Completed - On April 16, 2019 and again on September 5, 2019. On October 4, 2019 - DESC received notification from the USACE that their comments had been addressed and that the “Engineering No-Rise” submittals appear to be ready for submittal to the local FEMA Floodplain Coordinators.
 - iii. “No-Rise Certification” (a product of the Backwater Analysis [aka Hydraulic Analysis] listed above) for the 100-year storm – needs approval from FEMA via local Floodplain Coordinators. **Completed** - After revising the original April 16, 2019 submittal in January 2020, received concurrence /conditional approvals from Floodplain Coordinators in March and April of 2020.
 - iv. Re-evaluation of the type of cofferdam to be installed – Rock-filled or Cellular Sheetpile – [cellular sheetpile or reinforced rockfill berm approach may address prior concerns related to catastrophic failure]. **Completed** - Cellular Sheetpile Cofferdam Evaluation completed July 17, 2019 - Recommended reinforced rock-filled cofferdam approach in lieu of cellular sheetpile cofferdam approach. Submitted to SCDHEC on December 13, 2019. Discussed and verbally approved at Stakeholder meeting in January 23, 2020. **Completed** – January 23, 2020 – Verbally approved at the meeting. A confirmation letter was sent to SCDHEC on April 9, 2020 and approved by SCDHEC on April 10, 2020.
 1. Originally, evaluated 10 types of cofferdams, reduced to top 3 types (rock-filled, port-o-dam and cellular sheetpile – Rizzo, May 2012). Recently, a draft evaluation of the reinforced rock-filled berm and cellular sheetpile cofferdams was completed; [the port-o-dam approach was eliminated due to over topping risk which would likely result in catastrophic failure] - the cellular sheetpile approach may reduce/eliminate catastrophic risk and create less rise “flooding” on the western shoreline during lower flow events [due to a smaller design footprint], however constructability and water leakage/management issues persist.
 - v. Evaluate the net water level rise effects that the proposed cofferdam will exert on the western shoreline – (i.e. the lower flow evaluation). Ideally, the

approved backwater analysis from above (using the same computer simulation /modeling software, survey data and other site-specific inputs) can be used to predict the extent of the net rise (both increased water height and lateral extent due to the cofferdam installation) of water or “flooding” on the western shoreline. **Completed** - The “Low Flow Sensitivity Analysis”, prepared by WSP, dated July 30, 2019 - was provided to the USACE along with the “Engineering No-Rise” Submittals in April 2019 and again in August 2019. The “Low Flow Sensitivity Analysis” concluded that, “...the change in floodplain extent due to construction of the cofferdams is negligible”. DESC is proceeding on the assumption that the USACE concurs with this study and these calculated “negligible” increases are acceptable. Also, identify which property owner(s) may be affected by the increase, or rise and obtain their approvals to “flood” their property(s). Due to the “negligible rise” presented in the “Low Flow Sensitivity Analysis” the actual “rise” is within the natural rise and fall of the river (well below the high-water mark). Therefore, no individual property owners are anticipated to be affected by this “negligible rise.”, DESC requests SCDHEC to provide written approval of the “negligible rise” identified.

- vi. The type of cofferdam has been selected and the water level impacts to the western shore have been evaluated and included in the permit application. For the SCDHEC-requested submittal of June 30, 2020, additional engineering studies will be required and include a stability analysis, an evaluation for the potential increase of channel erosion adjacent to the cofferdam structure, and the potential for western shoreline erosion. See updates below:

Stability Analysis – WSP - work in progress, original draft of November 8, 2019 has been updated to include reinforcement by Articulated-Concrete Block (ACB mats) – as discussed and verbally approved at the January 23, 2020 Stakeholder meeting. **Work in Progress**

Evaluation of Potential River Bottom Erosion (adjacent to the cofferdam(s) – WSP - completed March 10, 2020 – There will be “minor” increases in velocity in the existing high-velocity areas – However, the net effect is negligible. **Completed – submit with application.**

West Bank Erosion Potential – WSP – completed November 26, 2019, findings include “...change in velocity due to cofferdam construction is relatively small ...erosion protection measures ... are not required.”

Completed – submit with application.

Update the Conceptual Design Drawings – work in progress adding the reinforcement elements and other updates as required. **Work in**

Progress – submit with application.

- vii. Once the engineering/design approach has been finalized; the previously approved UXO removal support plans (4 separate plans), Archaeological Data Recovery Plan and coordination with SHPO/SCIAA (Memorandum of Agreement), and other existing plans will need to be re-evaluated in the context of the stakeholder-developed MRA scope of work. The re-approved plans should be included in the actual, “Completed” permit application submittal

(Number 3 below). However, it will be very difficult, if not impossible, to obtain these approvals prior to submitting a “complete” application to the USACE based on the June 30, 2020 SCDHEC-requested submittal date. Notwithstanding the above, as part of the USACE’s review/approval process (either Individual Permit or verification under the Nation-Wide Permit program) the Corps is required to solicit input from various agencies [in varying degrees, dependent upon the actual permit approach the Corps selects], which could provide review/approval time for the USACE-Huntsville. **Proposed Approach** - DESC will submit the previously approved plans included within the permit application for the June 30, 2020 submittal and DESC will note that the plans need to be reviewed and updated as necessary with/by the respective agencies, while the Corps is completing their review of the other components of the application. [Note that DESC had to provide funding to SCDHEC so that SCDHEC could engage the USACE Charleston Project Management Office to manage the USACE UXO team out of Huntsville to review and approve the UXO plans. This funding procedure for the Corps’ review/approval of the UXO-related plans required a considerable amount of time and **will need to be in-place prior to Huntsville’s review.**]

2. **Landside Operations** – After the riverside operations have been determined, the Landside Operations task will consist of defining everything that needs to be completed on landside of the project and includes:
 - a. Determine access approach and define on-site access road improvements/construction. Ongoing –To submit an application to the USACE by June 30, 2020, **Central Access would be the only potentially feasible option among the alternatives** and must be included in the development of the permit documents. It is also anticipated that SCDHEC will communicate the planned access route to the adjacent property owners.
 - b. Obtain access agreement(s) for design activities, if required. Ongoing
 - c. Re-evaluate plans for constructing the office trailers and other project support facilities. To be initiated.
 - d. Re-evaluate the design and permit application package for constructing a Culvert Crossing. Given the SCDHEC requested submittal date of June 30th, 2020 - **Central Access is the only potentially feasible alternative and no Culvert-Crossing will be required.**
 - e. Re-evaluate the “Support Plans” (i.e. Erosion and Sediment Control Plans). The “Support Plans” will be updated **using Central Access only.**
 - f. Re-evaluate the off-site trucking routes. Only minor revisions to prior trucking routes are anticipated.
3. **“Completed” USACE Permit Application Submittal – June 30th, 2020 [Note: The USACE determines when an application is complete]**
 - a. Revise the support plans based on number 1 and 2 listed above – include revised plans and related approvals, if available. Note: Revised UXO Plans will not have been reviewed and approved by USACE Huntsville. SHPPO/SCIAA review, approval and full execution of a Memorandum of Agreement will not have been completed.
 - b. As before, the “completed” permit application will consist of 2 major components:

- i. The Joint Application / Pre-Construction Notification (JA/PCN) form and required attachments;
- ii. The Culvert Crossing design package; **Not required based on Central Access. Not feasible based on current schedule constraints.**
- iii. The updated Draft MRA Work Plan. [Not available by June 30, 2020 SCDHEC requested submittal date.] Conceptually, the USACE should issue a conditional permit requiring SCDHEC approval of an MRA Work Plan, prior to field implementation.

4. MRA Work Plan and Other Approvals – Fourth (4th) Quarter, 2020

- a. Provide the Draft MRA Work Plan to DHEC – after USACE permit application has been submitted, reviewed and significant comments from the Corps, or any other agencies have been received/addressed.
- b. DHEC Review/Approval of MRA Work Plan (including Public Participation) - At SCDHEC's discretion.
- c. Disposal Approvals – to be completed during review of the Draft MRA Work Plan.
- d. Obtain Access Agreement(s) for MRA scope of work. Ongoing
- e. Contractor Procurement – to be completed after the scope of work has been defined.

5. Remediation Field Activities – To be Determined

- a. Complete the site access improvements and construct the site support facilities.
- b. Complete the Mussel Relocation activities.
- c. Complete the screening / removal of Unexploded Ordnances (UXO's) within the footprint of the cofferdam.
- d. Construct the cofferdam to match the footprints from the stakeholder-developed MRA.
- e. Perform removal operations consistent with the approved plans.
- f. Repeat the above steps in phases until the project has been completed.
- g. De-construct site support operations and restore the site and landside operations area to pre-existing conditions.