Alderman Environmental Services, Inc.

April 11, 2022

Mr. Paul Biery
Dominion Energy South Carolina, Inc.
400 Otarre Parkway
Cayce, SC 29033

RE: March 2022 Mussel Relocation Initial Reconnaissance Survey
Congaree River Modified Removal Action Project
Columbia, SC

Dear Mr. Biery:

On March 28, 2022, Alderman Environmental Services' (AES) biologists, Joe Alderman and Dr. Logan Williams, conducted an initial reconnaissance survey of Area 1 and Area 2 of the Congaree River Modified Removal Action project in Columbia, SC. Water flow was approximately 9,000-10,000 cubic feet per second (cfs), in line with the median flow for the time of year. Gage height at the time of the reconnaissance was approximately 5.3 feet. Visibility was slightly turbid, with an approximate visibility range of one foot. The rate of flow was relatively high, likely exceeding 7 mph farther out from shore, not allowing for safe SCUBA diving in the area.

It should be noted that this was the fourth consecutive week that the work had been tentatively scheduled. During the prior three weeks, the river and forecasted conditions were not conducive to completing the work. Although the river conditions described above were considered fair and the initial reconnaissance goals could be accomplished, more suitable conditions for conducting the actual mussel relocation work will be required and are described below.

The initial assessment of Area 1 was that close to shore, in the more downstream area (in relation to the Senate Street access point), the benthic substrate was mostly silt and a fine sand, relatively poor quality mussel habitat. Upstream, however, the substrate was a clean mix of pebble and gravel, which is generally thought to be good quality mussel habitat. Area 2 benthic substrate resembled the downstream portions of Area 1 (mostly silt and a fine sand) but with steeper banks and deeper water. AES biologists observed no live mussels in either area. One shell fragment and a full shell of *Elliptio complanata* were observed. A Dominion staff member indicated that the area we were surveying is often exposed during the summer drier months, possibly explaining why the area was devoid of live mussels. The portions of Areas 1 and 2 located further from

shore near the channel, with deeper water and stronger current, do not appear to be good mussel habitat due to their flow characteristics. Also, these areas may not be safely accessible for mussel collection and relocation except during the lowest river flows.

AES biologists ascertained that the right descending shoreline (western side of the river, across from the project area) will be a good quality relocation site.

AES recommends conducting the mussel collection and relocation efforts when conditions are more conducive to that activity, likely when the flow is closer to 4,000-5,000 cfs (gage height reading of 3 to 3.5 feet) and a minimum visibility range of two feet. These flow conditions more consistently occur beginning in the late Spring timeframe, although river flows are highly variable.

Based on the project area river flow characteristics and findings of the initial reconnaissance described above, AES has developed the following approach to the collection and relocation of mussels that may be present within the cofferdam footprints as depicted in the attached figure. If favorable conditions are present, the red hatched areas shown on the figure will be the most safely accessible portions of the cofferdam footprint that coincide with locations where the presence of mussels is most likely to occur. If areas further out from shore are safe to access at that time, we can expand the areas accordingly if appropriate.

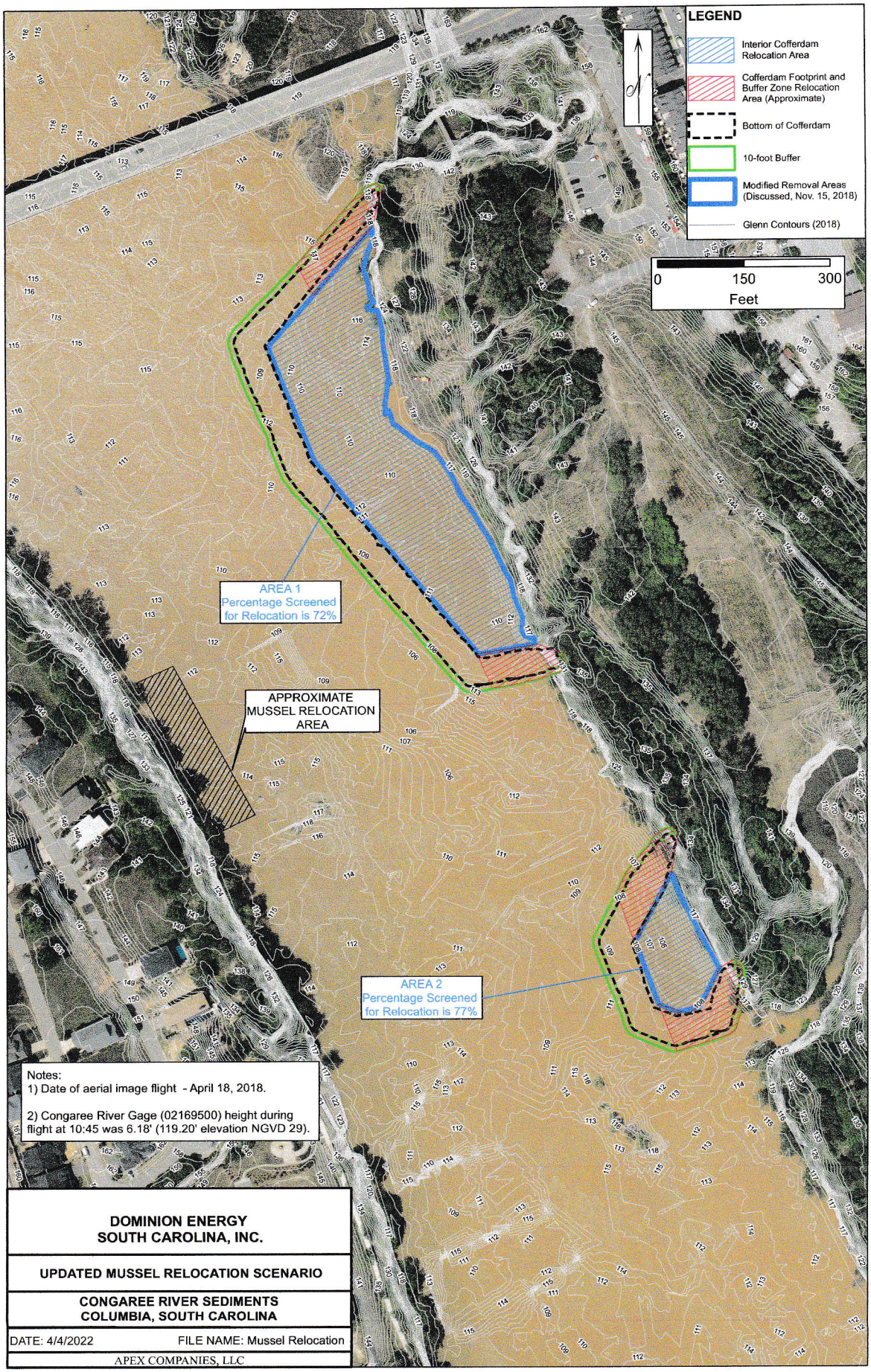
After each cofferdam is in place and partially dewatered, we can remobilize to the area to collect and relocate the mussels from the removal areas inside the cofferdams (blue hatched areas). This should lead to much safer conditions to conduct the relocation effort and result in the collection and relocation of most of the mussels potentially present in the project area.

AES believes this approach provides for the collection and relocation efforts to be focused on the areas where mussels are most likely to be present and can be safely accessed during the anticipated river conditions. We will continue to work with you to schedule the initial mussel collection and relocation activities as soon as practical and will be ready to mobilize for the interior area as soon as practical after the initial cofferdam is in place and has been partially dewatered.

Sincerely,

Joe Alderman
President – AES, Inc.

Attachment


LEGEND
Interior Cofferdam Relocation Area
Cofferdam Footprint and Buffer Zone Relocation Area (Approximate)
Bottom of Cofferdam
10-foot Buffer
Modified Removal Areas (Discussed, Nov. 15, 2018)
Glenn Contours (2018)
0
150
300
Feet
AREA 1
Percentage Screened for Relocation is 72%
APPROXIMATE MUSSEL RELOCATION AREA
AREA 2
Percentage Screened for Relocation is 77%
Notes:
1) Date of aerial image flight - April 18, 2018.
2) Congaree River Gage (02169500) height during flight at 10:45 was 6.18' (119.20' elevation NGVD 29).
DOMINION ENERGY SOUTH CAROLINA, INC.
UPDATED MUSSEL RELOCATION SCENARIO
CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA
DATE: 4/4/2022
FILE NAME: Mussel Relocation
APEX COMPANIES, LLC