PUBLIC PROTECTION PLANS

APPENDIX L

PUBLIC SAFETY PLAN

PUBLIC SAFETY PLAN

CONGAREE RIVER MODIFIED REMOVAL ACTION
COLUMBIA, SOUTH CAROLINA

May 2022

Prepared for:

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

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Greensburg, PA 15601

PUBLIC SAFETY PLAN

CONGAREE RIVER MODIFED REMOVAL ACTION
COLUMBIA, SOUTH CAROLINA

INTRODUCTION

Dominion Energy South Carolina, Inc. (DESC), formerly South Carolina Electric and Gas Company (SCE&G), plans to complete a Modified Removal Action (MRA) to address the occurrence of a tar-like material (TLM) that is commingled with sediment along the eastern shoreline of the Congaree River, just south of the Gervais Street Bridge in Columbia, South Carolina. The project area location is shown on Figure 1 in Attachment A. The TLM is believed to be a coal tar material that originated from the Huger Street former manufactured gas plant (MGP) site, located approximately 1,000 feet to the northeast of the project area. The proposed work is being performed by DESC at the direction of South Carolina Department of Health and Environmental Control (SCDHEC) and is subject to permits and approvals from the U.S. Army Corps of Engineers (USACE) and other agencies.

The overall objective of this project is to remove impacted sediment from the Congaree River within two areas. The current plan is to construct temporary cofferdams around each area to facilitate removal of the impacted sediment. As currently envisioned, the temporary cofferdams will be constructed sequentially and the MRA will occur over several years. The construction and active remediation season will occur from approximately May through October of each year. Figure 2 illustrates the current site operations plan scenario and the landside support zone components. After each cofferdam is constructed, the isolated area will be dewatered, and the impacted sediment removed and transported off-site for disposal. Following completion of the removal activities in Area 1, the cofferdam will be removed, and a cofferdam will be constructed around Area 2. After the removal activities are completed in Area 2, the cofferdam materials will be removed from the river. Due to documented historical activities conducted in the vicinity of the project area, this project will include screening the planned cofferdam and sediment removal areas for potential Civil War era unexploded ordnance (UXO).

DESC intends to ensure that public safety control measures are in place during implementation of the project. This Public Safety Plan summarizes the plans and procedures that have been developed to ensure safety of the public during implementation of the project.

GENERAL PUBLIC SAFETY CONCERNS

Throughout completion of the planning and permitting tasks associated with this project, DESC has identified the major potential public safety related concerns and has developed the appropriate plans to manage these concerns. The primary concerns identified by DESC, regulatory officials and other interested parties include:

1. Potential traffic related issues in the general project vicinity;
2. Safe identification, handling and disposal of potential UXO;

3. Airborne constituents of concern, dust and odors from the TLM and site operation activities;
4. Construction and operation of the cofferdam structures; and
5. Continued safe navigation through the project area and use of the Congaree River resources.

In addition to the Stakeholder-Developed MRA Work Plan, this Public Safety Plan and other public protection plans were developed to adequately address the above-mentioned concerns. The other plans provided as appendices to the MRA Work Plan that are summarized in this Public Safety Plan include:

- Traffic Control Plan (Appendix M)
- Air Monitoring and Odor/Dust Control Plan (Appendix N)
- Navigation Plan (Appendix O)
- Notification Plan (Appendix P)

Site security measures are described in the MRA Work Plan and Site Operations Plan. Because these measures are integral to overall public safety, they are also summarized in this plan. Maintaining site security will ensure that only properly trained personnel have access to the various work areas associated with the project. This Public Safety Plan also provides reference to information in the UXO Management Plans and Cofferdam Inspection and Maintenance Plan (Appendices D and I to the MRA work Plan). Safe management of UXO that may be encountered during the removal operations is critical to public safety. Routine inspection of the cofferdams, including navigational signage and notification components, and maintaining an awareness of projected river levels will ensure that the integrity of the structures is maintained and associated public safety concerns are addressed.

PROJECT SAFETY RELATED PLANS AND COMPONENTS

A number of separate project plans have been developed to provide guidance and specific details pertaining to public safety during implementation of the project. These plans include:

- **Traffic Control Plan** – This Plan provides specific routes into and away from the site, the landfill and the anticipated stone (cofferdam construction material) quarry to ensure that all site-related traffic movements are conducted as safely and with as minimal of an impact on the surrounding community as practical. Government officials were previously contacted and their input was utilized in development of the Traffic Control Plan. The Plan will be implemented during implementation of the project and oversight personnel will monitor trucking operations to ensure continued compliance with the Plan.
- **Air Monitoring and Odor/Dust Control Plan** – This Plan provides site perimeter air monitoring procedures to ensure that site related constituents of concern, dust and odors are monitored and controlled throughout implementation of the project.
- **Navigation Plan** – This Plan was developed based on the guidelines located in the “U.S. Coast Guard Aids to Navigation System” publication. The Plan provides specific methods for notifying boaters and other users of the river in advance of the project site (upriver and downriver) regarding the need to take appropriate measures to avoid the cofferdam structures. The specific methods for demarcating the area to be avoided and the buoy/signage/lighting scenario for the project are provided.

- **Notification Plan** – This Plan provides the planned steps that DESC, in conjunction with SCDHEC when appropriate, will take to notify the general public in the vicinity of the project area, local officials and emergency response agencies of significant events as outlined in the Plan. This Plan will ensure timely notification of important project events as required throughout implementation of the project.
- **UXO Management Plans** – These Plans provide the specific guidelines for UXO screening, identification and subsequent management and disposal activities. The specific Plans include the Work Plan for Munitions Response, Explosives Safety Plan for Munitions and Explosives of Concern, Diving Operations Plan and Diving Safe Practices Manual. These Plans were developed in accordance with industry standards and have been approved by SCDHEC.
- **Site Operations Plan** – This Plan provides details pertaining to the overall sediment removal activities including landside support zone construction, site security, work zones, staging areas, and water management and material handling provisions. The elements outlined in the Site Operations Plan were developed with the intent to complete the project as safely, efficiently and with as minimal of an impact as possible on the surrounding community, river ecosystem and the landside support zone.
- **Cofferdam Inspection and Maintenance Plan** – This Plan provides a detailed daily cofferdam structure inspection procedure that will be implemented by project oversight personnel. Areas of inspection include the cofferdam structural integrity, exterior conditions (such as debris buildup), riverbank tie-in locations, overall performance and leakage volumes, navigational signage and notification components, expected future river levels, etc. An inspection form/checklist will be completed daily and any potential areas in need of repairs will be documented and addressed as soon as practical. Implementation of this Plan will ensure that cofferdam structural issues are identified and rectified in a timely manner and that project personnel are aware of changing river conditions and can plan accordingly to protect project assets.

SITE SECURITY

An important component of the overall project will be site security. Maintaining site security will ensure that only properly trained personnel have access to the various work areas associated with the site. The primary method for securing the site will be the installation of a temporary chain-link fence around the perimeter of the landside support zone. “Restricted Area” signs will be posted at regular intervals along the fence and also posted on the cofferdam structure, as noted in the Navigation Plan. The approximate fence location is shown on Figure 2.

One locking gate, located at the corner of Senate and Gist Streets will be the sole vehicular access point to the project area. Several smaller locked man gates may be positioned along the perimeter fence to permit access to the immediate area outside the fenceline by project personnel if necessary. To prevent the unauthorized or unknowing entry of third parties onto the site, access gates will remain closed during site activities to the extent practical. The gates will remain locked during non-working hours while removal activities are occurring and during the off-season.

After site operations are initiated, DESC will post security guards on-site during non-working hours. These guards will conduct regular patrols of the property during non-working hours, during the off-season, and if necessary during periods of low site activity when a minimal number of site personnel are present. The guards and fence will serve to keep unauthorized and untrained personnel out of the active project area.

SUMMARY

Implementation of the above plans and security measures will result in the following public safety related project attributes:

1. Restrict access to the site area to only authorized and properly trained personnel;
2. Ensure that work within the project area is conducted in accordance with industry standards for safety;
3. Control traffic patterns on-site and into and away from the project area, landfill and stone quarry locations in order to significantly reduce the potential for traffic related incidents in the surrounding community;
4. Control odor, dust and other potential emissions within the work area and at the site perimeter, which will protect site workers and the surrounding community;
5. Inform boaters and other river users of the cofferdam structure and the appropriate measures to avoid the structure and safely pass through the project area;
6. Follow the procedures outlined in the Notification Plan to ensure potentially impacted parties and resources are notified of significant events in a timely manner.
7. Conduct UXO screening, identification and management activities in accordance with industry standards for safety and the approved site-specific UXO Management Plans;
8. Inspect and rectify potential issues with the cofferdam structure; and
9. Generally complete all site-related activities in a safe and efficient manner.

DESC believes that successful implementation of the above plans and security measures will result in the safe completion of the project with as minimal of an impact on the surrounding community as practical.

ATTACHMENTS

A Figures

ATTACHMENT A

FIGURES

BROAD RIVER

INTERSTATE I-126

SALUDA RIVER

HUGER ST. FORMER MGP SITE LOCATION

GIST STREET

SENATE STREET

GERVAIS STREET BRIDGE

MRA REMOVAL AREAS

BLOSSOM STREET BRIDGE

Timmerman Bridge

St Peters Cem

Randolph Cem

ELMWOOD

Governors Mansion

HUGER

LAUREL

Howard Sch

Reservoirs

WT

Irwin Park

TAYLOR

Correctional Institution

CONGAREE RIVER

BDY

232

250

150

12

378

Powerplant

4 LANE

LEARY

LUCAS

ST

Saging Sta

RICHLAND

LEXINGTON

CO

Brookland Sch

AVE

200

2

6TH

DRIVE

Brookland-Cayce

PO

0 537 1,074 1,611 2,148

SCALE (APPROXIMATE)

FIGURE 1
DOMINION ENERGY
SOUTH CAROLINA, INC.

SITE LOCATION MAP

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

U.S.G.S. 7 1/2' TOPOGRAPHIC QUADRANGLES OF SOUTHWEST COLUMBIA AND COLUMBIA NORTH
DATED: 1972 REVISED: 1982

DATE: 06/18/19 FILE NAME: CONG523

APEX COMPANIES, LLC

LEGEND

– STREAM/RIVER/WETLAND EDGE
– TREELINE
– 5 FOOT CONTOUR INTERVALS
– REMOVAL AREAS FROM STAKEHOLDER DEVELOPED MRA PLAN
– SITE PERIMETER FENCE
– APPROXIMATE EXTENT OF GRAVEL AREAS
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NOTES:
1) LAND TOPOGRAPHY BASED ON LIDAR SURVEY CONDUCTED ON APRIL 18, 2018.
2) CONGAREE RIVER GAGE (02169500) HEIGHT DURING LIDAR SURVEY WAS 6.18' (119.20' ELEVATION NGVD 29).
3) RIVER BOTTOM CONTOURS BASED ON BATHYMETRIC SURVEYS CONDUCTED MAY 7 THRU JULY 17, 2018.

0' 180' 360'

N

GERVAIS STREET BRIDGE
GIST STREET
SENATE STREET
JOB TRAILERS
OFFICE AREA
GATE
SITE ACCESS ROAD
TEMPORARY STRUCTURE MATERIAL HANDLING AND STORAGE
STAGING AREA
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PRIMARY SETTLING
POTENTIAL FILTERED WATER DISCHARGE POINT
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CONTACT WATER TRANSFER LINE
FILTRATION UNITS
DISCHARGE TANKS
PROPOSED MEC STORAGE MAGAZINE
CONGAREE RIVER
AREA 2

FIGURE 2
DOMINION ENERGY
SOUTH CAROLINA, INC.

CONCEPTUAL SITE OPERATIONS PLAN

COLUMBIA, SOUTH CAROLINA

DATE: 3/8/21 FILE NAME: CONG604

APEX COMPANIES, LLC

APPENDIX M

TRAFFIC CONTROL PLAN

TRAFFIC CONTROL PLAN

CONGAREE RIVER MODIFIED REMOVAL ACTION
COLUMBIA, SOUTH CAROLINA

May 2022

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TRAFFIC CONTROL PLAN

CONGAREE RIVER MODIFIED REMOVAL ACTION
COLUMBIA, SOUTH CAROLINA

INTRODUCTION

Dominion Energy South Carolina, Inc. (DESC), formerly South Carolina Electric and Gas Company (SCE&G), plans to complete a Modified Removal Action (MRA) to address the occurrence of a tar-like material (TLM) that is commingled with sediment along the eastern shoreline of the Congaree River, just south of the Gervais Street Bridge in Columbia, South Carolina. The project area location is shown on Figure 1 in Attachment A. The TLM is believed to be a coal tar material that originated from the Huger Street former manufactured gas plant (MGP) site, located approximately 1,000 feet to the northeast of the project area. The proposed work is being performed by DESC at the direction of South Carolina Department of Health and Environmental Control (SCDHEC) and is subject to permits and approvals from the U.S. Army Corps of Engineers (USACE) and other agencies.

The overall objective of this project is to remove impacted sediment from the Congaree River within two areas. The current plan is to construct temporary cofferdams around each area to facilitate removal of the impacted sediment. As currently envisioned, the temporary cofferdams will be constructed sequentially and the MRA will occur over several years. The construction and active remediation season will occur from approximately May through October of each year. Figure 2 illustrates the current site operations plan scenario and the landside support zone components. After each cofferdam is constructed, the isolated area will be dewatered, and the impacted sediment removed and transported off-site for artifact screening and/or disposal. Following completion of the removal activities in Area 1, the cofferdam will be removed, and a cofferdam will be constructed around Area 2. After the removal activities are completed in Area 2, the cofferdam materials will be removed from the river.

In order to complete this project, a significant amount of truck movements into and away from the project area are anticipated. The majority of the truck movements will be associated with importation of stone for cofferdam construction and installation of the operations area and site access roads, as well as for the transportation of the excavated material to a local landfill. This Traffic Control Plan was developed to ensure that the necessary truck movements are completed with as minimal of an impact to the surrounding area as practical. The proposed methodology for development of the truck routes and for monitoring of driver compliance during completion of the project are presented. Controlled use of established truck routes will minimize potential impacts to local traffic patterns.

The site entrance is located at the corner of Senate and Gist Streets. WSP USA Inc. performed an initial pavement assessment on the roads near the site entrance (portions of Senate, Gist and Williams Streets). Based on the findings of the assessment, the direct route along Senate Street to Huger Street is the best option.

SITE OPERATIONS AND TRAFFIC PATTERNS

Figure 2 shows the conceptual site operations plan, which includes establishing the landside support zone adjacent to the project area within the river. The landside support zone will consist of a series of gravel access roads, equipment/material lay down areas, and a material handling and artifact screening area. Throughout completion of the project, only authorized remediation personnel will be allowed access to the work areas during the source removal activities and on-site traffic patterns will be restricted to the site roads. A perimeter fence will be installed around the landside area and the singular site entrance/exit will be the gate at the corner of Senate and Gist Streets (Figure 2). All project related traffic will be routed through this gate.

Initial activities will involve installing the operations area and access roads and construction of the cofferdam around Area 1. Truck traffic associated with these activities will be primarily incoming deliveries of stone. DESC anticipates using the Martin Marietta Cayce Quarry located to the southwest of the project site at 2125 State Street in Cayce, SC to obtain the stone for the support zone and cofferdam construction. Reuse of the Area 1 material for the Area 2 cofferdam is anticipated, which can be accomplished using the access roads within the operations area. Excess material from the cofferdams will be transported off-site for reuse or disposal after the material is no longer needed on-site. For the purpose of this plan, it has been assumed that the excess cofferdam material will be transported to the Richland County landfill using the same routes as the excavated TLM material.

After each cofferdam is constructed and the isolated area dewatered, the sediment removal activities will commence. The excavated sediment will be transported from the river to the on-site material handling area via the site access roads. Initial dewatering and stabilization of the wet material will be completed within the isolated area in the river and additional conditioning will be completed as necessary to render the material suitable for off-site transport to the landfill. The stabilized material will be loaded into off-site transport trucks or roll-off boxes. To prevent the tracking of impacted material outside of the designated loading areas, all trucks carrying impacted material either from the river to the handling area or off-site to the landfill will be inspected for the presence of residual or loose material outside of the truck beds or boxes. Any residual or loose material observed will be removed prior to further movement of the truck. Clean, plastic lined loading areas will be utilized for truck loading to minimize the potential for truck tires to contact impacted material. Prior to leaving the site, each truck will be properly manifested in accordance with applicable regulations. DESC anticipates using Waste Management's Richland County landfill located at 1047 Highway Church Road in Elgin, SC for disposal. This landfill is located approximately 20 miles from the site.

All vehicles will maintain safe operating speeds at all times. The site roads are anticipated to be wide enough to accommodate trucks passing each other in opposite directions when necessary. Spotters and/or flagmen will be utilized as required to maintain safe traffic flow.

TRAFFIC CONTROL PLAN

The use of Senate Street for site-related traffic will reduce the potential for safety related issues, impacts on the adjacent residential community, and further road surface deterioration along Gist and Williams

Streets. However, it will still be critical to adequately control the flow of tractor-trailer and tri-axle trucks into and out of the general site vicinity in order to minimize the impact on the surrounding community. The following specific routes were developed through consultation with local officials. All routes will be verified prior to commencement of the project and will be modified, if necessary, to account for changing traffic patterns or public input. Each truck driver will be informed of the prescribed routes for site entry and exit and an effort will be made to utilize regular drivers who are familiar with these routes. All site related vehicles will follow the specific routes and project oversight personnel will conduct periodic monitoring of truck movements to ensure compliance with this Traffic Control Plan. Any identified deviation from the prescribed route will be immediately corrected.

Immediate Site Vicinity Incoming and Outgoing Traffic Pattern

General incoming and outgoing traffic patterns are presented on Figure 3. All incoming traffic will enter the project location by travelling south in the southbound lanes of Huger Street. They will then turn right onto Senate Street and follow Senate Street to the site entrance. Outgoing traffic will exit the site entrance, follow Senate Street to Huger Street, turn right onto Huger Street and travel south out of the immediate site vicinity toward Blossom Street. The traffic patterns will not utilize left turns, where possible.

Because Senate Street is the only access route to the project area, DESC intends to proactively repair, maintain and eventually replace the asphalt road surface of Senate Street at the conclusion of the project. DESC also intends to monitor the volume of trucks using Senate Street during construction activities, and will impose speed limits if necessary.

Landfill and Stone Quarry Planned Truck Routes

Most of the project related truck traffic will result from importation of stone likely from the Martin Marietta Cayce Quarry and out-going shipments of impacted material to the landfill. Figures 4 through 7 will be supplied to the truck drivers who are carrying this material in order to inform them of the required routes for the project. Please note that separate trucks will be used for stone import and impacted material export (i.e., a stone-filled truck will not be re-loaded with impacted material for transport to the landfill).

Figure 4 illustrates the route for empty material transport trucks traveling from the landfill to the project site. Trucks originating from other locations will use this route as soon as possible. Trucks will exit the landfill entrance by turning right onto Highway Church Road and then turn right onto Screaming Eagle Road. Trucks will then turn left onto Percival Road, right onto Spears Creek Church Road and merge onto I-20 W toward Columbia. Once on I-20 W, trucks will travel for 17.3 miles until they reach Exit 64A where they will exit onto I-26 E towards Charleston. Trucks will then continue onto I-126 E for 3.2 miles and take the exit for Huger Street. Once on Huger Street, the trucks will follow the incoming route shown on Figure 3 and turn right onto Senate Street to enter the site.

The traffic route for trucks carrying stone from the quarry to the project site is shown on Figure 5. Trucks will exit the quarry entrance by staying straight and continuing onto Frink Street. Trucks will then make a left turn onto 12th Street. After traveling 3.0 miles, trucks will merge onto I-77 S via the ramp to Charleston/Spartanburg and immediately merge onto I-26 W towards Spartanburg and travel for 7.3 miles. Trucks will then take Exit 108B for I-126 towards Columbia and merge onto I-126 E. Trucks will continue on I-126 E for 3.2 miles and take the exit for Huger Street. Once on Huger Street, the trucks will follow the incoming route shown on Figure 3 and turn right onto Senate Street to enter the site.

Figure 6 provides the route for trucks carrying material to the landfill for artifact screening and/or disposal. They will exit onto Senate Street and turn right onto Huger Street. They will then continue south for approximately 0.5 miles and turn right onto Blossom Street. Once on Blossom Street they will continue west until 12th Street, where a left turn will be made at a stoplight. These trucks will follow 12th Street until they reach I-77 where they will merge using the ramp on the left toward Charlotte. Once on I-77, the trucks will follow the remainder of the route specified on Figure 6, which is designed to keep the trucks on four lane highways until they reach the landfill entrance. This truck route was developed through consultation with the City of Cayce officials.

The route for empty trucks returning to the quarry is shown on Figure 7. The trucks will exit the site onto Senate and turn right onto Huger Street. They will travel south on Huger Street for approximately 0.5 miles and turn right onto Blossom Street and continuing west until 12th Street, where a left turn will be made at a stoplight. The trucks will follow 12th Street and make a left turn onto Frink Street and continue into the quarry entrance.

Traffic Control Considerations Along Senate Street

DESC is aware of the residences and businesses along Senate Street, which is the only access route to the project area. The volume of truck traffic will vary throughout MRA implementation, depending upon the activities occurring at the site. The most significant traffic is expected to occur during importation and eventual removal of stone material for the landside operation area, during importation and eventual removal of stone material for the cofferdams, and during transport of TLM material to the landfill while sediment removal is occurring. Projections of associated truck traffic provided by the remediation contractor include:

Task	Number of Truck Loads Per Day	Daily Production Rate (CY/Day)	Baseline Duration (Days)	Weather Days	Scheduled Duration (Days)
Dam Material In (Area 1 Construction)	55	667	21	5	26
Dam Material Out (Removal from Area 2)	45	547	15	3	18
Sediment Out (Area 1)	40	548	20	5	25
Gravel In	61	635	7	2	9
Gravel Out	61	635	7	2	9

Given the concerns associated with the truck traffic necessary for implementation of the MRA, the following elements have been incorporated into the overall Traffic Control Plan for the project to specifically address traffic along Senate Street:

- Truck traffic hauling stone or TLM material to or from the site will be limited to non-holiday weekday hours between 9:00 am and 4:00 pm.
- To mitigate the potential for a backup of trucks along Senate Street waiting for access into the site, a staging area will be established for use as necessary at the DESC property along Huger Street as identified on Figure 3.

- Routine inspections of the Senate Street pavement will be conducted. The purpose of the inspections will be to determine if pavement deterioration is occurring as a result of the MRA project, with recommendations for follow-up action if necessary.
- Vibration monitoring will be conducted along Senate Street near the site entrance. Vibration frequency monitors will be installed to provide continuous monitoring and an indication of the vibrations potentially experienced at nearby structures. If potentially detrimental vibrations are measured, a mitigation plan will be developed to address the incidences. Specifics of the plan will be based on the data obtained during monitoring and may include a reduced speed limit for truck traffic if appropriate.

ATTACHMENTS

A Figures

ATTACHMENT A

FIGURES

Figure 1 – Site Location Map

Figure 2 – Conceptual Site Operations Plan

Figure 3 – Incoming and Outgoing Routes from Immediate Site Vicinity

Figure 4 – Incoming Route from the Waste Management Richland County Landfill to the Project Site

Figure 5 – Incoming Route from the Martin Marietta Cayce Quarry to the Project Site

Figure 6 – Outgoing Route from the Project Site to the Waste Management Richland County Landfill

Figure 7 – Outgoing Route from the Project Site to the Martin Marietta Cayce Quarry

BROAD RIVER

INTERSTATE I-126

SALUDA RIVER

HUGER ST. FORMER MGP SITE LOCATION

GIST STREET

SENATE STREET

GERVAIS STREET BRIDGE

MRA REMOVAL AREAS

BLOSSOM STREET BRIDGE

Timmerman Bridge

St Peters Cem

Randolph Cem

ELMWOOD

Governors Mansion

HUGER

LAUREL

Howard Sch

Reservoirs

WT

Irwin Park

TAYLOR

Correctional Institution

CONGAREE RIVER

BDY

232

250

150

12

378

Powerplant

4 LANE

LEARY

LUCAS

ST

Saging Sta

RICHLAND

LEXINGTON

CO

Brookland Sch

AVE

200

2

6TH

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0 537 1,074 1,611 2,148

SCALE (APPROXIMATE)

FIGURE 1
DOMINION ENERGY
SOUTH CAROLINA, INC.

SITE LOCATION MAP

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

U.S.G.S. 7 1/2' TOPOGRAPHIC QUADRANGLES OF SOUTHWEST COLUMBIA AND COLUMBIA NORTH
DATED: 1972 REVISED: 1982

DATE: 06/18/19 FILE NAME: CONG523

APEX COMPANIES, LLC

LEGEND

– STREAM/RIVER/WETLAND EDGE
– TREELINE
– 5 FOOT CONTOUR INTERVALS
– REMOVAL AREAS FROM STAKEHOLDER DEVELOPED MRA PLAN
– SITE PERIMETER FENCE
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NOTES:
1) LAND TOPOGRAPHY BASED ON LIDAR SURVEY CONDUCTED ON APRIL 18, 2018.
2) CONGAREE RIVER GAGE (02169500) HEIGHT DURING LIDAR SURVEY WAS 6.18' (119.20' ELEVATION NGVD 29).
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ADDITIONAL SETTLING/STORAGE TANKS
CONTACT WATER TRANSFER LINE
FILTRATION UNITS
DISCHARGE TANKS
PROPOSED MEC STORAGE MAGAZINE
CONGAREE RIVER
AREA 2

FIGURE 2
DOMINION ENERGY
SOUTH CAROLINA, INC.

CONCEPTUAL SITE OPERATIONS PLAN

COLUMBIA, SOUTH CAROLINA

DATE: 3/8/21 FILE NAME: CONG604

APEX COMPANIES, LLC

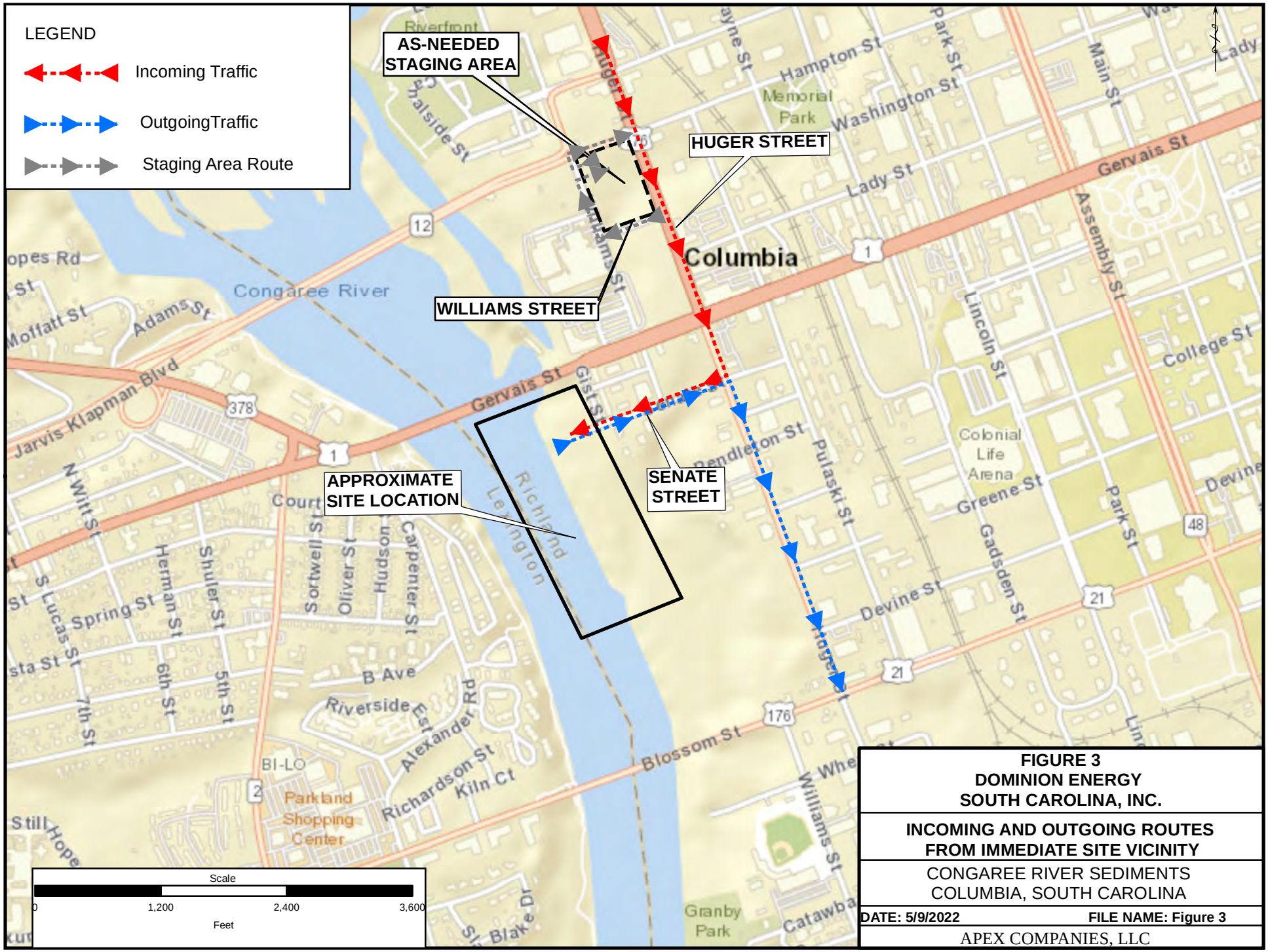


FIGURE 3
DOMINION ENERGY
SOUTH CAROLINA, INC.

INCOMING AND OUTGOING ROUTES FROM IMMEDIATE SITE VICINITY

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

DATE: 5/9/2022 **FILE NAME: Figure 3**

APEX COMPANIES, LLC

TRUCK ROUTE FROM LANDFILL

1. Exit the landfill entrance and turn right onto Highway Church Road.
2. Turn right onto Screaming Eagle Road.
3. Turn left onto Percival Road/SC-12.
4. Turn right onto Spear Creek Church Road and turn left to merge onto I-20 W toward Columbia.
5. Take Exit 64A to merge onto I-26 E towards Charleston.
6. Continue onto I-126 E. Travel for 3.2 miles.
7. Take the Exit for Huger Street.
8. Merge onto US-21 S/US-321 S/Huger Street.
9. Stay on Huger Street until Senate Street
10. Turn right onto Senate Street and continue straight to enter the site.

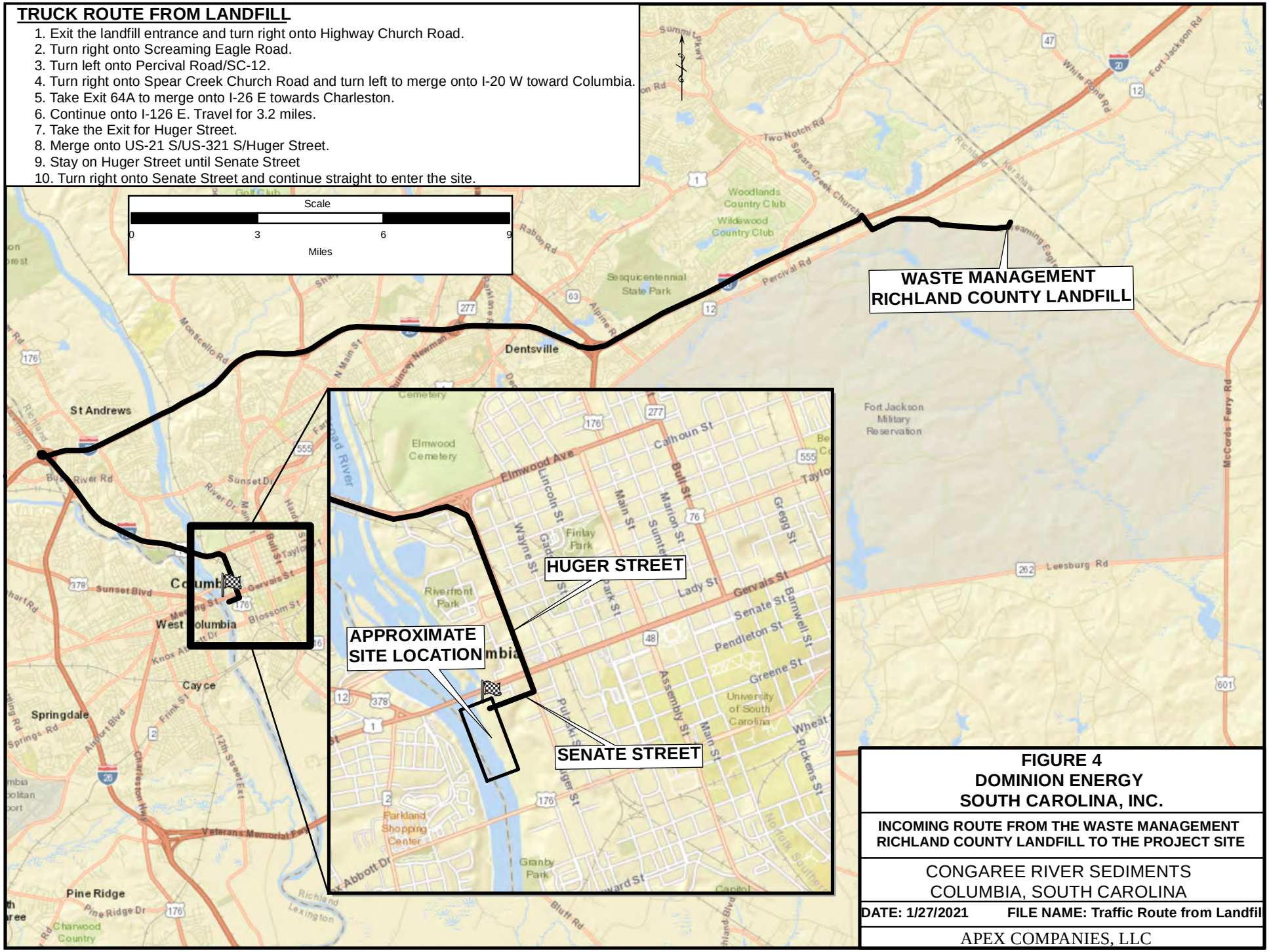


FIGURE 4
DOMINION ENERGY
SOUTH CAROLINA, INC.

INCOMING ROUTE FROM THE WASTE MANAGEMENT RICHLAND COUNTY LANDFILL TO THE PROJECT SITE

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

DATE: 1/27/2021 **FILE NAME: Traffic Route from Landfil**

APEX COMPANIES, LLC

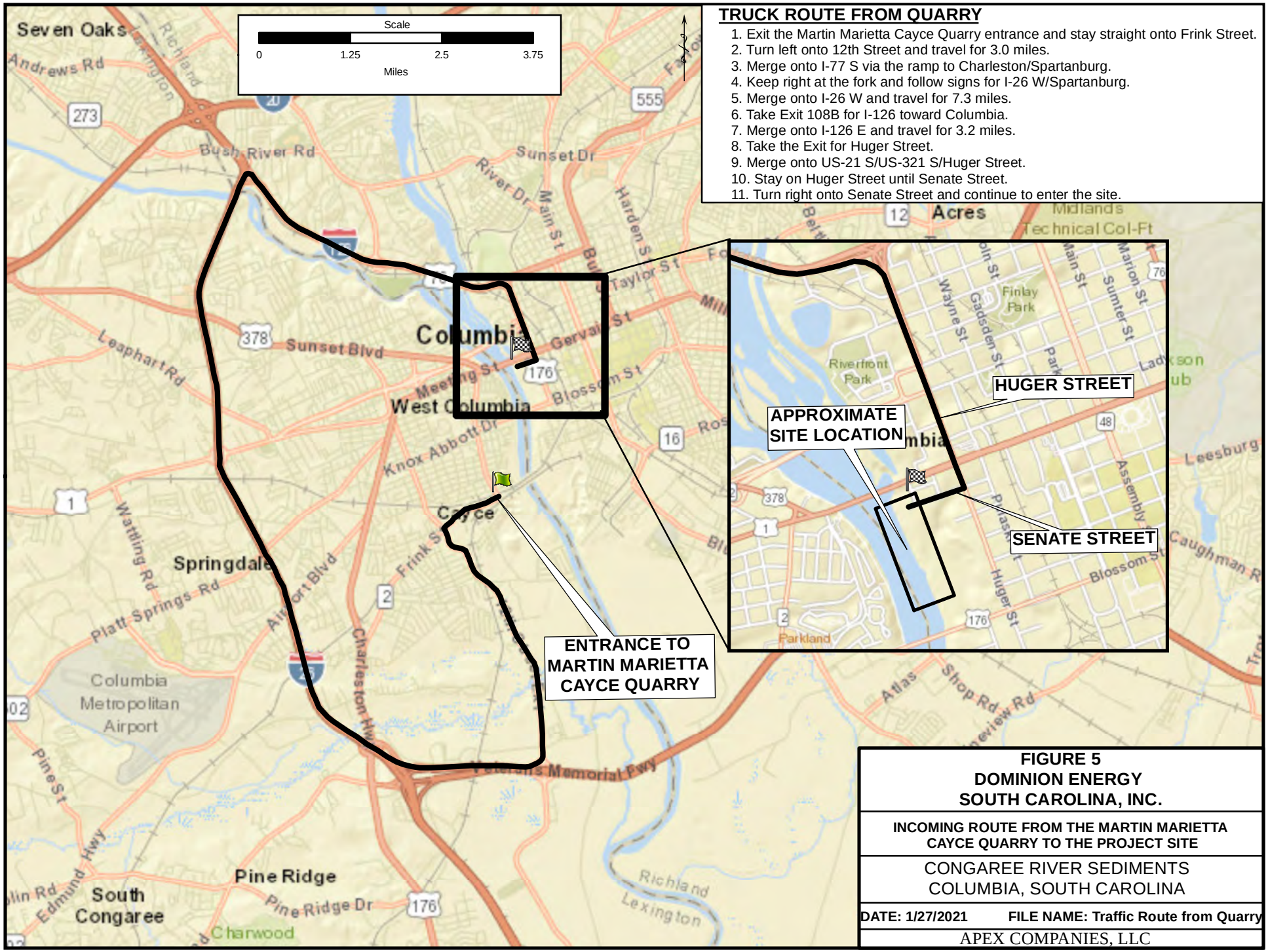


FIGURE 5
DOMINION ENERGY
SOUTH CAROLINA, INC.

INCOMING ROUTE FROM THE MARTIN MARIETTA CAYCE QUARRY TO THE PROJECT SITE

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

DATE: 1/27/2021 **FILE NAME: Traffic Route from Quarry**

APEX COMPANIES, LLC

TRUCK ROUTE TO LANDFILL

1. Exit site onto Senate Street and turn right onto Huger Street
2. Turn right onto Blossom Street
3. Turn left onto 12th Street.
4. 12th Street becomes 12th Street Extension.
5. Merge onto I-77 N via the ramp on the left toward Charlotte. Travel for 13.6 miles.
6. Take Exit 16 to merge onto I-20 E toward Florence and travel for 5.9 miles.
7. Take Exit 82 for Spear Creek Church Road toward Pontiac.
8. Turn right onto Spear Creek Church Road and turn left onto Percival Road.
9. Turn slight right onto Screaming Eagle Road.
10. Turn left onto Highway Church Road.
11. Turn left into landfill entrance.

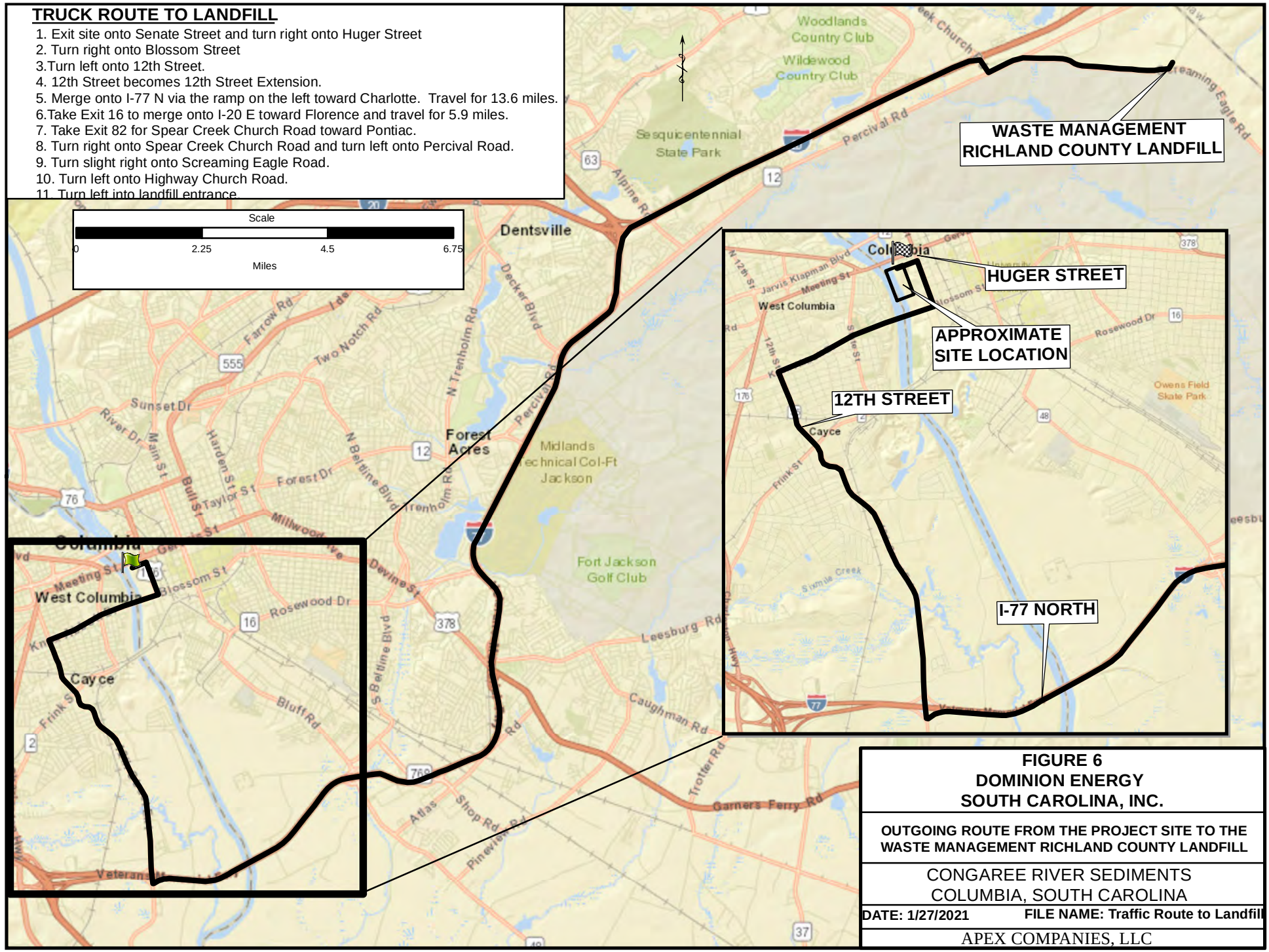


FIGURE 6
DOMINION ENERGY
SOUTH CAROLINA, INC.

OUTGOING ROUTE FROM THE PROJECT SITE TO THE WASTE MANAGEMENT RICHLAND COUNTY LANDFILL

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

DATE: 1/27/2021 **FILE NAME: Traffic Route to Landfill**

APEX COMPANIES, LLC

TRUCK ROUTE TO QUARRY

1. Exit site onto Senate Street and turn right onto Huger Street.
2. Turn right (west) onto Blossom Street.
3. Continue west until 12th street.
4. Turn left onto 12th Street.
5. Continue on 12th Street until making a left onto Frink Street.
6. The quarry entrance is at the end of Frink Street.

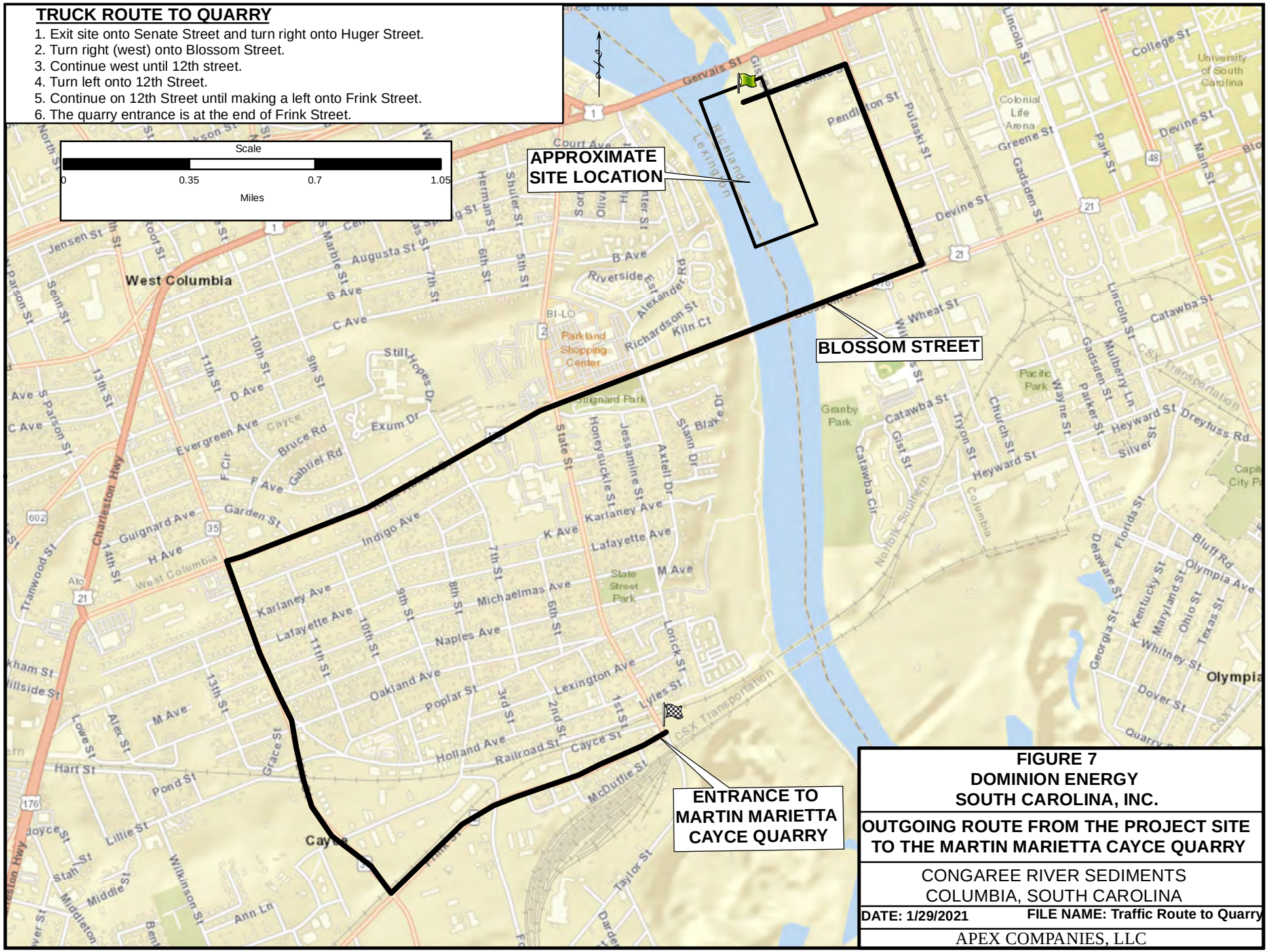


FIGURE 7
DOMINION ENERGY
SOUTH CAROLINA, INC.

OUTGOING ROUTE FROM THE PROJECT SITE TO THE MARTIN MARIETTA CAYCE QUARRY

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

DATE: 1/29/2021 **FILE NAME: Traffic Route to Quarry**

APEX COMPANIES, LLC

APPENDIX N

AIR MONITORING AND ODOR/DUST CONTROL PLAN

AIR MONITORING AND ODOR/DUST CONTROL PLAN

CONGAREE RIVER MODIFIED REMOVAL ACTION
COLUMBIA, SOUTH CAROLINA

May 2022

Prepared for:

Dominion Energy South Carolina, Inc.
400 Otarre Parkway
Cayce, Carolina 29033

Prepared by:

Apex Companies, LLC
975 Georges Station Road, Suite 100
Greensburg, PA 15601

AIR MONITORING AND ODOR/DUST CONTROL PLAN

CONGAREE RIVER MODIFIED REMOVAL ACTION
COLUMBIA, SOUTH CAROLINA

INTRODUCTION

Dominion Energy South Carolina, Inc. (DESC), formerly South Carolina Electric and Gas Company (SCE&G), plans to complete a Modified Removal Action (MRA) to address the occurrence of a tar-like material (TLM) that is commingled with sediment along the eastern shoreline of the Congaree River, just south of the Gervais Street Bridge in Columbia, South Carolina. The project area location is shown on Figure 1 in Attachment A. The TLM is believed to be a coal tar material that originated from the Huger Street former manufactured gas plant (MGP) site, located approximately 1,000 feet to the northeast of the project area. The proposed work is being performed by DESC at the direction of South Carolina Department of Health and Environmental Control (SCDHEC) and is subject to permits and approvals from the U.S. Army Corps of Engineers (USACE) and other agencies.

The overall objective of this project is to remove impacted sediment from the Congaree River within two areas. The current plan is to construct temporary cofferdams around each area to facilitate removal of the impacted sediment. As currently envisioned, the temporary cofferdams will be constructed sequentially and the MRA will occur over several years. The construction and active remediation season will occur from approximately May through October of each year. Figure 2 illustrates the current site operations plan scenario and the landside support zone components. After each cofferdam is constructed, the isolated area will be dewatered, and the impacted sediment removed and transported off-site for disposal. Following completion of the removal activities in Area 1, the cofferdam will be removed, and a cofferdam will be constructed around Area 2. After the removal activities are completed in Area 2, the cofferdam materials will be removed from the river.

A comprehensive environmental site air monitoring and odor/dust control program will be implemented during the project. DESC has successfully completed numerous former MGP remediation projects and has developed and refined a reliable and effective program for work area and site perimeter air monitoring and odor/dust control. The primary components of the program include real-time excavation area and perimeter air monitoring, dust and odor control measures, controlled and methodical excavation and contained material handling work areas.

AIR MONITORING

To ensure worker health and safety, contractors working on-site will be required to implement a Health and Safety Plan (HASP). The HASP specifically addresses potential hazards associated with conducting the work, the primary chemicals of concern for site workers, and safety measures, precautions and personal protective equipment (PPE) to be used by on-site workers.

A major HASP-related activity is the air monitoring program that will be conducted during active excavation and material handling activities. Procedures and techniques have been developed and will be implemented at the point of excavation and while handling and screening the TLM-impacted sediment. If the measured concentrations exceed standards specified in the HASP, then engineering controls will be implemented and/or on-site personnel must upgrade their PPE.

It is important to note that air monitoring within the active work zones at other previously completed MGP projects has not identified sustained elevated air monitoring readings and DESC does not anticipate that this project will produce sustained elevated readings in the work zone. Therefore, it is reasonable to assume that if conditions at the point of excavation or material handling are acceptable, then air concentrations at the perimeter monitoring stations will be substantially less and also acceptable.

Work Area Air Monitoring

The work area air monitoring will be conducted to ensure that remediation workers are safely able to complete their duties. If elevated readings are identified, then the appropriate engineering controls will be implemented to quickly reduce concentrations in the work area. Impacted material excavation and handling activities will be conducted primarily in the river within the cofferdam footprint, and within a temporary sediment staging area and temporary structure for on-site artifact screening utilized in the landside operations area.

Figure 2 provides the conceptual site operations scenario, which includes the approximate locations of the landside operations area and the excavation areas within the river. The excavation and temporary staging areas will be the primary locations for the work area air monitoring activities that will be conducted. These readings will be compared to the established action levels. Monitoring guidelines and frequency will be consistent with contractor HASP requirements.

Volatile organic compounds (VOCs) associated with the constituents found in the TLM and dust/particulates will be the primary focus of the air monitoring program. A photo-ionization detector (PID) will be the instrument used to collect the periodic real-time measurements at the locations where impacted material is being handled. If sustained VOC readings are identified using a PID, additional air monitoring using constituent-specific detector tubes will be conducted. Engineering controls such as the application of a vapor suppressant spray or foaming agent or the use of tarps or other such means to encapsulate the impacted material and limit the potential for volatilization will be implemented should conditions warrant. Water sprays will be utilized to control dust, if necessary.

Perimeter Air Monitoring

The perimeter air monitoring program will be implemented to monitor and control site-related activities during completion of the project. There are three primary elements of this program that include:

- Conducting perimeter air monitoring activities in the vicinity of Gervais, Senate and Gist Streets when material handling activities are ongoing;
- Conducting perimeter air monitoring at other locations should wind conditions warrant; and
- Implementing counter measures should the air monitoring activities indicate a need for such mitigation activities.

DESC's objective for the plan described in this section is to measure air quality concentrations at the perimeter of the project area to provide information on real-time site conditions and confirm that there are no exceedances of the predetermined perimeter action levels. DESC plans to conduct perimeter air monitoring during impacted material removal and handling operations. DESC does not foresee any scenario where elevated concentrations will be identified at the perimeter of the landside operations. Perimeter air monitoring has been conducted at other DESC MGP remediation sites and it has successfully confirmed the absence of elevated perimeter concentrations at these locations.

Attachment B provides information on recent predominant wind direction and wind speed data measured during calendar year 2020 at the nearby Williams-Brice Stadium weather station. This weather station documents a predominant south/southwest to north/northeast wind direction (see Figure 3). With the prevailing wind direction blowing across the site from the south/southwest, the downwind perimeter of the site will likely most often be the north/northeast corner (Senate and Gist Streets area). This is also recognized as the primary potential sensitive receptor area for the project. DESC has developed this perimeter air monitoring program to be protective of both the sensitive receptor areas and the downwind perimeter of the site at all times, regardless of wind direction.

DESC will establish daily air monitoring stations along the northeastern landside perimeter (Senate and Gist Streets area), as shown on Figures 3 and 4. These stations will house VOC and particulate air monitors whenever excavation or impacted material handling operations are being conducted. Examples of the instruments typically utilized for similar projects are provided in Attachment C. Other similar stations will be established around the remainder of the perimeter of the landside operations area and will be utilized to provide upwind (background) monitoring or if the wind direction indicates that these areas of the perimeter will be downwind of the work areas. A windsock or other device will be used to determine the direction of the wind each day. Wind direction, weather conditions and perimeter monitoring locations will be documented in the field notes. The following two examples are provided to illustrate the planned air monitor placement scenarios:

Example 1: Air monitor placement when the predominant wind direction is blowing from the south to the north (from the site toward Senate and Gist Streets) will be as follows and shown on Figure 3:

1. Three daily stations will be established in the Gist and Senate Street areas and will serve as both the sensitive receptor area air monitoring stations and the downwind stations due to the predominant wind direction blowing from the south to the north.

2. One upwind station (background station) will be established along the southern perimeter of the work area. This station will provide background data for comparison to the data observed at the downwind locations.

In this scenario the monitoring stations along the northeastern perimeter provide data as both the sensitive receptor area and downwind air monitoring locations.

Example 2: Air monitor placement when the predominant wind direction is from a direction that differs from Example 1. For illustrative purposes, a northwest to southeast wind direction is assumed and the scenario is shown on Figure 4.

1. Three daily stations will be established in the Gist and Senate Street areas and will provide for both sensitive receptor area and background monitoring when the predominant wind direction is not blowing toward these locations.

2. One to two monitoring stations will be established along the southeastern site perimeter and will provide data at the downwind perimeter.

An iteration of Example 2 will be utilized if the predominant wind direction is from any direction other than from the south/southwest (Example 1).

The perimeter meters will conduct continuous real-time measurements of dust and organic compounds and will be set to log data at 15-minute intervals. The monitoring stations will be periodically inspected by site personnel and the data collected will be downloaded for review. The data will be summarized in the final MRA Documentation Report and available for review during project implementation.

For volatile organic vapors, the PIDs will have an audible alarm set at a 15-minute average concentration of 1 ppm. This conservative action level has been successfully utilized at other DESC sites. If the ambient air concentration of total organic vapors at a perimeter monitoring location exceeds 1 part per million (ppm) above background for a 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level decreases (per instantaneous readings) below 1 ppm over background, work activities will resume with continued monitoring. If total organic vapor levels at the perimeter monitoring stations persist at levels in excess of 1 ppm over background work activities will be halted. The source of vapors will be identified, corrective actions taken to abate emissions, and monitoring continued until levels are reduced below 1 ppm and work activities can resume. Corrective actions may include covering the impacted material or implementing measures identified in the Odor and Dust Control section below (VOC suppressant spray or foam technologies).

Similar to the VOC monitoring, particulate monitoring will be performed at the perimeter locations using real-time monitoring equipment capable of integrating readings over a period of 15 minutes (or less) and data logging the results. The monitors will be periodically inspected by site personnel. In addition, fugitive dust migration will be visually assessed during work activities. If the perimeter particulate level is 100 micrograms per cubic meter ($\mu g/m^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be immediately employed. These techniques may include water spray over the area creating the dust or other methods described in the Odor and Dust Control section below. Work may continue with dust suppression techniques provided that the downwind particulate level does not exceed 150 $\mu g/m^3$ above the upwind (background) level and provided that no visible dust is migrating from the work area.

If, after implementation of dust suppression techniques, downwind particulate levels are greater than 150 $\mu g/m^3$ above the upwind (background) level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind particulate concentration to within 150 $\mu g/m^3$ of the background level and in preventing visible dust migration.

Air Monitor Calibration and Maintenance

All air monitoring equipment will be calibrated, maintained and operated in accordance with the instrument manufacturer's instructions. A record of all air monitoring equipment calibration and

adjustment information will be maintained. Initially, the PID and particulate monitors calibration will be checked at the beginning of each workday. If manufacturer specifications and recommendations indicate that a reduced frequency is acceptable, then a reduction will be considered. Calibration checks will also be conducted during work hours if a potential malfunction of the instrument is detected.

ODOR AND DUST CONTROL

Odor Control

Odor control measures will be implemented, as needed, to ensure that site activities do not produce unsatisfactory odors. Exposed impacted material will primarily be handled within the river excavation areas, within a temporary sediment staging area, or a temporary structure used for on-site artifact screening. Plastic sheeting, tarps or other means may be utilized to cover impacted material and prevent or minimize fugitive odors within the excavation or staging areas. Additional control measures will be available on-site as contingency measures during on-going impacted material handling operations. These include the following two commercially available odor suppressant technologies, or equivalent:

Bio Solve® – Bio Solve® is a biodegradable, water-based product that has the ability to encapsulate hydrocarbon VOC vapors. The product is mixed with water at a 3 to 5 percent concentration and can be applied with a variety of water application spray methods. Bio Solve® is not subject to breaches or drawdown (like some foam applications) that allow for re-volatilization, making it a preferred option in windy conditions or on sloped surfaces.

Odor Suppressant Foam – Odor suppressant foam can provide immediate, localized control of odor emissions. The foam is produced by injection of air into a foam concentrate/water mixture using a pneumatic foam unit. The foam is applied via a hose to cover source areas, generally to a depth of 3 to 6 inches. Short-term foam (such as Rusmar AC-645) is recommended to control odors from active excavations and stockpiles. This foam may last between 12 to 16 hours but because it can degrade quickly in direct sunlight, frequent and liberal applications may be necessary. For longer-term odor suppression, such as over weekends, a long-term foam (such as Rusmar AC-904) should be used.

Additional information on these technologies is provided in Attachment D.

Dust Control

Dust presents a typical concern with former MGP site remediation projects. For the Congaree River MRA, dust is not anticipated to be an issue with the excavated material (wet sediment). Loading and off-loading activities will be conducted with care to minimize the occurrence of particulate emissions. Also, water-resistant tarps will be used on vehicles loaded with impacted material at the site to minimize the production of particulates during transportation off-site. If necessary, a water spray may be utilized to control dust from material management operations.

Site personnel will visually monitor for dust during equipment movement and windy conditions. Nuisance dust from truck movements along haul roads may require management through the application of a water spray. A street sweeper or power broom will be utilized, as needed, to ensure the site entry/exit area is clear of mud and dust. Perimeter air monitoring activities will provide real-time measurements of dust levels at the site perimeter during impacted material removal activities.

ATTACHMENTS

A Figures

B Predominant Wind Speed and Direction

C Air Monitoring Instrument Information

D Odor Control Technology Information

ATTACHMENT A

FIGURES

BROAD RIVER

INTERSTATE I-126

SALUDA RIVER

HUGER ST. FORMER MGP SITE LOCATION

GIST STREET

SENATE STREET

GERVAIS STREET BRIDGE

MRA REMOVAL AREAS

BLOSSOM STREET BRIDGE

Timmerman Bridge

St Peters Cem

Randolph Cem

ELMWOOD

Governors Mansion

HUGER

LAUREL

Howard Sch

Reservoirs

WT

Irwin Park

TAYLOR

Correctional Institution

CONGAREE RIVER

BDY

232

250

150

12

378

Powerplant

4 LANE

LEARY

LUCAS

ST

Saging Sta

RICHLAND

LEXINGTON

CO

Brookland Sch

AVE

200

2

6TH

DRIVE

Brookland-Cayce

PO

0 537 1,074 1,611 2,148

SCALE (APPROXIMATE)

FIGURE 1
DOMINION ENERGY
SOUTH CAROLINA, INC.

SITE LOCATION MAP

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

U.S.G.S. 7 1/2' TOPOGRAPHIC QUADRANGLES OF SOUTHWEST COLUMBIA AND COLUMBIA NORTH
DATED: 1972 REVISED: 1982

DATE: 06/18/19 FILE NAME: CONG523

APEX COMPANIES, LLC

LEGEND

– STREAM/RIVER/WETLAND EDGE
– TREELINE
– 5 FOOT CONTOUR INTERVALS
– REMOVAL AREAS FROM STAKEHOLDER DEVELOPED MRA PLAN
– SITE PERIMETER FENCE
– APPROXIMATE EXTENT OF GRAVEL AREAS
– APPROXIMATE LEASE AREA

NOTES:
1) LAND TOPOGRAPHY BASED ON LIDAR SURVEY CONDUCTED ON APRIL 18, 2018.
2) CONGAREE RIVER GAGE (02169500) HEIGHT DURING LIDAR SURVEY WAS 6.18' (119.20' ELEVATION NGVD 29).
3) RIVER BOTTOM CONTOURS BASED ON BATHYMETRIC SURVEYS CONDUCTED MAY 7 THRU JULY 17, 2018.

0' 180' 360'

N

GERVAIS STREET BRIDGE
GIST STREET
SENATE STREET
JOB TRAILERS
OFFICE AREA
GATE
SITE ACCESS ROAD
TEMPORARY STRUCTURE MATERIAL HANDLING AND STORAGE
STAGING AREA
ADDITIONAL OFFICE/STORAGE TRAILERS
PRIMARY SETTLING
POTENTIAL FILTERED WATER DISCHARGE POINT
AREA 1
ADDITIONAL SETTLING/STORAGE TANKS
CONTACT WATER TRANSFER LINE
FILTRATION UNITS
DISCHARGE TANKS
PROPOSED MEC STORAGE MAGAZINE
CONGAREE RIVER
AREA 2

FIGURE 2
DOMINION ENERGY
SOUTH CAROLINA, INC.

CONCEPTUAL SITE OPERATIONS PLAN

COLUMBIA, SOUTH CAROLINA

DATE: 3/8/21 FILE NAME: CONG604

APEX COMPANIES, LLC

LEGEND

- STREAM/RIVER/WETLAND EDGE
- TREELINE
- 5 FOOT CONTOUR INTERVALS
- REMOVAL AREAS FROM STAKEHOLDER DEVELOPED MRA PLAN
- SITE PERIMETER FENCE
- APPROXIMATE EXTENT OF GRAVEL AREAS
- APPROXIMATE LEASE AREA
- PREDOMINANT WIND DIRECTION
- DOWNWIND AIR MONITORING STATION LOCATION
- UPWIND (BACKGROUND) AIR MONITORING STATION LOCATION

NOTES:
1) LAND TOPOGRAPHY BASED ON LIDAR SURVEY CONDUCTED ON APRIL 18, 2018.
2) CONGAREE RIVER GAGE (02169500) HEIGHT DURING LIDAR SURVEY WAS 6.18' (119.20' ELEVATION NGVD 29).
3) RIVER BOTTOM CONTOURS BASED ON BATHYMETRIC SURVEYS CONDUCTED MAY 7 THRU JULY 17, 2018.
4) SCENARIO ILLUSTRATES THE APPROXIMATE PERIMETER MONITORING STATION LOCATIONS WITH THE PREDOMINATE WIND DIRECTION BLOWING FROM THE SOUTH TO NORTH.
5) BLUE ARROWS REPRESENT THE PREDOMINANT WIND DIRECTION FOR 2020 AS MEASURED AT THE NEARBY WILLIAMS–BRICE STADIUM WEATHER STATION.

0' 180' 360'

N

GERVAIS STREET BRIDGE
GIST STREET
SENATE STREET
JOB TRAILERS
OFFICE AREA
GATE
SITE ACCESS ROAD
TEMPORARY STRUCTURE MATERIAL HANDLING AND STORAGE
STAGING AREA
ADDITIONAL OFFICE/STORAGE TRAILERS
PRIMARY SETTLING
POTENTIAL FILTERED WATER DISCHARGE POINT
ADDITIONAL SETTLING/STORAGE TANKS
CONTACT WATER TRANSFER LINE
FILTRATION UNIT
DISCHARGE TANKS
PROPOSED MEC STORAGE MAGAZINE
AREA 1
AREA 2
CONGAREE RIVER

FIGURE 3
DOMINION ENERGY
SOUTH CAROLINA, INC.

PERIMETER AIR MONITORING EXAMPLE 1

COLUMBIA, SOUTH CAROLINA

DATE: 2/1/21 FILE NAME: CONG605

APEX COMPANIES, LLC

LEGEND

- STREAM/RIVER/WETLAND EDGE
- TREELINE
- 5 FOOT CONTOUR INTERVALS
- REMOVAL AREAS FROM STAKEHOLDER DEVELOPED MRA PLAN
- SITE PERIMETER FENCE
- APPROXIMATE EXTENT OF GRAVEL AREAS
- APPROXIMATE LEASE AREA
- WIND DIRECTION FOR THAT DATE
- DAILY AIR MONITORING STATION LOCATION
- DOWNWIND AIR MONITORING STATION LOCATION

NOTES:
1) LAND TOPOGRAPHY BASED ON LIDAR SURVEY CONDUCTED ON APRIL 18, 2018.
2) CONGAREE RIVER GAGE (02169500) HEIGHT DURING LIDAR SURVEY WAS 6.18' (119.20' ELEVATION NGVD 29).
3) RIVER BOTTOM CONTOURS BASED ON BATHYMETRIC SURVEYS CONDUCTED MAY 7 THRU JULY 17, 2018.
4) SCENARIO ILLUSTRATES THE APPROXIMATE PERIMETER MONITORING STATION LOCATIONS WITH THE PREDOMINATE WIND DIRECTION BLOWING FROM THE NORTHWEST TO SOUTHEAST.

0' 180' 360'

N

GERVAIS STREET BRIDGE

GIST STREET

SENATE STREET

JOB TRAILERS

OFFICE AREA

SITE ACCESS ROAD

GATE

TEMPORARY STRUCTURE MATERIAL HANDLING AND STORAGE

STAGING AREA

ADDITIONAL OFFICE/STORAGE TRAILERS

PRIMARY SETTLING

POTENTIAL FILTERED WATER DISCHARGE POINT

AREA 1

ADDITIONAL SETTLING/STORAGE TANKS

CONTACT WATER TRANSFER LINE

FILTRATION UNITS

DISCHARGE TANKS

PROPOSED MEC STORAGE MAGAZINE

CONGAREE RIVER

AREA 2

FIGURE 4
DOMINION ENERGY
SOUTH CAROLINA, INC.

PERIMETER AIR MONITORING EXAMPLE 2

COLUMBIA, SOUTH CAROLINA

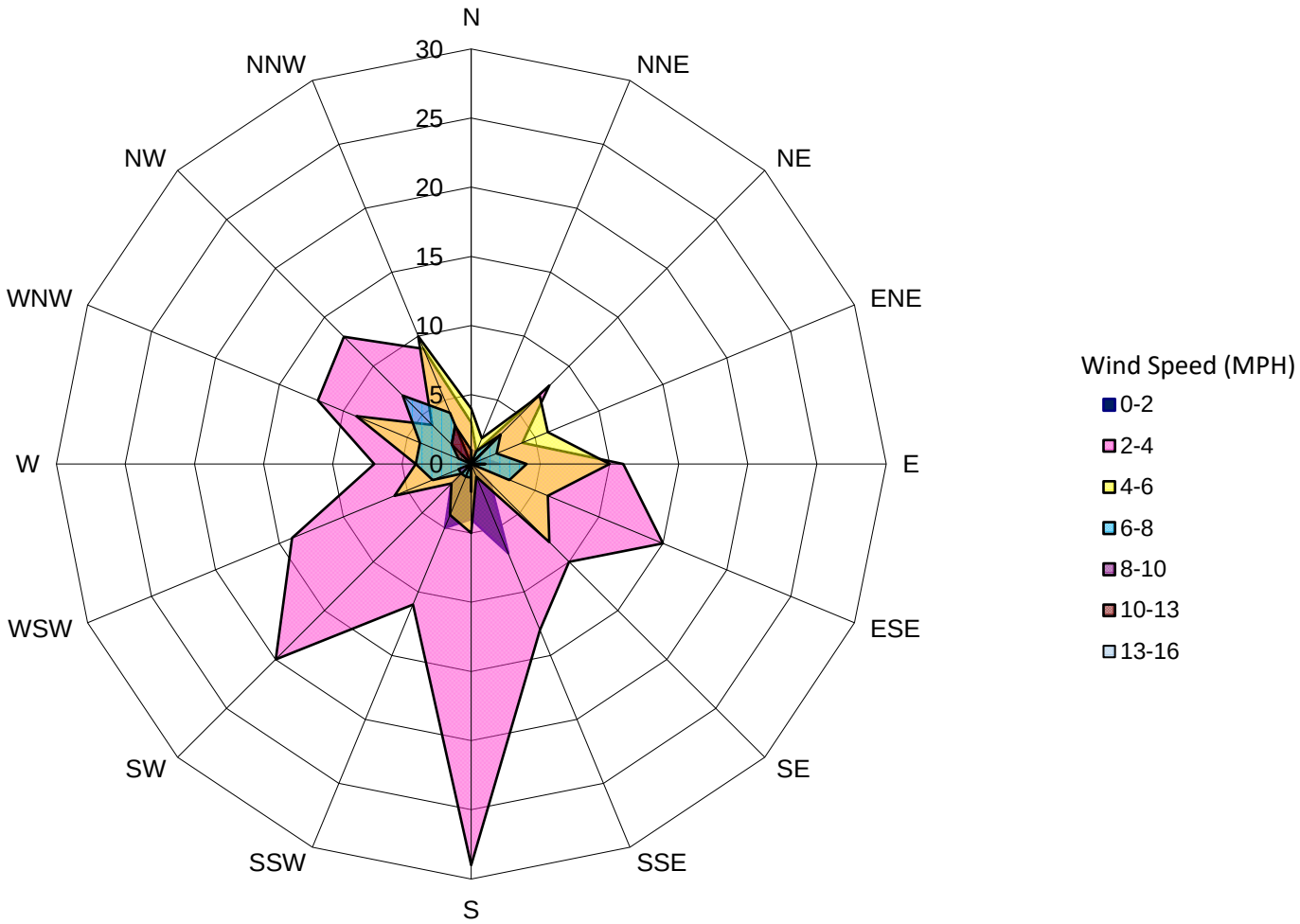
DATE: 2/1/21 FILE NAME: CONG606

APEX COMPANIES, LLC

ATTACHMENT B

PREDOMINANT WIND SPEED AND DIRECTION

Wind Speed (MPH) and Wind Direction (Degrees) in Columbia, SC 2020



Note: Wind speed and direction information was derived from the historical weather data provided by Weather Underground for the ETV Williams--Brice Stadium Weatherstem Station.

ATTACHMENT C

AIR MONITORING INSTRUMENT INFORMATION

Honeywell

THE POWER OF **CONNECTED**

MiniRAE® 3000 +

Portable Handheld VOC Monitor

The MiniRAE 3000 + is a comprehensive handheld VOC (Volatile Organic Compound) monitor that uses a third-generation patented PID technology to accurately measure one of the highest levels of ionizable chemicals available on the market. The MiniRAE 3000 + is a comprehensive handheld VOC (Volatile Organic Compound) monitor that uses a third-generation patented PID technology to accurately measure one of the highest levels of ionizable chemicals available on the market.

It provides full-range measurement from 0 to 15,000 ppm of VOCs. The MiniRAE 3000 + has a built-in wireless modem that allows real-time data connectivity with the command center located up to 2 miles (3 km) away through a Bluetooth connection to a RAELink 3* portable modem or optionally via Mesh Network.

Workers can quickly measure VOCs and wirelessly transmit data

- Highly accurate VOC measurements
- Reflex PID Technology™
- Low maintenance—easy access to lamp and sensor
- Low cost of ownership
- 3-year 10.6eV lamp warranty
- BLE module & dedicated APP for Enhanced Datalogging capability

FEATURES & BENEFITS

- Third-generation patented PID technology
- Reflex PID Technology™
- VOC detection range from 0 to 15,000 ppm
- 3-second response time
- Humidity compensation with built-in humidity and temperature sensors
- Six-month datalogging
- Highly connectivity capability through multiple wireless module options
- Large graphic display with integrated flashlight
- Multi-language support with 10 languages encoded
- IP- 67 waterproof design

APPLICATIONS

- Oil and Gas
- HazMat
- Industrial Safety
- Civil Defense
- Environmental and Indoor Air Quality

Download on the App Store

GET IT ON Google Play

Instrument Specifications

Size	10" L x 3.0" W x 2.5" H (25.5 cm x 7.6 cm x 6.4 cm)
Weight	26 oz (738 g)
Sensors	Photoionization sensor with standard 10.6 eV or optional 9.8 eV or 11.7 eV lamp
Battery	• Rechargeable, external field-replaceable Lithium-Ion battery pack • Alkaline battery adapter
Running time	16 hours of operation (12 hours with alkaline battery adapter)
Display Graphic	4 lines, 28 x 43 mm, with LED backlight for enhanced display readability
Keypad	1 operation and 2 programming keys, 1 flashlight on/off
Direct Readout	Instantaneous reading • VOCs as ppm by volume (mg/m3) • High values • STEL and TWA • Battery and shutdown voltage • Date, time, temperature
Alarms	95dB at 12" (30 cm) buzzer and flashing red LED to indicate exceeded preset limits • High: 3 beeps and flashes per second • Low: 2 beeps and flashes per second • STEL and TWA: 1 beep and flash per second • Alarms latching with manual override or automatic reset • Additional diagnostic alarm and display message for low battery and pump stall
EMC/RFI	Compliant with EMC directive (2004/108/EC) EMI and ESD test: 100MHz to 1GHz 30V/m, no alarm Contact: ±4kV Air: ±8kV, no alarm
IP Rating	• IP-67 unit off and without flexible probe • IP-65 unit running
Datalogging	Standard 6 months at one-minute intervals
Calibration	Two-point or three-point calibration for zero and span. Reflex PID Technology™ Calibration memory for 8 calibration gases, alarm limits, span values and calibration dates
Sampling Pump	• Internal, integrated flow rate at 500 cc/mn • Sample from 100' (30m) horizontally or vertically
Low Flow Alarm	Auto pump shutoff at low-flow condition
Communication & Data Download	• Download data and upload instrument set-up from PC through charging cradle or using BLE module and dedicated APP • Wireless data transmission through built-in RF modem
Wireless Network	Mesh RAE Systems Dedicated Wireless Network
Wireless Range (Typical)	Up to 15ft (5m) for BLE EchoView Host: LOS > 660 ft (200 m) ProRAE Guardian & RAEMesh Reader: LOS > 660 ft (200 m) ProRAE Guardian & RAELink3 Mesh: LOS > 330 ft (100 m)
Safety Certifications	**US and Canada:** CSA, Classified as Intrinsically Safe for use in Class I, Division 1 Groups A, B, C, D **Europe:** ATEX II 2G EEx ia IIC T4
Temperature	-4° to 122° F (-20° to 50° C)
Humidity	0% to 95% relative humidity (non-condensing)

Instrument Specifications

Attachments	Durable bright yellow rubber boot
Warranty	3 years for 10.6 eV lamp, 1 year for pump, battery, sensor and instrument
Wireless Frequency	ISM license-free band. IEEE 802.15.4 Sub 1GHz
Wireless Approvals	FCC Part 15, CE R&TTE, Others[1]
Radio Module	Supports BLE or Bluetooth or RM900

[1] Contact RAE Systems for country-specific wireless approvals and certificates. Specifications are subject to change.

Sensor Specifications

Gas Monitor	Range	Resolution	Response Time T90
VOCs	0 to 999.9 ppm 1,000 to 15,000 ppm	0.1 ppm 1 ppm	< 3 s < 3 s

MONITOR ONLY INCLUDES:

- MiniRAE 3000 + Monitor, Model PGM-7320
- Wireless communication module built in, as specified
- Datalogging with ProRAE Studio II Package
- Charging/download adapter
- RAE UV lamp, as specified
- Flex-I-Probe™
- External filter
- Rubber boot
- Alkaline battery adapter
- Lamp-cleaning kit
- Tool kit
- Soft leather case

OPTIONAL CALIBRATION KIT ADDS:

- 100 ppm isobutylene calibration gas, 34L
- Calibration regulator and flow controller

OPTIONAL GUARANTEED COST-OF-OWNERSHIP PROGRAM:

- 4-year repair and replacement warranty
- Annual maintenance service

For more information
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www.raesystems.com

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Datasheet_MiniRAE 3000_+_DS-1018-_EN

DUSTTRAK™ II AEROSOL MONITORS MODELS 8530, 8530EP AND 8532

DESKTOP OR HANDHELD UNITS FOR ANY ENVIRONMENT, ANY APPLICATION

DustTrak™ II Aerosol Monitors are battery-operated, data-logging, light-scattering laser photometers that give you real-time aerosol mass readings. They use a sheath air system that isolates the aerosol in the optics chamber to keep the optics clean for improved reliability and low maintenance. From desktop and desktop with external pump models to a handheld model, the DustTrak II offers a suitable solution for harsh industrial workplaces, construction and environmental sites and other outdoor applications, as well as clean office settings. The DustTrak II monitors measure aerosol contaminants such as dust, smoke, fumes and mists.

Features and Benefits

All Models

+ Real-time mass concentration readings and data-logging allow for data analysis during and after sampling
+ Measure aerosol concentrations corresponding to PM1, PM2.5, Respirable, and PM10 size fractions, using a variety of inlet conditioners
+ Easy-to-use graphical user interface with color touch-screen for effortless operation

Handheld Model (8532)

+ Long life internal pump for continuous sampling
+ Single-point data collection for walk through surveys
+ Lightweight design with ergonomic handle for portable applications

Desktop Models (8530 and 8530EP)

+ Energy-efficient, long lasting external pump for continuous, unattended, 24/7, outdoor monitoring applications (Model 8530EP only)
+ Long life internal pump for shorter work-shift or IAQ sampling applications (Model 8530)
+ Gravimetric reference sampling capability for custom reference calibrations
+ Automatic zeroing (with optional zero module) to minimize the effect of zero drift
+ STEL alarm setpoint for tracking 15-minute average mass concentrations
+ Environmental protected and tamper-proof secure (with an optional environmental enclosure)
+ Inlet sample conditioning (with optional heated inlet sample conditioner) to reduce the effect of humidity on photometric mass measurements (for use with an environmental enclosure)
+ Cloud Data Management System as hosted by Netronix™

TSI®

UNDERSTANDING, ACCELERATED

Desktop Models: Ideal for Long-Term Surveys and Remote Monitoring Applications

The DustTrak II is offered as a standard desktop (Model 8530), as well as a desktop with external pump (Model 8530EP.) Both models have manual and programmable data logging functions, making them ideal for unattended applications. The standard desktop model is most suitable for indoor, continuous monitoring, while the desktop with external pump is designed for 24/7 unattended, remote monitoring outdoors.

The DustTrak II desktop models come with USB (device and host), Ethernet, and analog and alarm outputs allowing remote access to data. User adjustable alarm setpoints for instantaneous or 15-minute short-term excursion limit (STEL) are also available on desktop models. The alarm output with user-defined setpoint alerts you when upset or changing conditions occur.

The DustTrak II desktop monitors have several unique features:

+ Measure aerosols in high concentrations up to 400 mg/m3.
+ External pump (Model 8530EP) with low power consumption for continuous, unattended monitoring in remote outdoor locations.
+ Gravimetric sampling capability using a 37-mm filter cassette which can be inserted in-line with the aerosol stream allowing you to perform an integral gravimetric analysis for custom reference calibrations.
+ Zeros automatically using the external zeroing module. This optional accessory is used when sampling over extended periods of time. By zeroing the monitor during sampling, the effect of zero drift is minimized.
+ STEL alarm feature for tracking 15-minute average mass concentrations when alarm setpoint has been reached for applications like monitoring fugitive emissions at hazardous waste sites.
+ Provide for environmental protection and tamper-proof security using an environmental enclosure. This optional accessory encloses the instrument within a waterproof, lockable, custom-designed case.
+ Condition the sample air stream before entering the instrument optics using a heated inlet sample conditioner (designed for use with an environmental enclosure.) This optional accessory is used in humid environments. By conditioning the sample, the humidity and water vapor are minimized, reducing elevated measurements.

Handheld Models: Perfect for Walk-Through Surveys and Single-Point Data Collection Applications

The DustTrak II Handheld Model 8532 is lightweight and portable. It is perfect for industrial hygiene surveys, point source location monitoring, indoor air quality investigations, engineering control evaluations/validation, and for baseline trending and screening. Like the desktop models, it has manual and programmable data logging functions. In addition, the handheld model also has a single-point data logging capability. Single-point data collection is used for walk-through industrial hygiene surveys and indoor air quality investigations.

Applications	Desktop	Handheld
Aerosol research studies	+	+
Baseline trending and screening	+	+
Engineering control evaluations		+
Engineering studies		+
Epidemiology studies	+	+
Indoor air quality investigations	+	+
Industrial/occupational hygiene surveys	+	+
Point source monitoring		+
Outdoor environmental monitoring	+	
Process monitoring	+	+
Remote monitoring	+	
Battery Performance		
Models 8530 and 8530EP (Typical) 6600 mAH Li-Ion Battery Pack (P/N 801680)	1 Battery	2 Batteries
Battery runtime (hours)	Up to 6	Up to 12
Charge time* (hours) in DustTrak	4	8
Charge time* (hours) in external battery charger (P/N 801685)	4	8

Model 8532 (Typical) 3600 mAH Li-Ion Battery Pack (P/N 801681)	Battery
Battery runtime (hours)	Up to 6
Charge time* (hours) in DustTrak	4
Charge time* (hours) in external battery charger (P/N 801686)	4

* Of a fully depleted battery

DustTrak II Aerosol Monitor Features

All Models

+ Li-Ion rechargeable batteries
+ Internal and external battery charging capabilities
+ Outlet port for isokinetic sampling applications
+ User serviceable sheath flow and pump filters
+ Logged test pause and restart feature
+ Logged test programming
  + Color touch screen–either manual mode or program mode
  + TrakPro™ Data Analysis Software via a PC
+ User adjustable custom calibration settings
+ Instantaneous alarm settings with visual and audible warnings
+ Real-time graph display
+ View statistical information during and after sampling
+ On-screen instrument status indicators: FLOW, LASER and FILTER
+ Filter service indicator for user preventative maintenance

Desktop Models (8530 and 8530EP)

+ Long life external pump (8530EP)
+ Internal pump (8530)
+ Hot swappable batteries
+ Gravimetric reference sample capability
+ STEL alarm setpoint

Optional Accessories

+ Auto zeroing module
+ Protective environmental enclosure (8535 and 8537)
+ Heated inlet sample conditioner (for use with an environmental enclosure)
+ Cloud Data Management System as hosted by Netronix™

Handheld Model (8532)

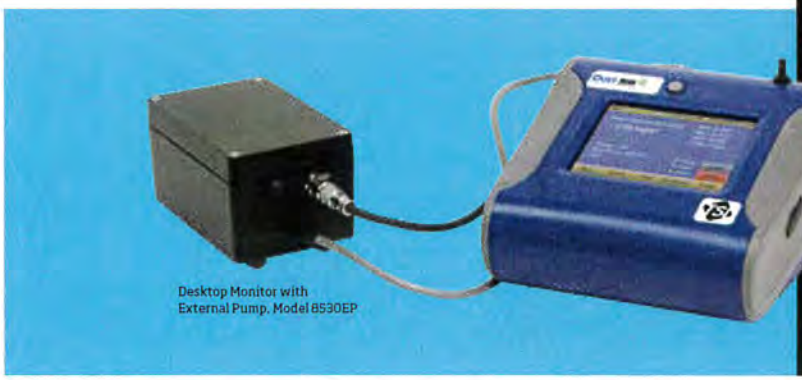
+ Long life internal pump
+ Single-point data collection for walk through surveys

Easy to Program and Operate

The graphical user interface with color touch-screen puts everything at your fingertips. The easy-to-read display shows real-time mass concentration and graphical data, as well as other statistical information along with instrument pump, laser and flow status, and much more. Perform quick walk-through surveys or program the instrument's advanced logging modes for long-term sampling investigations. Program start times, total sampling times, logging intervals, alarm setpoints and many other parameters. You can even set up the instrument for continuous unattended operation.

TrakPro™ Software Makes Monitoring Easier than Ever

TrakPro™ Data Analysis Software allows you to set up and program directly from a PC. It even features the ability for remote programming and data acquisition from your PC via wireless communication options or over an Ethernet network. As always, you can print graphs, raw data tables, and statistical and comprehensive reports for record keeping purposes.



Desktop Monitor with External Pump, Model 8530EP

SPECIFICATIONS

DUSTTRAK™ II AEROSOL MONITORS
MODELS 8530, 8530EP AND 8532

Sensor Type
90° light scattering

Particle Size Range
0.1 to 10 µm

Aerosol Concentration Range

8530 Desktop	0.001 to 400 mg/m³
8530EP Desktop with External Pump	0.001 to 400 mg/m³
8532 Handheld	0.001 to 150 mg/m³

Resolution
±0.1% of reading or 0.001 mg/m³, whichever is greater

Zero Stability
±0.002 mg/m³ per 24 hours at 10 sec time constant

Flow Rate
3.0 L/min set at factory, 1.40 to 3.0 L/min, user adjustable

Flow Accuracy
±5% of factory set point, internal flow controlled

Temperature Coefficient
+0.001 mg/m³ per °C

Operational Temp
32 to 120°F (0 to 50°C)

Storage Temp
-4 to 140°F (-20 to 60°C)

Operational Humidity
0 to 95% RH, non-condensing

Time Constant
User adjustable, 1 to 60 seconds

Data Logging
5 MB of on-board memory (>60,000 data points)
45 days at 1 minute logging interval

Log Interval
User adjustable, 1 second to 1 hour

Physical Size (H x W x D)

Handheld	4.9 x 4.8 x 12.5 in. (12.5 x 12.1 x 31.6 cm)
Desktop	5.3 x 8.5 x 8.8 in. (13.5 x 21.6 x 22.4 cm)
External Pump	4.0 x 7.0 x 3.5 in. (10.0 x 18.0 x 9.0 cm)

Weight

Handheld	2.9 lb (1.3 kg), 3.3 lb (1.5 kg) with battery
Desktop	3.5 lb (1.6 kg), 4.5 lb (2.0 kg)-1 battery, 5.5 lb (2.5 kg)-2 batteries
External Pump	3.0 lb (1.4 kg)

Communications

8530	USB (host and device) and Ethernet. Stored data accessible using flash memory drive
8530EP	USB (host and device) and Ethernet. Stored data accessible using flash memory drive plus, cable assembly for external pump
8532	USB (Hose and device). Stored data accessible using flash memory drive

Power-AC
Switching AC power adapter with universal line cord included, 115-240 VAC

Analog Out

8530/8530EP	User selectable output, 0 to 5 V or 4 to 20 mA. User selectable scaling range

Alarm Out

8530/8530EP	Relay or audible buzzer Relay Non-latching MOSFET switch + User selectable set point + -5% deadband + Connector 4-pin, Mini-DIN connectors
8532	Audible buzzer

Screen

8530	5.7 in. VGA color touchscreen
8532	3.5 in. VGA color touchscreen

Gravimetric Sampling

8530/8530EP	Removable 37 mm cartridge (user supplied)

CE Rating

Immunity	EN61236-1:2006
Emissions	EN61236-1:2006

Specifications are subject to change without notice.

UNDERSTANDING, ACCELERATED

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P/N 6001986 Rev J Printed in U.S.A.

*p*DR-1000AN
Hand-held and fixed-point, real-time aerosol monitor/datalogger

Measure airborne particulate concentration in real-time

The *personal*DataRAM (*p*DR-1000AN) measures mass concentrations of dust, smoke, mists, and fumes in real time, and sounds an audible alarm whenever the user-defined level is exceeded. Conventional filter-based monitoring methods cannot indicate dangerous, real-time dust levels. In contrast, the *p*DR-1000AN alerts you to a problem within seconds, allowing you to take immediate action. With the datalogging enabled, the instrument automatically tags and time stamps the data collected, and stores it for subsequent retrieval, printing, or graphing through a computer.

Highest performance of any real-time personal particulate monitor

With a measurement range from 0.001 to 400 mg/m^3 (auto-ranging), and an optical feedback stabilized sensing system, the *p*DR-1000AN sets the standard for sensitivity, long-term stability and reliability.

The palm-sized *p*DR-1000AN weighs only 18 oz (0.5 kg) for easy portability and attachment to a belt or a shoulder strap. The absence of any moving parts, such as pumps, motors and valves, and the use of low-power semiconductors housed in a ruggedized case ensures long life and dependable operation.

High correlation with gravimetric measurement

The *p*DR-1000AN is a light-scattering photometer (i.e., nephelometer) incorporating a pulsed, high output, near-infrared light emitting diode source, a silicon detector/hybrid preamplifier, and collimating optics and a source reference feedback PIN silicon detector. The intensity of the light scattered over the forward angle of 50^o to 90^o by airborne particles passing through the sensing chamber is linearly proportional to their concentration. This optical configuration produces optimal response to particles in the size range of 0.1-10 µm, achieving high correlation with standard gravimetric measurements of the respirable and thoracic fractions.

Simple zeroing and calibration

The *p*DR-1000AN arrives practically ready to use after the easy zeroing step. The unit comes gravimetrically calibrated in mg/m^3 (NIST traceable) using standard SAE Fine test dust (ISO Fine). Zeroing with particle-free air is accomplished quickly and effectively under field conditions using the zeroing kit included with the instrument. Internal firmware controls an automatic calibration check. To maximize efficiency in the field, gravimetric calibration can be performed by comparison with a filter sampler and programming of the calibration constant.

Standard Accessories

- Universal voltage power supply
- PC communications software
- Zeroing kit
- Belt clip kit
- Instruction manual
- Carrying case
- Signal output cables

Optional Accessories

- Rechargeable battery pack (NiMH)
- Active sampling kit (converts *p*DR-1000AN to *p*DR-1200)
- Portable pump unit
- Shoulder strap
- Remote alarm interface
- Wall mounting bracket

Specifications

Concentration Measurement Range (auto-ranging)
Referred to gravimetric calibration with SAE Fine test dust (mmd = 2 to 3 mm sg = 2.5, as aerosolized)
0.001 to 400 mg/m^3

Scattering Coefficient Range
1.5 x 10^{-6} to 0.6 m^{-1}(approx) @ lambda = 880 nm

Precision/Repeatability Over 30 Days (2-sigma at constant temperature and full battery voltage)
- ±2% of reading or ±0.005 mg/m^3, whichever is larger, for 1 second averaging time
- ±0.5 of reading or ±0.0015 mg/m^3, whichever is larger, for 10 second averaging time
- ±0.2% of reading or ±0.0005 mg/m^3, whichever is larger, for 60 second averaging time

Accuracy
Referred to gravimetric calibration with SAE Fine test dust (mmd = 2 to 3 mm, sg = 2.5, as aerosolized)
±5% of reading ±precision

Resolution
0.1% of reading or 0.001 mg/m^3, whichever is larger

Particle Size Range of Maximum Response
0.1 to 10 µm

Flow Rate Range (model *p*DR-1200)
1-10 liters/min (external pump required)

Aerodynamic Particle Sizing Range
1.0 to 10 µm (*p*DR-1200 only)

Concentration Display Updating Interval
1 second

Concentration Display Averaging Time (user selectable)
1 to 60 seconds

Alarm Level Adjustment Range (user selectable)
Selectable over entire measurement range

Alarm Averaging Time (user selectable)
Real-time (1 to 60 seconds) or STEL (15 minutes)

Datalogging Averaging Periods (user selectable)
1 second to 4 hours

Total Number of Data Points That Can Be Logged in Memory
More than 13,300

Number of Data Tags (data sets)
99 (maximum)

Logged Data
- Each data point: average concentration, time/date, and data point number
- Run summary: overall average and maximum concentrations, time/data of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration, and time/date of occurrence, averaging (logging) period, calibration factor, and tag number

Analog Signal Output
0 to 5 V and 4 to 20 mA, with selectable full scale ranges between 0.1 and 400 mg/m^3

Power
- Internal battery 9 V alkaline, 20 hour run time (typical)
- Internal battery 9 V lithium, 40 hour run time (typical)
- AC source universal voltage adapter (included) 100-250 volts, 50-60 Hz (CE marked)
- Optional battery pack rechargeable NiMH, 72 hour run time typical (*p*DR-BP)

Readout Display
LCD 16 characters (4 mm height) x 2 lines

Serial Interface
RS232, 4800 baud

Computer Requirements
PC compatible, 486 or higher, Windows 95® or higher

Storage Environment
-20°C to 70°C (-4°F to 158°F)

Operating Environment
-10°C to 50°C (14°F to 122°F), 10 to 95% RH, non-condensing

Dimensions (max external)
153 mm (6.0 in) H x 92 mm (3.6 in) W x 63 mm (2.5 in) D (*p*DR-1000AN)
160 mm (6.3 in) H x 205 mm (8.1 in) W x 60 mm (2.4in) D (*p*DR-1200 including cyclone and filter holder)

Weight
0.5 kg (18 oz) (*p*DR-1000AN)
0.68 kg (24 oz) (*p*DR-1200)

Approvals
- Intrinsic safety approval by US Mine Safety & Health Administration (MSHA) coal-mining environments containing methane gas (the *p*DR-PU pump is not approved by MSHA)
- US FCC Rules (Part 15)
- CE certified

ATTACHMENT D

ODOR CONTROL TECHNOLOGY INFORMATION

biosolve®

WATER-BASED HYDROCARBON MITIGATION AGENTS ™

THE TRUSTED SOLUTION FOR HYDROCARBON CLEANUP for over 30 years

» Reduces Volatility
» Increases Solubility
» Accelerates Biodegradation

The leading specialty surfactant formulation used by professionals to mitigate contamination from oil, fuel and other hydrocarbons

Used Worldwide by Environmental & Industrial Contractors, Utilities & Municipalities

BioSolve.com

Tank Cleaning & Degassing

BioSolve PINKWATER, brand leader and industry workhorse for over 30 years. Formulated with our signature magenta dye for traceability. Sold only as a concentrate.

BioSolve CLEAR, same concentration and performance as Pinkwater, without traceable magenta dye.

NEW BioSolve Activator, formulated as a high performance emulsification surfactant for improved soil remediation. Meets EPA's Safer Choice Standard as well as OECD standard for Ready Biodegradability.

BioSolve FOGwash, same concentration and performance as Pinkwater, with no fragrance and less color. FOGwash is formulated for professional use in both commercial & industrial kitchens. (Sold only in cases/gallons.)

BioSolve products sold in:

Units	US Gallons	Liters	Pallet
Tote	275	1,041	1 unit
Drum	55	208	4 units
Pail	5	19	24 units
Case	4 x 1G	4 x 3.8L	27 units

Authorized BioSolve Distributor

TO ORDER CALL **800 225-3909**

THE BioSolve™ COMPANY

The BioSolve Company
Lexington, MA 02420 USA
781 482-7900
info@biosolve.com

BioSolve.com

APPLICATIONS

Vapor Suppression & Odor Control >> PINKWATER • ACTIVATOR
Diluted in large mixing tanks, Pinkwater and Activator are used at major remediation and construction work-sites where excavation of contaminated soils may release noxious organic odors or hazardous VOCs. The dilute solution is sprayed directly onto newly exposed soil surfaces or stockpiles of contaminated material where volatilization is taking place. Used as an alternative to foam, our products create a barrier that keeps vapors in the soil, allowing work to continue safely without disruption to workers or neighbors.

Soil Remediation >> ACTIVATOR • PINKWATER
In-situ, a dilute solution is injected into contaminated subsurface zones to mobilize and solubilize NAPL trapped in the soil. The effluent is then extracted under careful hydraulic control and treated prior to discharge. For ex-situ remediation or soil washing, Pinkwater and Activator are used as washing agents to remove hydrocarbons. Following the wash, soil is rinsed, dried and returned to grade. On bioremediation or land farming projects, the ability to micro-emulsify hydrocarbons results in enhanced bioavailability for naturally occurring hydrocarbon degrader bacteria. This dramatically accelerates the biodegradation process.

Tank Cleaning & Degassing >> PINKWATER
Pinkwater is a standard component in cleaning/degassing protocols for oil and fuel tanks of all sizes. High pressure spray application of Pinkwater solution to tank walls and internal structures rapidly reduces LEL (Lower Explosive Limits) readings, improves worker safety and sharply reduces project turnaround time. Pinkwater solution is also sprayed/mixed into sludge to knock down vapor levels and convert sludge into a pumpable aqueous solution.

Emergency Spill Response >> PINKWATER
BioSolve Pinkwater eliminates fire and explosion hazard when sprayed directly onto a fuel/oil spill. Aggressive agitation reduces volatilization and causes LEL readings to immediately decline, possibly registering "0." Application of Pinkwater also facilitates roadway cleanup and elimination of hazardous oil sheen.

Equipment Decontamination >> PINKWATER • CLEAR
Used for cleaning/decontaminating tools and equipment at remediation sites, in refineries, on drilling rigs, following spill cleanup, and in industrial maintenance operations. Generally applied with standard pressure washing equipment, most oil and tar build-up can be washed away on contact. For more severe contamination, a hot water spray system may be required.

HOW DO BIOSOLVE PRODUCTS WORK?

BioSolve products are water-based surfactant formulations engineered to aggressively "grab" hydrocarbon molecules and hold them in an aqueous solution, called an emulsion. When applied as a dilute solution and agitated, the formulation first mobilizes hydrocarbons, pulling them away from hard surfaces (e.g., metal, concrete, asphalt) or releasing them from soil, and then solubilizes hydrocarbons in an emulsion that can be removed with water. The emulsion is non-volatile and readily degraded.

This functionality enables BioSolve products to be effective across a wide range of applications where increased solubility, reduced volatility and/or accelerated biodegradation is required for removing or remediating oil and fuel contamination. Pinkwater, Activator and Clear are typically applied as a 1% to 8% solution. Agitation may be provided by a pressure washer, pump, brush, water hose, jet sprayer or mixer.

"Shell is purchasing BioSolve Pinkwater for only one reason, because it works"

Pat Agbo
Head of Oil Spill Response
Shell Oil Upstream International
Port Harcourt, Nigeria

"Your product performed exactly as advertised"

David Turner
Colonial Pipeline
Alpharetta, Georgia

"The loading dock was caked with hydraulic oil and had a grotesque odor. The Pinkwater worked brilliantly. When those guys were finished, it literally smelled clean."

Mike Dimino
The Seneca Companies
Denver Colorado

"BioSolve Pinkwater helped mitigate a big VOC emission issue, assisting in eliminating citizen complaints and keeping the project on schedule."

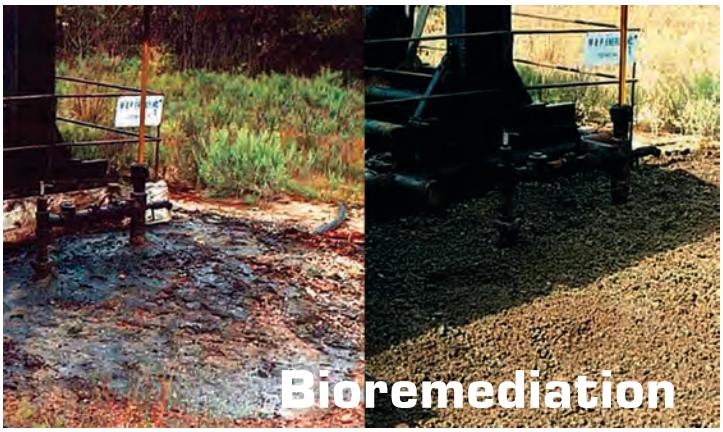
Shouvik Gangopadhyay
ECC Senior Project Manager
Nordlys Environmental, LP
Sydney Tar Ponds Project

» PROVEN EFFECTIVE » EASY TO USE » SAFE FOR WORKERS & ENVIRONMENT

Water-based Biodegradable

COMMON USES

Suppression of Volatile Organic Vapors
In-Situ/Ex-Situ Remediation of Contaminated Soil
Bioremediation of Contaminated Soil
Hazardous Spill Containment & Cleanup
Solubilization of Sludge & Grease
Oil/Fuel Storage Tank Cleaning & Degassing
Equipment & Hard Surface Decontamination
Paraffin Control in Oil Wells



BioSolve products contain no caustic, d-limonene or hydrocarbon solvents. Products do not contain any hazardous ingredients as defined by CERCLA, OSHA (29 CFR 1910.1200), Massachusetts Right to Know Law, and California Proposition 65. Products are rated by DOT as Class 55, non-hazardous.

BioSolve Pinkwater is on the U.S. Environmental Protection Agency's NCP Product Schedule. This listing does NOT mean that EPA approves, recommends, licenses, certifies, or authorizes the use of BioSolve Pinkwater on an oil discharge. This listing means only that data have been submitted to EPA as required by Subpart J of the National Contingency Plan, 40 CFR Section 300.915.

Pinkwater and Activator are not listed as bioremediation agents on the EPA National Contingency Plan and therefore are not to be used for bioremediation purposes on or near the shorelines of navigable waters within the US.

This material is made available for use by professionals or persons having the proper technical skills. The statements made herein are guidelines only and may require modification to accommodate site specific conditions. Nothing contained herein is a warranty or is to be taken as a license to use without proper instruction and supervision. BioSolve products should always be used in accordance with applicable federal, state and local rules and regulations

Case Studies, Information Sheets, Application Protocols & SDS are available on request

"I am very impressed with your product's ability to clean everything from invert and gel drilling mud to hydraulic oil."

Colby Simpson
Hot Flash Oil Field Services
Alberta Canada

"BioSolve clearly outperformed everything else we have tried. I'm a real believer in the product."

Lane Altenbaumer
Specialized Maintenance Services,
Carylon Corporation
Pasadena, TX

Used by 'Fire Department of New York' Hazmat Units (for emergency response) and 'New York City Transit' (for parts cleaning) for over ten years.

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IMO INTERNATIONAL MARITIME ORGANIZATION

BioSolve.com

RUSMAR FOAM TECHNOLOGIES™

Recognized Globally
For Superior Odor And Emissions Control

RusFoam® OC
(AC645)

The Odor-Control Foam

RusFoam® OC long duration foam produces a thick, long-lasting, viscous foam barrier for immediate control of dust, odors and volatile organic compounds (VOCs).

RusFoam® OC is recognized by the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, state agencies and major corporations as providing superior emission control for a period up to 17 hours. It has been specified for use at Superfund and other hazardous waste sites across the United States and Canada, and elsewhere in the world. RusFoam® OC is designed for use with all Rusmar Pneumatic Foam Units.

FEATURES

- Biodegradable
- Non-hazardous
- Non-combustible
- Non-reactive
- No ambient temperature limits
- Requires only water dilution
- Covers any contamination source
- Duration can be varied by dilution

BENEFITS

- Easy to use
- Safe for workers and environment
- No clean up necessary
- Will not add to soil volume
- Will not add to treatment costs
- More effective than the competition

APPLICATIONS

The primary application for RusFoam® OC is control of odors, VOCs and dust during active excavation and for overnight coverage of contaminated soils at hazardous waste sites. RusFoam® OC can also be applied on liquid surfaces, such as lagoons and retention ponds.

ODOR CONTROL FOR CHALLENGING PROBLEMS

The remediation of hazardous waste sites often includes excavation of soil contaminated with odorous compounds. RusFoam® OC has no odor itself, although a pleasant wintergreen or vanilla scent can be added. It forms a barrier between contaminants and the atmosphere and can be applied during active excavation to provide an immediate and effective barrier to minimize odors. It is completely biodegradable and poses no threat to workers, neighboring residents or ground water.

(continued)

RUSMAR FOAM TECHNOLOGIES™

Recognized Globally
For Superior Odor And Emissions Control

RusFoam® OC
(AC645)

SOLVES TRANSPORTATION PROBLEMS

RusFoam® OC can also be applied on top of trucks, railcars and barges for odor and emission control during transport of materials such as contaminated soils or sewage sludge. Ammonia tests performed on trucks containing sewage sludge resulted in a drop of concentration levels from 170 ppm prior to foaming down to 6 ppm after coverage with RusFoam® OC.

- Minimizes worker exposure
- Maintains fence-line odor and VOC emission limits
- Effective on lagoon and pond closures
- Can be applied to near vertical or liquid surfaces

CONTROLS FUGITIVE DUST

At hazardous waste sites, fugitive dust can present a health hazard. RusFoam® OC can be applied on top of the dusty material to prevent any wind-borne emissions. There is no need to mobilize equipment to immediately cover with soil or tarps. The Pneumatic Foam Unit can be filled and placed at the site to be used at a moment's notice.

CLEANS UP EMERGENCY SPILLS

In emergency spills, odor and VOC control is often difficult because of the terrain and accident conditions. RusFoam® OC can be applied to any shaped object, as well as steep slopes, water, mud, snow and ice. It is non-flammable and non-reactive. Difficult spill problems can be accommodated.

METHOD OF APPLICATION

RusFoam® OC is supplied in either 450 pound (200L) drums or in bulk. Bulk shipments can be stored outside in a Rusmar Bulk Storage-Dilution System. The Bulk Storage and Dilution system is comprised of a 7000 gallon (26,500L) heated and stirred chemical storage tank with a microprocessor to accurately dilute and transfer the chemical.

RusFoam® OC is designed to be applied with a Rusmar Pneumatic Foam Unit. The Pneumatic Foam Units are available in a variety of sizes to accommodate a range of site conditions and application needs.

Rusmar Incorporated
216 Garfield Avenue, West Chester, PA 19380
1-800-733-3626, 610-436-4314 office, 610-436-8436 fax
rusmarinc.com

APPENDIX O

DRAFT NAVIGATION PLAN WITH USCG APPLICATION

DEPARTMENT OF HOMELAND SECURITY
U.S. Coast Guard

OMB Approval: 1625-0011
Expiration Date: 05/31/2021

PRIVATE AIDS TO NAVIGATION APPLICATION

(See attached instructions and copy of Code of Federal Regulations, Title 33, Chap. 1, Part 66)

NO PRIVATE AID TO NAVIGATION MAY BE AUTHORIZED UNLESS A COMPLETED APPLICATION FORM HAS BEEN RECEIVED (14 U.S.C. 83; 33 CFR. 66. 01-5).

1. ACTION REQUESTED FOR PRIVATE AIDS TO NAVIGATION: [x] A. ESTABLISH AND MAINTAIN [ ] B. DISCONTINUE [ ] C. CHANGE [ ] D. TRANSFER OWNERSHIP — 2. DATE ACTION TO START: 05/01/2022

3. AIDS WILL BE OPERATED: [ ] A. YEAR-ROUND [x] B. TEMPORARILY UNTIL October [ ] C. SEASONAL FROM ____ TO ____

4. NECESSITY FOR AID *(Continue in Block 8)*: Congaree River Stakeholder-Developed MRA

5. GENERAL LOCALITY: Columbia, SC

6. AUTHORIZING PERMIT FOR THIS STRUCTURE OR BUOY: USACE [x] PERMIT AND/OR STATE [ ] PERMIT (Valid Permit Number) NWP 38

FOR DISTRICT COMMANDERS ONLY		7. APPLICANT WILL FILL IN APPLICABLE REMAINING COLUMNS									
LIGHT LIST NUMBER	NAME OF AID	NO. OR LTR (7a)	LIGHT: FLASH PERIOD (7b)	LIGHT: FLASH LENGTH (7c)	LIGHT: COLOR (7d)	POSITION (7e)	DEPTH OF WATER (7f)	CANDELA (7g)	FOCAL PLANE HEIGHT (7h)	STRUCTURE: TYPE, COLOR, AND HEIGHT ABOVE GROUND (7i)	REMARKS *(See instructions)* (7j)
		1				20' from dam perimeter (6 to 9 points)	< 1'-20'			Non-Lighted Buoys	Information Buoys
		2	60s	1s	W	10' from dam perimeter (6 to 9 points)	N/A	1 mile	10.5	Solar Power, LED Marine Application	Visible for 1 mile during clear conditions
		3				Up and down river (6 locations)	N/A	3'-5'		Reflective Sign - "Warning River Construction Zone ..."	White/Orange 4'x4'

8. ADDITIONAL COMMENTS
Sediment remediation project required by SCDHEC. Refer to Navigation Plan for additional information.

9a. NAME AND ADDRESS OF PERSON IN DIRECT CHARGE OF THE AID(S)
Paul Biery - Dominion Energy
400 Otarre Parkway, Cayce, SC 29033

9b. TELEPHONE NO.
803-217-5016

9c. E-MAIL ADDRESS
paul.biery@dominionenergy.com

10a. NAME AND ADDRESS OF PERSON OR CORPORATION AT WHOSE EXPENSE THE AID(S) WILL BE MAINTAINED
Rusty Harris (VP & GM-NC & SC Gas Distribution) -Dominion Energy
400 Otarre Parkway
Cayce, SC 29033
VP & GM-NC & SC Gas Distribution

10b. THE APPLICANT AGREES TO SAVE THE COAST GUARD HARMLESS WITH RESPECT TO ANY CLAIM OR CLAIMS THAT MAY RESULT ARISING FROM THE ALLEGED NEGLIGENCE OF THE MAINTENANCE OR OPERATION OF THE APPROVED AID(S).

10c. DATE: Jan 21, 2022

10d. SIGNATURE AND TITLE OF OFFICIAL SIGNING
Rusty Harris
VP & GM - NC & SC Gas Distribution

FOR USE BY DISTRICT COMMANDER		RECD	DATE APPROVED	SIGNATURE *(By direction)*
SERIAL NO.	CLASSIFICATION OF AIDS(S)	CHART		
		LNM		

Reset

REMARKS

DATE	REFERENCE	ACTION AND REMARKS

J F M A M J J A S O N D

NAME OF AID

LIGHT LIST NO.

PRIVACY NOTICE

Authority: 14 U.S.C. 83, 14 U.S.C. 85.

Purpose: To obtain approval to establish a private aid to navigation, applicants must submit CG 2554 (Private Aids to Navigation Application). Information about the private aid to navigation (type, color, geographic position), as well as the applicant's contact information is stored in the U.S. Coast Guard's United States Aids to Navigation Information Management System (USAIMS). USAIMS is the U.S. Coast Guard's comprehensive database for managing information about aids to navigation. USAIMS has user access controls in place to govern who may view or access information.

Routine Uses: Authorized USCG personnel will utilize this information to contact owners in the event of a discrepancy or a mishap to a private aid to navigation. Any external disclosures of data within this record will be made in accordance with DHS/ALL-002, Department of Homeland Security (DHS) Mailing and Other Lists System, November 25, 2008, 73 FR 71659.

Consequences of Failure to Provide Information: Mandatory. Failure to provide the required contact information will prevent approval to establish a private aid to navigation.

U.S. COAST GUARD
PRIVATE AIDS TO NAVIGATION APPLICATION
INSTRUCTIONS

1. The rules, regulations, and procedures pertaining to private aids to navigation are set forth in the excerpt of the Code of Federal Regulations; Title 33, Chapter 1, Part 66 on the following pages.

2. One copy of the application for private aids to navigation shall be forwarded via postal mail, electronic mail, or facsimile to the Commander of the Coast Guard District in which the aids will be located. Sections of charts or sketches showing the work proposed should accompany each application.

3. When making application for private aids to navigation to mark structures and mooring buoys in navigable waters or to mark the excavating or depositing of material therein, evidence is required of the authorization obtained from the U.S. Army Corps of Engineers (USACE), Department of the Army, for such work, (Code of Federal Regulations; Title 33, Part 322.) and/or State Regulatory Agency.

4. The applicant shall complete all of Blocks 1, 2, 3, 4, 5, 9 and 10 for all new applications. When a private aid to navigation is being discontinued, Block 3 need not be completed. Block 6 shall be completed whenever authorization is required to be obtained from Corps of Engineers (See Instruction No. 3). Columns in Block 7 will be completed as follows:
   a. Unlighted buoy(s) - 7a, 7e, 7f, and 7j.
   b. Lighted buoy(s) - 7a, 7b, 7c, 7d, 7e, 7f, 7g, 7h, and 7j.
   c. Daybeacon(s) - 7a, 7e, 7f (if applicable), 7h, 7i, and 7j.
   d. Light(s) on a structure - 7a, 7b, 7c, 7d, 7e, 7f (if applicable), 7g, 7h, 7i, and 7j.

5. When a private aid to navigation is being changed, Block 8 shall be used to describe the nature of the change.

6. The required information for each column includes the following:
   (7a) Proposed number or letter to be assigned to the private aid to navigation.
   (7b) Period of light (time in seconds for one complete cycle).
   (7c) Flash length in seconds. For complex or multiple flashes, explain in column (7j).
   (7d) Color of light.
   (7e) Position as determined by Global Positioning System (GPS), differential GPS, professional surveyor, by two or more horizontal angles, or bearing and distance from a prominent charted landmark. If a prominent charted landmark is not available, show latitude and longitude as precisely as the chart permits.
   (7f) Depth of water at buoy or structure (if marine site). All depths are measured from mean lower low water except on Great Lakes where depths are measured from low water datum.
   (7g) Candela, if known; otherwise, include the following information in column (7j); lens size, lamp voltage and amperage if electric, or details of other illuminant to be used.
   (7h) If lighted, the height of the light's optic above the water.
   (7i) Include details of structure (type, color).
   (7j) Used for the following specific information, plus any other useful details: a. buoys - size, shape, color, and reflective material used; b. structures - dayboard shape and color; c. sound signal on a buoy or structure - type and model, audible range, and characteristic (number of strokes or blasts, period and blast length).

7. This form may be used to cover more than one private aid to navigation in the same geographic area. Draw a line between each aid as indicated in example below. Attach separate sheet if additional space is required.

8. Attach a section of chart showing the proposed location of the private aid(s) to navigation.

9. a. After receipt of the approved form, the applicant will advise the District Commander by telephone, postal mail, electronic mail, or facsimile when the authorized work is actually accomplished.
   b. If the private aid(s) to navigation have not been installed within one year of the approval date, the approved application is automatically cancelled.
   c. Any discrepancy in the operation of the private aid(s) to navigation at any time shall be reported to the District Commander by telephone, postal mail, electronic mail, or facsimile in order that Notices to Mariners may be issued. A discrepancy exists whenever the private aid to navigation is not operating as described in the approved application, i.e., lack of signal, incorrect light characteristic, or improper color, shape, or position of shore structure or buoy. The correction of the discrepancy will also be reported by the same method.

10. All classes of private aids to navigation shall be maintained in proper condition. They are subject to inspection by the Coast Guard at any time and without prior notice to the maintainer.

EXAMPLE OF USE OF APPLICATION

FOR DISTRICT COMMANDERS ONLY		7. APPLICANT WILL FILL IN APPLICABLE REMAINING COLUMNS									
LIGHT LIST NUMBER	NAME OF AID	NO. OR LTR (7a)	LIGHT			POSITION (7e)	DEPTH OF WATER (7f)	CANDELA (7g)	FOCAL PLANE HEIGHT (7h)	BUOY/STRUCTURE	REMARKS *(See instructions)* *(7j)*
			FLASH PERIOD (7b)	FLASH LENGTH (7c)	COLOR (7d)					TYPE, COLOR, AND HEIGHT ABOVE GROUND (7i)	
		1	4s	0.4s	Green	dd°mm'ss.sss"N ddd°mm'ss.sss"W	9 Ft			5' lighted buoy, Green	
		2				dd°mm'ss.sss"N ddd°mm'ss.sss"W	8 Ft			Nun buoy, Red	
		3				dd°mm'ss.sss"N ddd°mm'ss.sss"W	7 Ft			Single Pile	2' square dayboard, Green
		4	2.5s	0.5s	Red	dd°mm'ss.sss"N ddd°mm'ss.sss"W	9 Ft		14 Ft	Multi-Pile	3' triangular dayboard, Red

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number.

The U.S. Coast Guard estimates the average burden for this report is 1 hour. You may submit any comments concerning the accuracy of this burden estimate or any suggestions for reducing the burden to: COMMANDANT (CG-NAV-1), U.S. COAST GUARD STOP 7418, 2703 MARTIN LUTHER KING JR AVE SE, WASHINGTON DC 20593-7418 or OFFICE OF MANAGEMENT AND BUDGET, PAPERWORK REDUCTION PROJECT (1625-0011), WASHINGTON, DC 20590-0001.

§ 66.01-1 Basic provisions.

(a) No person, public body, or instrumentality not under the control of the Commandant, exclusive of the Armed Forces, will establish and maintain, discontinue, change or transfer ownership of any aid to maritime navigation, without first obtaining permission to do so from the Commandant.

(b) For the purposes of this subpart, the term private aids to navigation includes all marine aids to navigation operated in the navigable waters of the United States other than those operated by the Federal Government (part 62 of this subchapter) or those operated in State waters for private aids to navigation (subpart 66.05).

(c) Coast Guard authorization of a private aid to navigation does not authorize any invasion of private rights, nor grant any exclusive privileges, nor does it obviate the necessity of complying with any other Federal, State or local laws or regulations.

(d) With the exception of radar beacons (racons) and shore based radar stations, operation of electronic aids to navigation as private aids will not be authorized.

§ 66.01-3 Delegation of authority to District Commanders.

(a) Under Section 888 of Pub. L. 107-296, 116 Stat. 2135, the Commandant delegates to the District Commanders within the confines of their respective districts (see Part 3 of this chapter for descriptions) the authority to grant permission to establish and maintain, discontinue, change or transfer ownership of private aids to maritime navigation, and otherwise administer the requirements of this subpart.

(b) The decisions of the District Commander may be appealed within 30 days from the date of decision. The decision of the Commandant in any case is final.

§ 66.01-5 Application procedure.

To establish and maintain, discontinue, change, or transfer ownership of a private aid to navigation, you must apply to the Commander of the Coast Guard District in which the aid is or will be located. You can find application form CG-2554 at http://www.uscg.mil/forms/cg/CG_2554.pdf. You must complete all parts of the form applicable to the aid concerned, and must forward the application to the District Commander. You must include the following information:

(a) The proposed position of the aid to navigation by two or more horizontal angles, bearings and distance from charted landmarks, or the latitude and longitude as determined by GPS or differential GPS. Attach a section of chart or sketch showing the proposed position.

(b) The name and address of the person at whose expense the aid will be maintained.

(c) The name and address of the person who will maintain the aid to navigation.

(d) The time and dates during which it is proposed to operate the aid.

(e) The necessity for the aid.

(f) For lights: The color, characteristic, range, effective intensity, height above water, and description of illuminating apparatus. Attach a copy of the manufacturer's data sheet to the application.

(g) For sound signals: Type (whistle, horn, bell, etc.) and characteristic.

(h) For buoys or daybeacons: Shape, color, number, or letter, depth of water in which located or height above water.

(i) For racons: Manufacturer and model number of racon, height above water of desired installation, and requested coding characteristic. Equipment must have FCC authorization.

§ 66.01-10 Characteristics.

The characteristics of a private aid to navigation must conform to those prescribed by the United States Aids to Navigation System set forth in subpart B of part 62 of this subchapter.

§ 66.01-11 Lights.

(a) Except for range and sector lights, each light approved as a private aid to navigation must:

(1) Have at least the effective intensity required by this subpart omnidirectionally in the horizontal plane, except at the seams of its lens-mold.

(2) Have at least 50% of the effective intensity required by this subpart within ±2° of the horizontal plane.

(3) Have a minimum effective intensity of at least 1 candela for a range of 1 nautical mile, 3 candelas for one of 2 nautical miles, 10 candelas for one of 3 nautical miles, and 54 candelas for one of 5 nautical miles. The District Commander may change the requirements for minimum intensity to account for local environmental conditions. For a flashing light this intensity is determined by the following formula:

$Ie=G/(0.2+t_2-t_1)$

Where:
Ie = Effective intensity
G = The integral of the instantaneous intensity of the flashed light with respect to time
t_1 = Time in seconds at the beginning of the flash
t_2 = Time in seconds at the end of the flash
t_2-t_1 is greater than or equal to 0.2 seconds.

(4) Unless the light is a prefocused lantern, have a means of verifying that the source of the light is at the focal point of the lens.

(5) Emit a color within the angle of 50% effective intensity with color coordinates lying within the boundaries defined by the corner coordinates in Table 66.01-11(5) of this part when plotted on the Standard Observer Diagram of the International Commission on Illumination (CIE).

Table 66.01-11(5)--Coordinates of Chromaticity

Color	Coordinates of chromaticity	
	x axis	y axis
White	0.500	0.382
	0.440	0.382
	0.285	0.264
	0.285	0.332
	0.453	0.440
	0.500	0.440
Green	0.305	0.689
	0.321	0.494
	0.228	0.351
	0.028	0.385
Red	0.735	0.265
	0.721	0.259
	0.645	0.335
	0.665	0.335
Yellow	0.618	0.382
	0.612	0.382
	0.555	0.435
	0.560	0.440

(6) Have a recommended interval for replacement of the source of light that ensures that the lantern meets the minimal required intensity stated in paragraph (a)(3) of this section in case of degradation of either the source of light or the lens.

(7) Have autonomy of at least 10 days if the light has a self-contained power system. Power production for the prospective position should exceed the load during the worst average month of insolation. The literature concerning the light must clearly state the operating limits and service intervals. Low-voltage disconnects used to protect the battery must operate so as to prevent sporadic operation at night.

(b) The manufacturer of each light approved as a private aid to navigation must certify compliance by means of an indelible plate or label affixed to the aid that meets the requirements of § 66.01-14.

§ 66.01-12 May I continue to use the private aid to navigation I am currently using?

If, after March 8, 2004, you modify, replace, or install any light that requires a new application as described in § 66.01-5, you must comply with the rules in this part.

§ 66.01-13 When must my newly manufactured equipment comply with these rules?

After March 8, 2004, equipment manufactured for use as a private aid to navigation must comply with the rules in this part.

§ 66.01-14 Label affixed by manufacturer.

(a) Each light, intended or used as a private aid to navigation authorized by this part, must bear a legible, indelible label (or labels) affixed by the manufacturer and containing the following information:

(1) Name of the manufacturer.

(2) Model number.

(3) Serial number.

(4) Words to this effect: "This equipment complies with requirements of the U.S. Coast Guard in 33 CFR part 66."

(b) This label must last the service life of the equipment.

(c) The manufacturer must provide the purchaser a data sheet containing the following information:
(1) Recommended service life based on the degradation of either the source of light or the lamp.
(2) Range in nautical miles.
(3) Effective intensity in candela.
(4) Size of lamp (incandescent only).
(5) Interval, in days or years, for replacement of dry-cell or rechargeable battery.

§ 66.01-15 Action by Coast Guard.

(a) The District Commander receiving the application will review it for completeness and will assign the aid one of the following classifications:

Class I: Aids to navigation on marine structures or other works which the owners are legally obligated to establish, maintain and operate as prescribed by the Coast Guard.

Class II: Aids to navigation exclusive of Class I located in waters used by general navigation.

Class III: Aids to navigation exclusive of Class I located in waters not ordinarily used by general navigation.

(b) Upon approval by the District Commander, a signed copy of the application will be returned to the applicant. Approval for the operation of radar beacons (racons) will be effective for an initial two year period, then subject to annual review without further submission required of the owner.

§ 66.01-20 Inspection.

All classes of private aids to navigation shall be maintained in proper operating condition. They are subject to inspection by the Coast Guard at any time and without prior notice.

§ 66.01-25 Discontinuance and removal.

(a) No person, public body or instrumentality shall change, move or discontinue any authorized private aid to navigation required by statute or regulation (Class I, § 66.01-15) without first obtaining permission to do so from the District Commander.

(b) Any authorized private aid to navigation not required by statute or regulation (Classes II and III, § 66.01-15) may be discontinued and removed by the owner after 30 days' notice to the District Commander to whom the original request for authorization for establishment of the aid was submitted.

(c) Private aids to navigation which have been authorized pursuant to this part shall be discontinued and removed without expense to the United States by the person, public body or instrumentality establishing or maintaining such aids when so directed by the District Commander.

§ 66.01-30 Corps of Engineers' approval.

(a) Before any private aid to navigation consisting of a fixed structure is placed in the navigable waters of the United States, authorization to erect such structure shall first be obtained from the District Engineer, U.S. Army Corps of Engineers in whose district the aid will be located.

(b) The application to establish any private aid to navigation consisting of a fixed structure shall show evidence of the required permit having been issued by the Corps of Engineers.

§ 66.01-40 Exemptions.

(a) Nothing in the preceding sections of this subpart shall be construed to interfere with or nullify the requirements of existing laws and regulations pertaining to the marking of structures, vessels and other obstructions sunken in waters subject to the jurisdiction of the United States (Part 64 of this subchapter), the marking of artificial islands and structures which are erected on or over the seabed and subsoil of the Outer Continental Shelf (Part 67 of this subchapter), or the lighting of bridges over navigable waters of the United States (Subchapter J of this subchapter).

(b) Persons marking bridges pursuant to Subchapter J of this title are exempted from the provisions of § 66.01-5.

§ 66.01-45 Penalties.

Any person, public body or instrumentality, excluding the armed forces, who shall establish, erect or maintain any aid to maritime navigation without first obtaining authority to do so from the Coast Guard, with the exception of those established in accordance with § 64.11 of this chapter, or who shall violate the regulations relative thereto issued in this part, is subject to the provisions of 14 U.S.C. 83.

§ 66.01-50 Protection of private aids to navigation.

Private aids to navigation lawfully maintained under these regulations are entitled to the same protection against interference or obstruction as is afforded by law to Coast Guard aids to navigation (Part 70 of this subchapter). If interference or obstruction occurs, a prompt report containing all the evidence available should be made to the Commander of the Coast Guard District in which the aids are located.

§ 66.01-55 Transfer of ownership.

(a) When any private aid to navigation authorized by the District Commander, or the essential real estate or facility with which the aid is associated, is sold or transferred, both parties to the transaction shall submit application (§66.01-5) to the Commander of the Coast Guard District in which the aid is located requesting authority to transfer responsibility for maintenance of the aid.

(b) The party relinquishing responsibility for maintenance of the private aid to navigation shall indicate on the application form (CG-2554) both the discontinuance and the change of ownership of the aid sold or transferred.

(c) The party accepting responsibility for maintenance of the private aid to navigation shall indicate on the application form (CG-2554) both the establishment and the change of ownership of the aid sold or transferred.

(d) In the event the new owner of the essential real estate or facility with which the aid is associated refuses to accept responsibility for maintenance of the aid, the former owner shall be required to remove the aid without expense to the United States. This requirement shall not apply in the case of any authorized private aid to navigation required by statute or regulation (Class I, § 66.01-15) which shall be maintained by the new owner until the conditions which made the aid necessary have been eliminated.

NAVIGATION PLAN

CONGAREE RIVER MODIFIED REMOVAL ACTION
COLUMBIA, SOUTH CAROLINA

August 2020

Prepared for:

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

Prepared by:

Apex Companies, LLC
1600 Commerce Circle
Trafford, PA 15085

NAVIGATION PLAN

CONGAREE RIVER MODIFIED REMOVAL ACTION
COLUMBIA, SOUTH CAROLINA

INTRODUCTION

Dominion Energy South Carolina, Inc. (DESC), formerly South Carolina Electric and Gas Company (DESC), plans to complete a Stakeholder-developed Modified Removal Action (MRA) to address the occurrence of a tar-like material (TLM) that is commingled with sediment along the eastern shoreline of the Congaree River, just south of the Gervais Street Bridge in Columbia, South Carolina. The project area location is shown on Figure 1. The TLM is believed to be a coal tar material that originated from the Huger Street former manufactured gas plant (MGP) site, located approximately 1,000 feet to the northeast of the project area. The proposed work is being performed by DESC at the direction of South Carolina Department of Health and Environmental Control (SCDHEC) and is subject to permits and approvals from the U.S. Army Corps of Engineers (USACE) and other agencies. The USACE approval for this project is provided in Appendix A.

The overall objective of this project is to remove impacted sediment from the Congaree River within two areas. The plan is to construct temporary cofferdams around each area to facilitate removal of the impacted sediment. The temporary cofferdams will be constructed sequentially and the MRA will occur over several years. The construction and active remediation season will occur from approximately May through October of each year. Figure 2 illustrates the proposed cofferdam locations. After each cofferdam is constructed, the isolated area will be dewatered and the impacted sediment removed and transported off-site for disposal. Following completion of the removal activities in Area 1, the cofferdam will be removed and a cofferdam will be constructed around Area 2. After the removal activities are completed in Area 2, the cofferdam materials will be removed from the river.

DESC intends to complete the project with as minimal of an impact on navigation and recreational use of the Congaree River as possible. This Plan was developed based on the guidelines provided in the “U.S. Coast Guard Aids to Navigation System” publication and is a supplement to the U.S. Coast Guard (USCG) Private Aids to Navigation Application. DESC will consult with the USCG District Seven Aids to Navigation and Waterways Management Office as necessary, and will complete the required notifications and installation of appropriate navigational aids and safety measures as specified in this Plan or directed by the USCG during implementation of the project. The proposed Notice to Navigation Interests and example navigational aid specifications are provided in Appendix B and C, respectively.

NAVIGATION WITHIN THE PROJECT AREA

The USACE Charleston District completed a Navigability Study of the Congaree River Basin in 1977. Excerpts from this study are provided in Appendix D. This document classifies the Congaree River as “navigable waters of the U.S. from its confluence with the Wateree River (R.M. [River Mile] 125.3) to the Gervais Street Bridge, U.S. 378 (R.M. 175.9).” As a result, the MRA area is located at the extreme

upriver limit of the classified navigable waters (Figure 2). This study provides historical documentation of significant use of the Congaree River for navigation and commerce, especially during the time frame when the Columbia Canal was operational. However, the study states that use of the river for interstate commerce has not occurred since the 1950s due to the utilization of other forms of transportation.

Current conditions within the Congaree River and the project area are similar to those described in the 1977 study. The river in the vicinity of the Gervais Street Bridge is shallow and rocky with highly variable flow rates that preclude the operation of large watercraft. In fact, it was necessary to utilize multiple forms of small watercraft that ranged in size from a pontoon boat to a canoe to complete the sediment investigative activities within the project area. In some instances, areas were investigated by wading due to the shallow and rocky nature of the river bottom. In other areas, where sufficient water depth was present to allow for the small pontoon boat to operate, the flow rate of the river was too swift to permit safe operation of the watercraft.

Currently, only small personal watercraft such as inner tubes, kayaks, canoes and occasionally a small motorboat are seen operating in the vicinity of the Gervais Street Bridge and the project area. Wading for the purpose of fishing or swimming also occurs in this area.

Potential Impacts to Navigation

As seen on Figure 2, cofferdams will be constructed around Areas 1 and 2 to isolate the areas for dewatering and sediment removal. The actual project area is relatively small in comparison to the overall width of the river and more than half of the river's width will be available for continued navigation or other activities. The maximum width of the area within the river to be isolated by the cofferdams is approximately 280 feet in Area 1 and approximately 190 feet wide in Area 2, while the entire river width ranges from approximately 650 to 800 feet in the project area.

The aerial photograph in Figure 3 shows the open water area west of the proposed cofferdams, and the approximate navigation route is highlighted by the arrows. Watercraft of the type typically utilized in this area of the river will be able to continue unobstructed use of the resource during completion of the project by following this general route.

Due to safety requirements, landside support zone activities and MRA activities within the river, access by the general public to the Congaree River via the Senate Street Extension (Figure 3) must be restricted during implementation of the project. This area has been utilized as a boat launch and fishing area due to the access provided by the asphalt and gravel road (which is private property) and the gentle slope to the river's edge. Access restrictions in this area should not affect the general public access to the river since this is private property. DESC plans to secure the area with fencing to establish the landside operations.

Options for the general public to launch small watercraft and access the river include the Three Rivers Greenway located directly across the river from the project area (Figure 3) and a public boat ramp located approximately 1.8 miles downstream of the Blossom Street Bridge.

Overall, no significant impacts to navigation of small watercraft and use of the river for recreational purposes are expected during completion of the project. As Figure 3 illustrates, more than half of the river's width will be available for use by the general public at all times. Restrictions to river access at the private access point on the east side will be mitigated by the access points located directly across the

river at the Three Rivers Greenway and public boat ramp located downstream. Safety measures that will be installed and maintained to ensure safe navigation around the project area are described below.

SAFETY MEASURES (PRIVATE AIDS TO NAVIGATION)

The safety measures (private aids to navigation) and details listed below are provided to illustrate the current plan and will be modified as necessary to obtain USCG approval of the project. The three main objectives of the safety measures are:

1. Provide boaters and other users of the river with advance notice of the construction site and the need to take appropriate measures to avoid the cofferdam structure;
2. Demarcate the area to be avoided; and
3. Alert boaters and other users of the river that the cofferdam structure, isolated area (sediment removal area) and landside support zone are restricted areas and off limits to non-project related personnel.

These objectives will be accomplished by publication of a “Notice to Navigation Interests” (Notice) prior to initiation of the project. This Notice will provide specific details pertaining to the project area and the navigational requirements. A draft Notice is provided as Appendix B.

In addition, strategic placement of warning and restricted access signs, solar powered lights and regulatory buoys (Figures 4 and 5) will provide real-time notification to boaters as they enter and make their way through the project area from either direction. Table 1 provides a summary of the required quantities of aids to navigation as well as recommended manufacturer identification and model numbers. Proposed alternative aids to navigation that meet or exceed the criteria below will also be considered.

The warning signs will be placed up and down river and the sign locations will be determined in the field based on existing conditions. The signs will be located in areas that are readily visible to river users. The warning signs will be relatively large (approximately 4 feet by 4 feet) and state “Warning - River Construction Zone Ahead”. The signs placed in the river will be properly secured (e.g., bolted to metal posts and attached to a weighted base and secured in-place with concrete blocks or large boulders).

The signs will be placed in the river, on the cofferdam and along the shoreline, and will be placed at an appropriate height (i.e., eye level, or approximately 3 to 5 feet above the water or land surface). For boaters, the elevation of the signs will be based on average river flows when most recreational boating activity is expected to occur. The average river elevation is approximately 116.5 feet (NGVD 29) which equates to an approximate sign elevation of 120 feet (NGVD 29). During completion of the investigative activities, it was observed that river elevations above approximately 117 feet (NGVD 29) produced flows that were not conducive to the safe operation of small watercraft within the project area. As a result, the 120 feet elevation will place the signs above the water level at flows where most recreational boating and use of the river is expected to take place. For the landside sign installations, eye level or approximately 5 feet above the surface elevation will be used to establish the correct position of the sign.

The USCG Aids to Navigation System specifies the use of an information or regulatory buoy (white with an orange band) to designate areas that should be avoided by watercraft. For this project, the buoys will also be marked with a danger symbol that specifies the presence of the dam. Example specifications of

this type of buoy and markings are provided in Appendix C. The approximate locations for buoy moorings are shown on Figures 4 and 5 for Areas 1 and 2, respectively. Generally, the buoys will be properly secured approximately 5 to 10 feet away from the outboard toe of the cofferdam slope and alert river users to the presence of the dam. The buoys will direct both downstream and upstream traffic away from the cofferdam structure. They will be relocated as necessary as the project progresses.

Marine-application lights will also be positioned slightly above the top of the cofferdam to help identify the perimeter of the structure in the unlikely event that boating traffic is in the area during nighttime or low light conditions. As part of the aids to navigation, solar powered, LED lights will be placed on each corner (or bend) and midpoint of each leg of the cofferdam. The lights will have a standard flash rate of 60 flashes per minute (FPM) and will be visible for one mile, under clear conditions. The lights will be secured on posts and positioned on the outboard side of the cofferdam with the elevation set approximately two feet above the crest elevation of the cofferdam. This height was selected to provide optimum visibility from the waterside of the cofferdam, while attempting to minimize any potential adverse impacts to the inhabitants of the residential condominiums located on Gist Street. Nine (9) lights are currently planned for the Area 1 cofferdam and six (6) lights are planned for the Area 2 cofferdam. An example of solar powered nautical lights is provided in Appendix C. The operating period for lights is between sunset and sunrise.

“Restricted Area” signs will be positioned at regular intervals along the cofferdam structure to alert river users of the need to stay away from the cofferdam. No unauthorized access to or on the cofferdam structure will be permitted.

Project personnel will conduct regular inspections of the buoys, lights and signs to ensure that they are still visible, in the correct locations, securely moored in place and operating properly. The minimum inspection frequency will be once per week or as soon as possible following high water/high river flow events. Any issues identified during the inspections will be corrected as soon as possible.

TABLES AND FIGURES

APPENDICES

TABLES AND FIGURES

TABLE 1

SUMMARY OF AIDS TO NAVIGATION

Congaree River Sediments
Columbia, South Carolina

Quantity	Description	Model No.	Manufacturer
9 - Area 1 6 - Area 2	Regulatory buoys ABS type 9" diameter or equivalent, with required anchors and mandatory restricted area symbol, "Dam"	B1147R	Roylan
6	48" x 48" flourescent/reflective signs "Warning River Construction Zone Ahead" black message on white reflective background with orange border	B2211	Roylan
9 - Area 1 6 - Area 2	Solar lights (LEDs), clear, to be positioned on each "corner" of construction area, 60 FPM (flashes per minute) mounted on 4" x 4" treated posts or equivalent	One mile #101 Series	Roylan

Note:
Signs, buoys and lights will be deployed during each phase of the project.

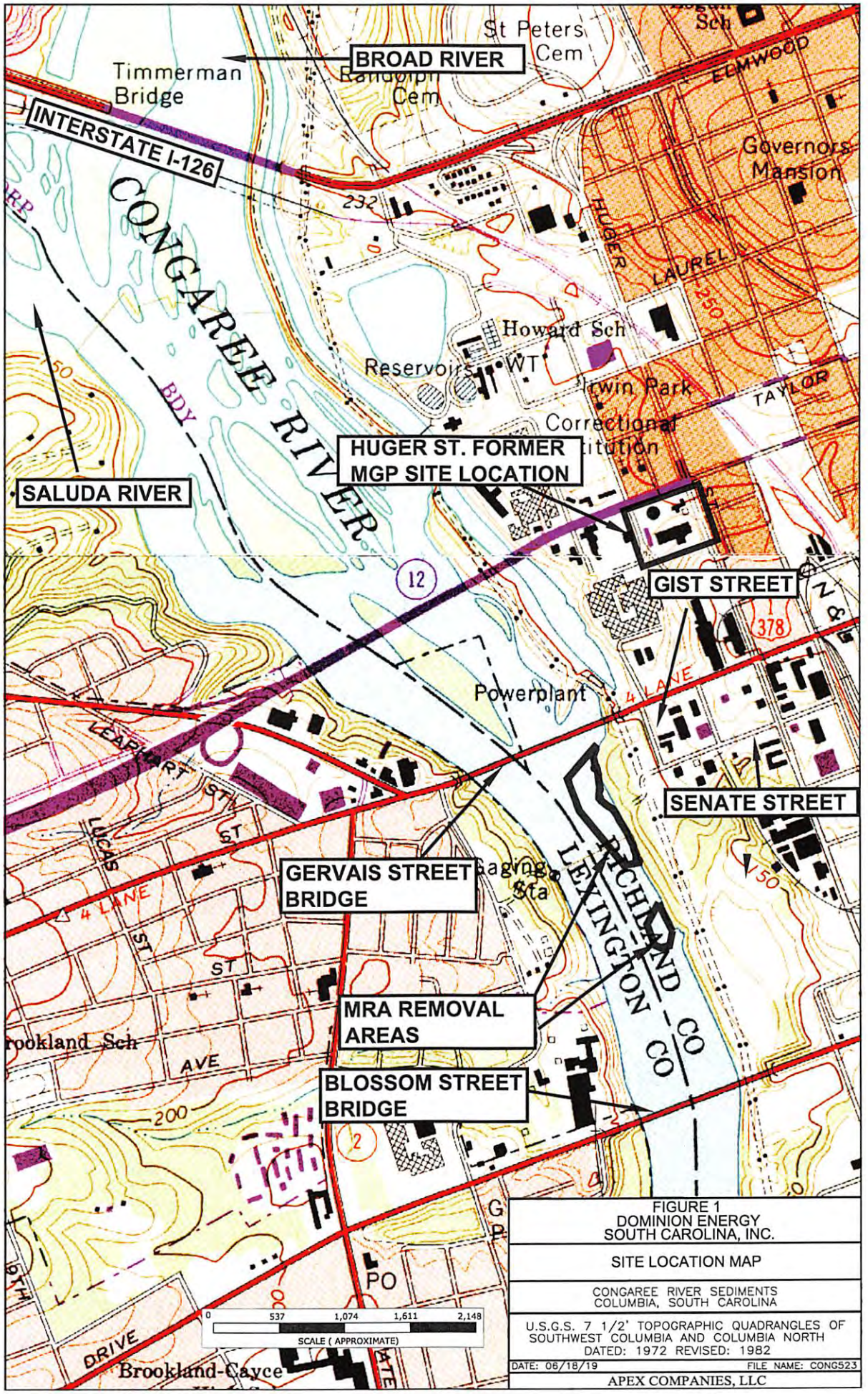


FIGURE 1
DOMINION ENERGY SOUTH CAROLINA, INC.

SITE LOCATION MAP

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

U.S.G.S. 7 1/2' TOPOGRAPHIC QUADRANGLES OF SOUTHWEST COLUMBIA AND COLUMBIA NORTH
DATED: 1972 REVISED: 1982

DATE: 06/18/19 FILE NAME: CONG523

APEX COMPANIES, LLC

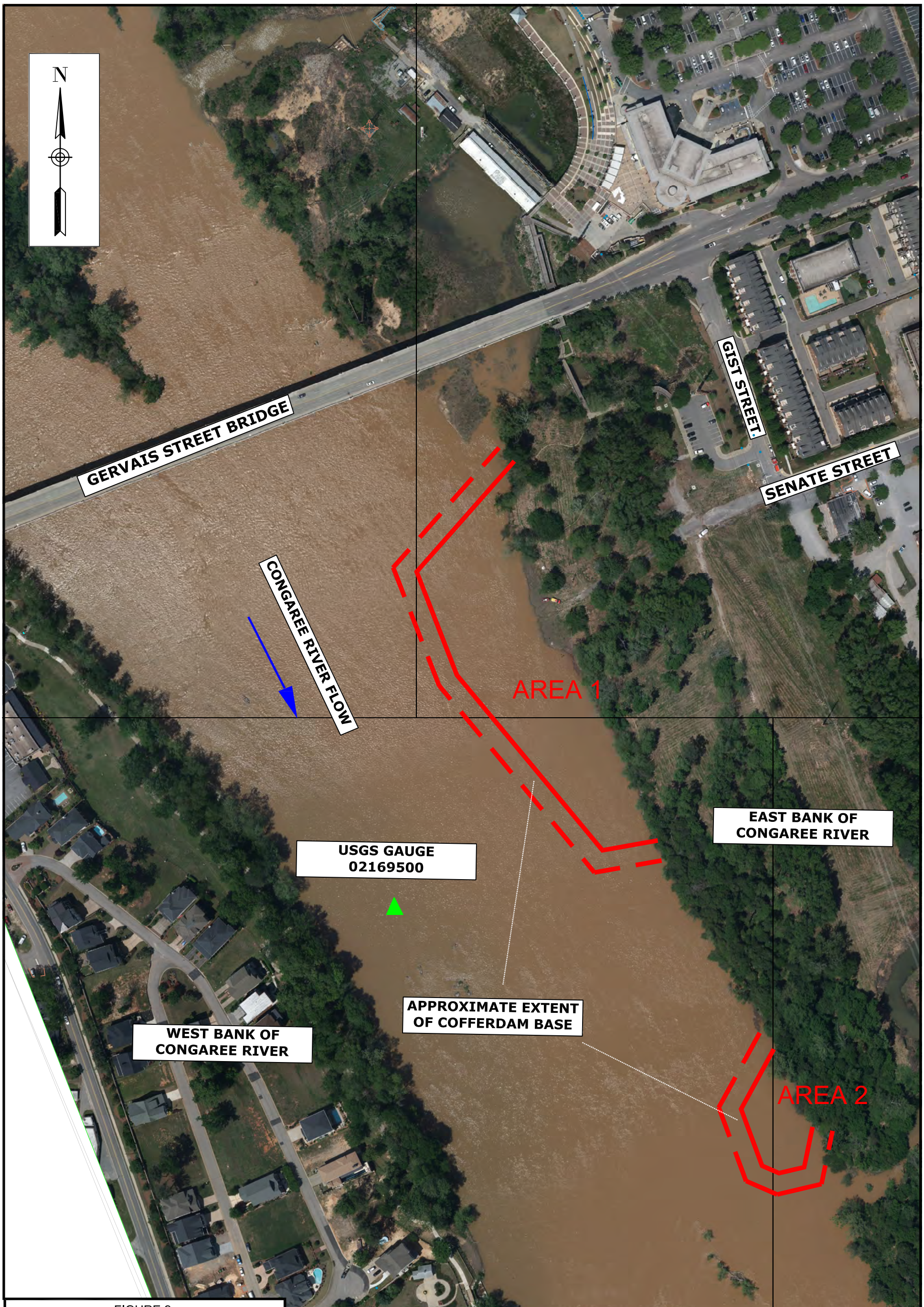


FIGURE 2

DOMINION ENERGY
SOUTH CAROLINA, INC.

PLANNED REMOVAL AREAS AND
COFFERDAM LOCATIONS

COLUMBIA, SOUTH CAROLINA

DATE: 6/8/20 FILE NAME: CONG554

APEX COMPANIES, LLC

N

LEGEND

– POTENTIAL SMALL CRAFT NAVIGABLE PATHWAY

– APPROXIMATE AREA TO BE REMOVED

– APPROXIMATE COFFERDAM FOOTPRINT

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).

0' 120' 240' 360'

UNNAMED TRIBUTARY #1

GERVAIS STREET BRIDGE

GIST STREET

SENATE STREET

COFFERDAM

RESTRICTED ACCESS ROAD (PRIVATE PROPERTY)

THREE RIVERS GREENWAY (PUBLIC RIVER ACCESS)

AREA 1

CONGAREE RIVER FLOW

UNNAMED TRIBUTARY #2

COFFERDAM

AREA 2

PUBLIC BOAT RAMP (APPROX. 1.8 MILES)

FIGURE 3
DOMINION ENERGY
SOUTH CAROLINA, INC.

PROJECT AREA AND NAVIGABILITY INFORMATION

COLUMBIA, SOUTH CAROLINA

DATE: 6/8/20 FILE NAME: CONG553

APEX COMPANIES, LLC

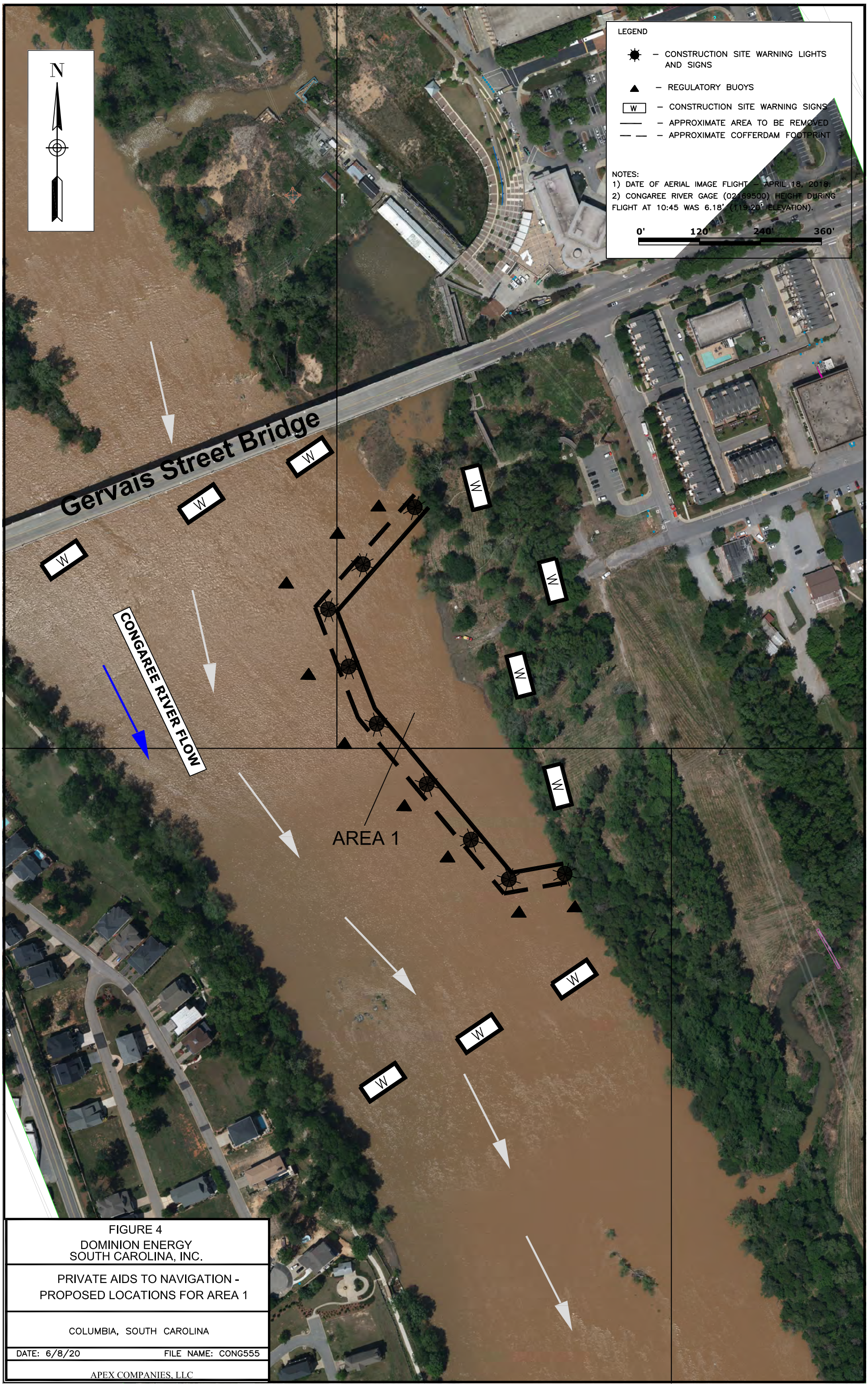


FIGURE 4

DOMINION ENERGY
SOUTH CAROLINA, INC.

PRIVATE AIDS TO NAVIGATION -
PROPOSED LOCATIONS FOR AREA 1

COLUMBIA, SOUTH CAROLINA

DATE: 6/8/20 FILE NAME: CONG555

APEX COMPANIES, LLC

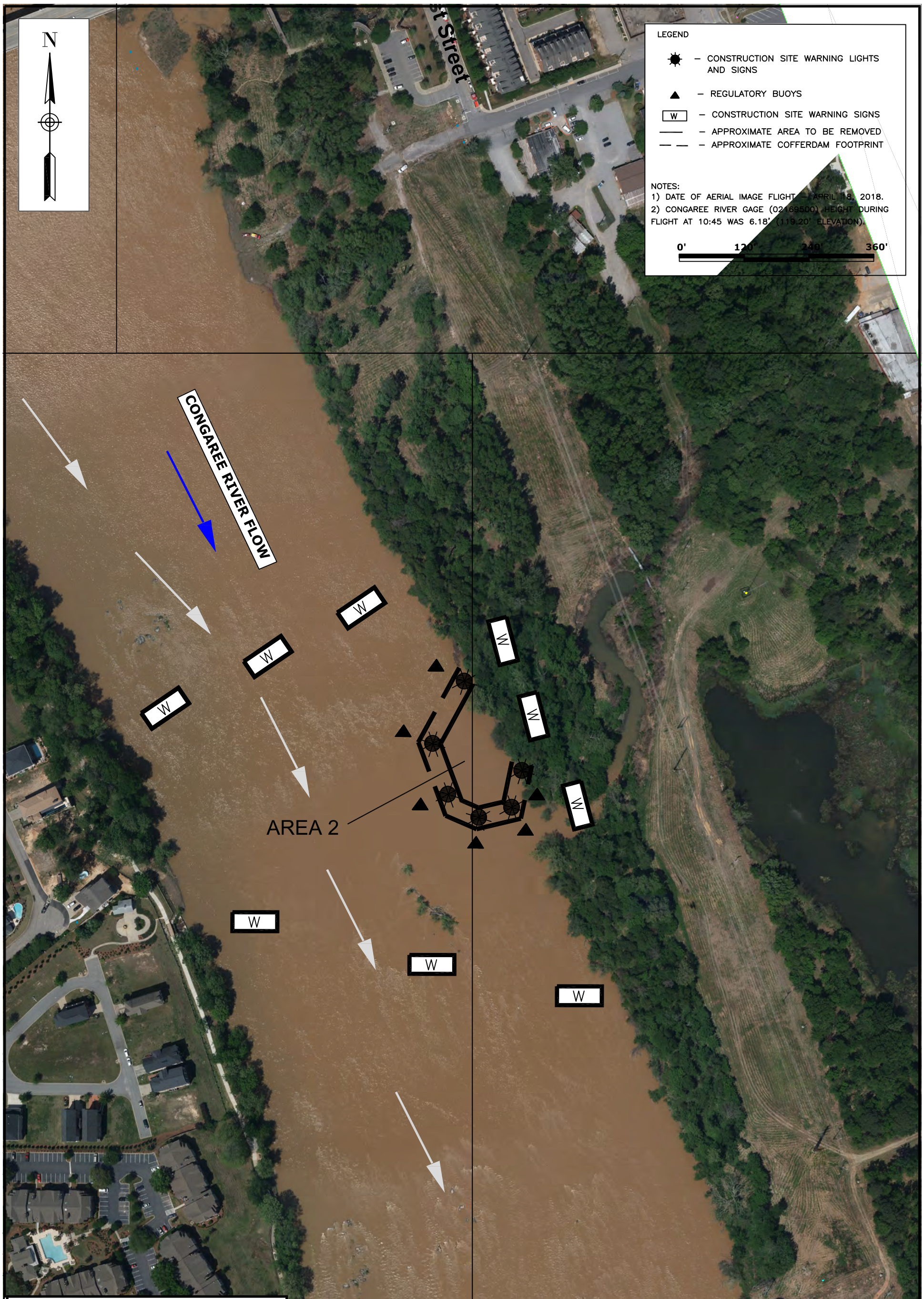


FIGURE 5

DOMINION ENERGY
SOUTH CAROLINA, INC.

PRIVATE AIDS TO NAVIGATION -
PROPOSED LOCATIONS FOR AREA 2

COLUMBIA, SOUTH CAROLINA

DATE: 6/8/20 FILE NAME: CONG556

APEX COMPANIES, LLC

APPENDIX A

USACE Project Approval

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, CHARLESTON DISTRICT
69A HAGOOD AVENUE
CHARLESTON, SC 29403-5107

December 10, 2021

Regulatory Division

Mr. Donald (Rusty) Harris
Dominion Energy South Carolina, Inc.
400 Otarre Parkway
Cayce, South Carolina 29033
rusty.harris@dominionenergy.com

Dear Mr. Harris:

This is in response to a Pre-Construction Notification (PCN) (SAC-2011-01356) received on September 30, 2020 and considered complete on December 15, 2020. In submitting the PCN, you requested verification the proposed project is authorized by a Department of the Army (DA) Nationwide Permit (NWP). **In accordance with Dominion Energy South Carolina, Inc.'s letter dated October 22, 2021 (i.e., withdrawing the capping project and replacing it with the project described below), this authorization letter (SAC-2011-01356) supersedes the previous authorization letter dated October 18, 2017 (SAC-2011-01356).**

The work affecting waters of the United States is part of an overall project known as Congaree River Stakeholder-Developed Modified Removal Action (MRA), to remove tar-like material (TLM) impacted sediment under Voluntary Cleanup Contract 02-5295-RP between Dominion Energy South Carolina, Inc., as a successor to the SCANA Corporation (Dominion) and the South Carolina Department of Health and Environmental Control (DHEC). The activities in waters of the United States include construction of temporary reinforced rock-filled berm cofferdams around two areas (2.6 acres and 0.5 acres) in the Congaree River, dewatering within the cofferdams, excavation of tar-like material, sediments, gravel, and rocks from the river bed that will be disposed off-site (estimated 11,700 cubic yards), removal of cofferdams, and restoration of disturbed portions of the riverbank (1,300 linear feet) using geotextile, riprap, vegetation, and/or bioengineering methods. The project involves impacts to not more than 5.8 acres of waters of the United States. Specifically, this letter authorizes impacts to 1,300 linear feet (5.8 acres) of tributaries. The project is located on the Congaree River at a site west of the intersection of Gist Street and Senate Street in Columbia, Richland County, South Carolina (Latitude: 33.9939°, Longitude: -81.04829°). The PCN also includes the following supplemental information:

a. Drawing sheets 1-23 of 23 titled "Congaree River SDMRA" and dated September 30, 2020.

b. A mitigation plan that includes avoidance and minimization measures.

c. A delineation of wetlands, other special aquatic sites, and other waters.

Based on a review of the PCN, including the supplemental information indicated above, the Corps has determined the proposed activity will result in minimal individual and cumulative adverse environmental effects and is not contrary to the public interest. Furthermore, the activity meets the terms and conditions of NWP 38 Cleanup of Hazardous and Toxic Waste.

For this authorization to remain valid, the project must comply with the enclosed NWP General Conditions, Charleston District Regional Conditions, and the following special conditions:

a. **That impacts to aquatic areas do not exceed those specified in the above mentioned PCN, including any supplemental information or revised permit drawings that were submitted to the Corps by the permittee.**

b. **That the construction, use, and maintenance of the authorized activity is in accordance with the information given in the PCN, including the supplemental information listed above, and is subject to any conditions or restrictions imposed by this letter.**

c. **That the permittee shall submit the attached signed compliance certification to the Corps within 30 days following completion of the authorized work.**

d. **That the permittee agrees the construction and removal of cofferdams in the Congaree River will be limited to May 1st through October 31st to reduce impacts to Shortnose sturgeon.**

e. **That the permittee shall submit any updated plans approved by DHEC to the Corps for review and approval prior to the commencement of work in waters of the U.S.**

f. **The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or their authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.**

g. Use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the U.S.

h. The permittee must install and maintain, at their expense, any safety lights and signals prescribed by the U.S. Coast Guard (USCG), through regulations or otherwise, on authorized facilities. The USCG may be reached at the following address and telephone number: (as of February 2013) U. S. Coast Guard District Seven, Waterways Management Branch, 909 SE 1st Ave, Suite 406, Miami, FL. 33131, and 305-415-6755 or 305-415-6750.

i. That the permittee agrees to perform and comply with the attached signed NHPA Section 106 memorandum of agreement entitled "Memorandum of Agreement among the U.S. Army Corps of Engineers, Charleston District; the South Carolina State Historic Preservation Office; and Dominion Energy South Carolina, Inc. regarding the Congaree River Remediation Project, Richland County South Carolina," and fully executed on December 8, 2021.

j. Prior to beginning the authorized work, the permittee must coordinate with the local NFIP flood plain manager and comply with FEMA requirements. A list of NFIP floodplain managers may be found at: http://www.dnr.sc.gov/water/flood/index.html.

This verification is valid until March 18, 2022, unless the district engineer modifies, suspends, or revokes the NWP authorization in accordance with 33 CFR 330.5(d). If prior to this date, the NWP authorization is reissued without modification or the activity complies with any subsequent modification of the NWP authorization, the verification continues to remain valid until March 18, 2022. If you commence, or are under contract to commence this activity before the NWP expires, or the NWP is modified, suspended, or revoked by the Chief of Engineers or division engineer in accordance with 33 CFR 330.5(b) or (c), respectively, in such a way that the activity would no longer comply with the terms and conditions of the NWP, you will have 12 months after the date the NWP expires or is modified, suspended, or revoked, to complete the activity under the present terms and conditions of this NWP.

This NWP is verified based on information you provided. It is your responsibility to read the attached NWP(s) along with the General, Regional, and Special Conditions before you begin work. If you determine your project will not be able to meet the NWP and the conditions, you must contact the Corps before you proceed.

In all future correspondence, please refer to file number SAC-2011-01356. A copy of this letter is forwarded to State and/or Federal agencies for their information. If you have any questions, please contact Amy Cappellino, Project Manager, at (803) 253-3992, or by email at Amy.e.Cappellino@usace.army.mil.

Sincerely,

Brice McKoy

Brice McKoy
Chief, Northwest Branch

Attachments
Permit Drawings
NWP 38 Cleanup of Hazardous and Toxic Waste
Nationwide Permit General Conditions
Nationwide Permit Regional Conditions
Compliance Certification Form
NHPA Section 106 MOA

Copies Furnished:

Mr. Andrew (Rusty) Contrael
ACE, Inc.
132 South Grant Avenue
Kittanning, Pennsylvania 16201
rcontrael21@outlook.com

SC DHEC - Bureau of Water
2600 Bull Street
Columbia, South Carolina 29201
WQCWetlands@dhec.sc.gov

US Coast Guard
Sector Charleston
Attention: Waterways Management
1050 Register Street
North Charleston, SC 29405
D07-PF-SECTORCHASN-WWM@uscg.mil

APPENDIX B

Notice to Navigation Interests

DRAFT

NOTICE TO NAVIGATION INTERESTS

CONGAREE RIVER MODIFED REMOVAL ACTION
COLUMBIA, SOUTH CAROLINA

Overview

Dominion Energy South Carolina, Inc. (DESC), formerly South Carolina Electric and Gas Company (DESC), plans to complete a Modified Removal Action (MRA) to address the occurrence of a tar-like material (TLM) that is commingled with sediment along the eastern shoreline of the Congaree River, just south of the Gervais Street Bridge in Columbia, South Carolina. The project area location is shown on Figure 1. The TLM is believed to be a coal tar material that originated from the Huger Street former manufactured gas plant (MGP) site, located approximately 1,000 feet to the northeast of the project area. The proposed work is being performed by DESC at the direction of South Carolina Department of Health and Environmental Control (SCDHEC) and is subject to permits and approvals from the U.S. Army Corps of Engineers (USACE) and other agencies.

The overall objective of this project is to remove impacted sediment from the Congaree River within two areas. The current plan is to construct temporary cofferdams around each area to facilitate removal of the impacted sediment. As currently envisioned, the temporary cofferdams will be constructed sequentially and the MRA will occur over several years. The construction and active remediation season will occur from approximately May through October of each year. Figure 2 illustrates the proposed cofferdam locations. After each cofferdam is constructed, the isolated area will be dewatered and the impacted sediment removed and transported off-site for disposal. Following completion of the removal activities in Area 1, the cofferdam will be removed and a cofferdam will be constructed around Area 2. After removal activities are completed in Area 2, the cofferdam materials will be removed from the river.

The actual project area is relatively small in comparison to the overall width of the river and more than half of the river's width will be available for continued navigation or other activities. Figure 2 shows the planned restricted areas and the area that will remain available for navigation during completion of project. Figures 3 and 4 provide illustrations of the planned Area 1 cofferdam and show the river portion available for continued navigation during this phase. Because Area 2 is smaller than Area 1, the cofferdam will have a similar appearance although smaller and not extending as far into the river.

Navigation Signage, Lighting and Signals

Prior to initiation of cofferdam construction activities, warning signs will be placed upriver and downriver of the cofferdam location. The final locations of the signs will be determined in the field based on existing conditions. The signs will be located in areas that are readily visible from the water. The warning signs will be approximately 4 feet by 4 feet and state "Warning - River Construction Zone Ahead". The signs will be bolted to metal posts and attached to a weighted base and secured in-place with concrete blocks or boulders.

Information buoys (white with a orange band) will be placed approximately 5 to 10 feet away from the outboard toe of the cofferdam as an aid to alert river users to the presence of the rock dam. The buoys will be marked with a danger symbol that specifies the presence of the dam. The buoys will direct both downstream and upstream traffic away from the cofferdam structure. They will be relocated as necessary

as the project progresses. Figures 3 and 4 provide illustrations of the planned cofferdam buoy and lighting scenario using Area 1 as an example.

Marine-application lights will also be positioned slightly above the top of the cofferdam to help identify the perimeter of the structure in the unlikely event that boating traffic is in the area during nighttime or low light conditions. As part of the aids to navigation, solar powered, LED lights will be placed on each corner (or bend) and midpoint of each leg of the cofferdam. The lights will have a standard flash rate of 60 flashes per minute (FPM) and will be visible for one mile, under clear conditions. The lights will be positioned on the outboard side of the cofferdam with the elevation set approximately two feet above the crest elevation of the cofferdam. Nine (9) lights are currently planned for the Area 1 cofferdam and six (6) lights are planned for the Area 2 cofferdam. The operating period for lights is between sunset and sunrise.

“Restricted Area” signs will be positioned at regular intervals along the cofferdam structure to alert river users of the need to stay away from the cofferdam. No unauthorized access to or on the cofferdam structure will be permitted. Users of the river are advised to remain a safe distance from the project area at all times and to obey all navigation aids and instructions.

List of Figures

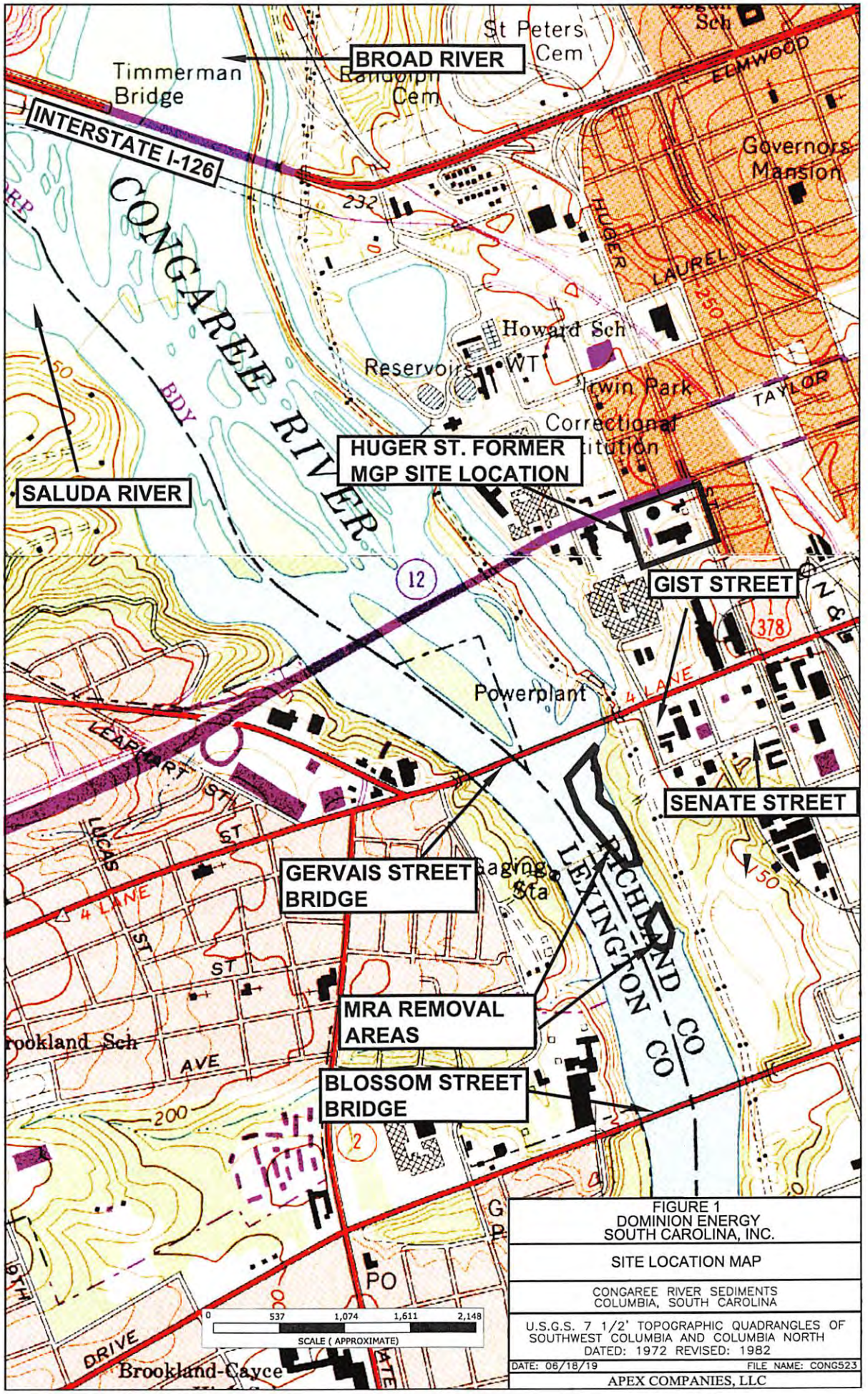


FIGURE 1
DOMINION ENERGY SOUTH CAROLINA, INC.

SITE LOCATION MAP

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

U.S.G.S. 7 1/2' TOPOGRAPHIC QUADRANGLES OF SOUTHWEST COLUMBIA AND COLUMBIA NORTH
DATED: 1972 REVISED: 1982

DATE: 06/18/19 FILE NAME: CONG523

APEX COMPANIES, LLC

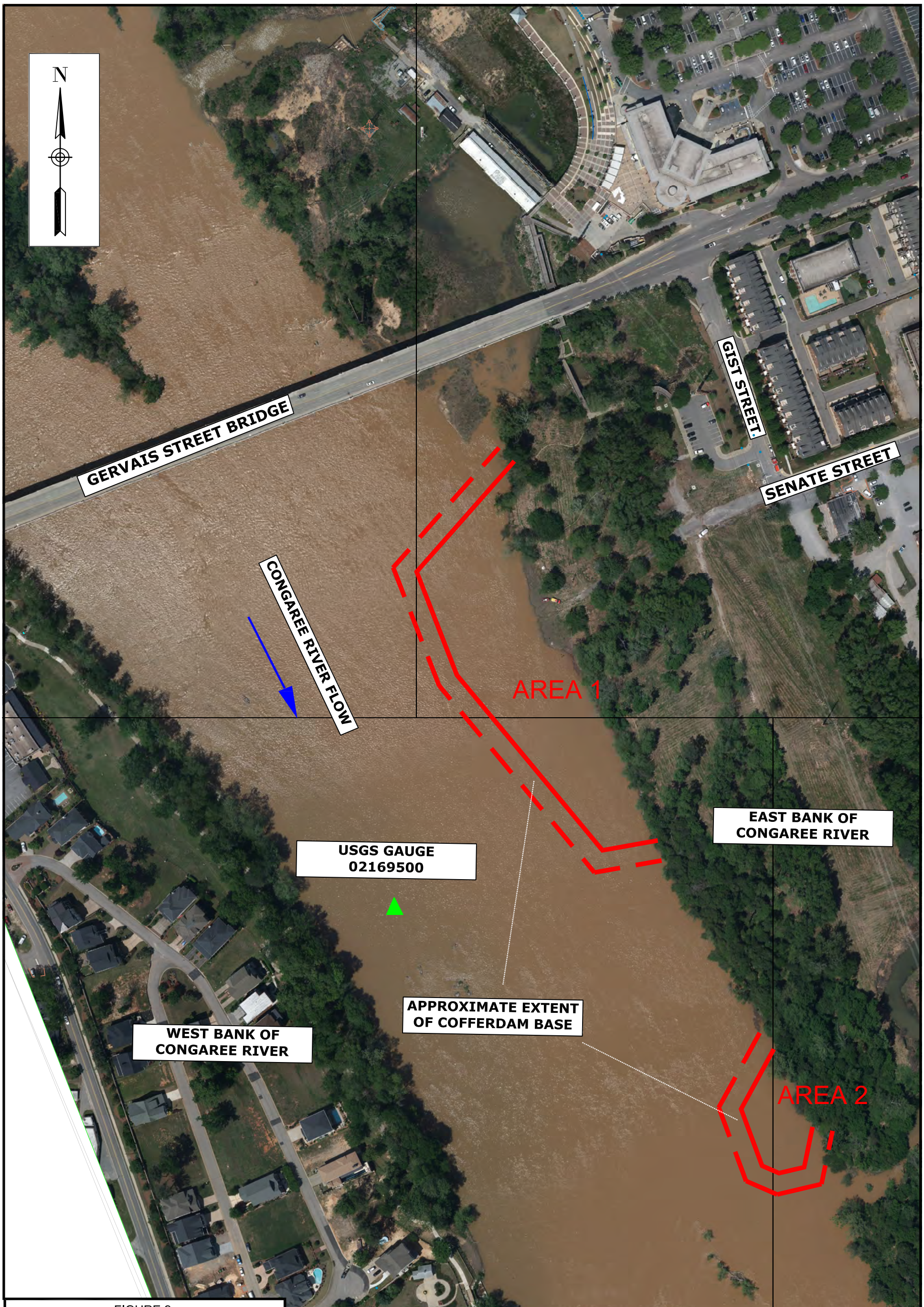


FIGURE 2

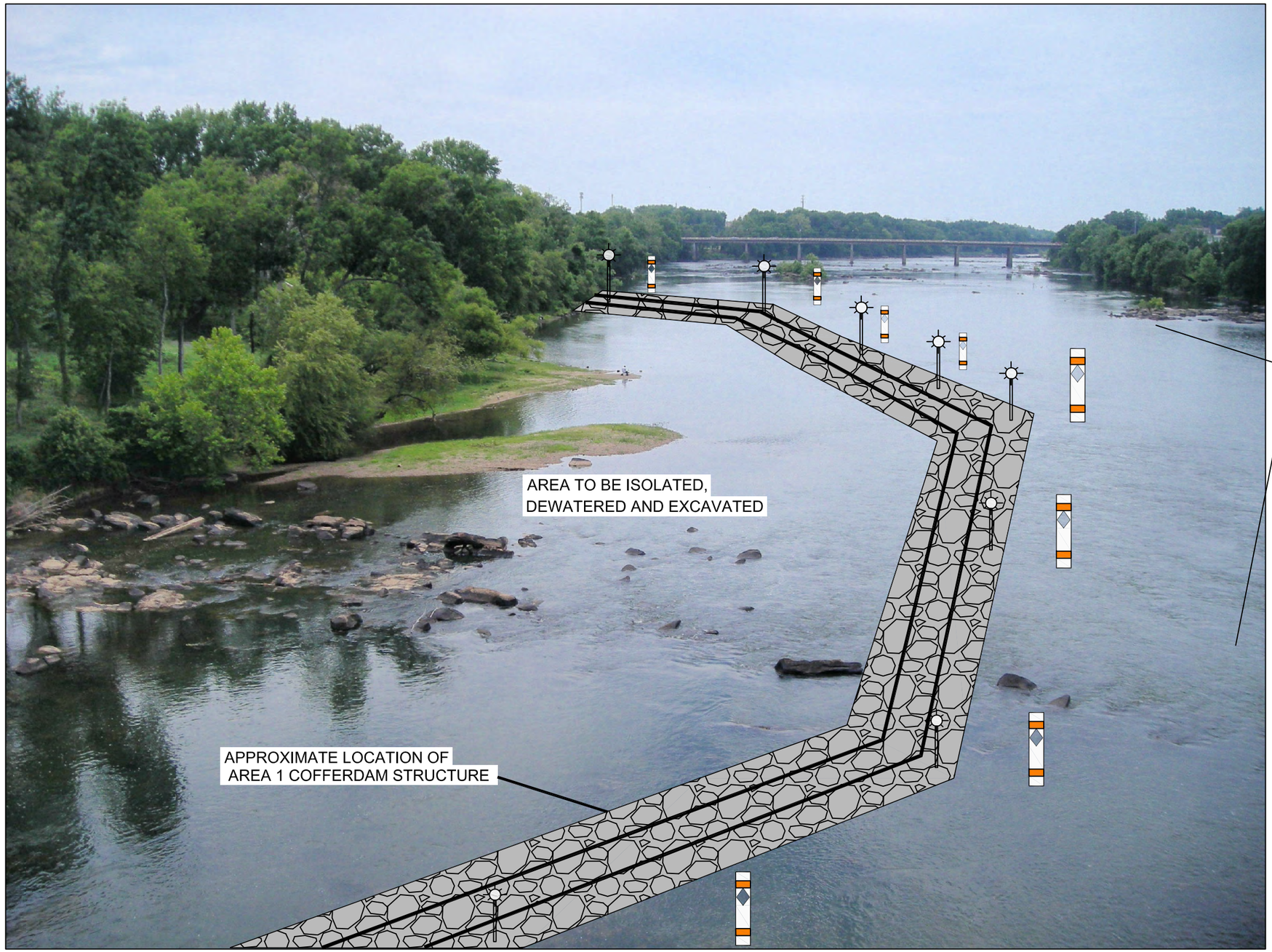
DOMINION ENERGY
SOUTH CAROLINA, INC.

PLANNED REMOVAL AREAS AND
COFFERDAM LOCATIONS

COLUMBIA, SOUTH CAROLINA

DATE: 6/8/20 FILE NAME: CONG554

APEX COMPANIES, LLC



- INFORMATION BUOY WITH DANGER OR OTHER SYMBOL TO ALERT BOATERS OF COFFERDAM

- OBSTRUCTION LIGHTS WILL BE PLACED IN ACCORDANCE WITH 33 C.F.R. 67.05-1.

REMAINDER OF RIVER AVAILABLE FOR NAVIGATION

NOTES:
- DRAWING NOT TO SCALE AND IS FOR ILLUSTRATIVE PURPOSES ONLY.
- COFFERDAM STRUCTURE LOCATION AND CONFIGURATION IS APPROXIMATE.
- PHOTOGRAPH TAKEN FROM THE GERVAIS ST. BRIDGE LOOKING SOUTH.

FIGURE 3
DOMINION ENERGY SOUTH CAROLINA, INC.

AREA 1 COFFERDAM ILLUSTRATION (1 OF 2)

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

DATE: 7/6/20 FILE NAME: CONG557

APEX COMPANIES, LLC

- INFORMATION BUOY WITH DANGER OR OTHER SYMBOL TO ALERT BOATERS OF COFFERDAM

- OBSTRUCTION LIGHTS WILL BE PLACED IN ACCORDANCE WITH 33 C.F.R. 67.05-1.

NOTES:
- DRAWING NOT TO SCALE AND IS FOR ILLUSTRATIVE PURPOSES ONLY.
- COFFERDAM STRUCTURE LOCATION AND CONFIGURATION IS APPROXIMATE.
- PHOTOGRAPH TAKEN FROM THE WEST BANK OF THE RIVER LOOKING EAST.

FIGURE 4
DOMINION ENERGY SOUTH CAROLINA, INC.

AREA 1 COFFERDAM ILLUSTRATION (2 OF 2)

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

DATE: 7/6/20 FILE NAME: CONG558

APEX COMPANIES, LLC

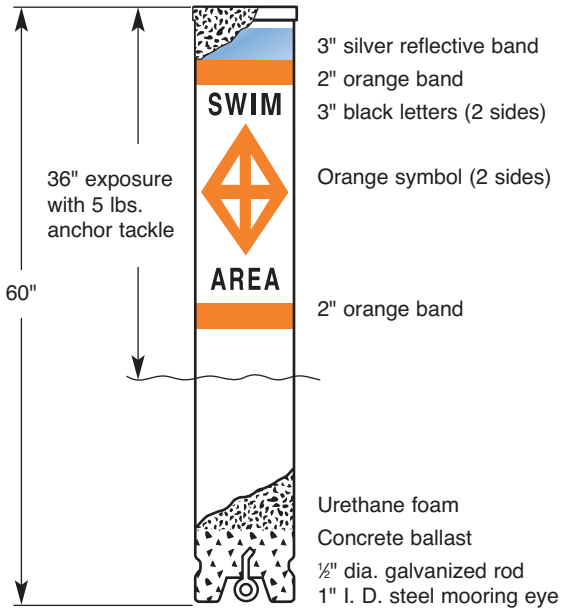
APPENDIX C

Example Navigational Aid Specifications

Regulatory Buoys • ABS type – 9" Dia.

Approved and universally used by local, state and federal agencies to ensure water safety. Ideal for private applications.

UNSINKABLE — filled with urethane foam



Specify desired symbols and messages when ordering.

Submerged buoyancy	84 lbs.
Net weight	49 lbs.
Shipping weight	56 lbs.

Refer to installation suggestions on page 21.
See warranty information on back cover.

Model B1147R

Features

- Easy reconditioning of weather-worn buoys with excellent adhesion of restoration materials. See page 18.
- 9" diameter, white, ABS plastic exterior. Will not rust, chip or peel. Ultraviolet inhibited.
- Completely urethane foam filled. Virtually unsinkable.
- 3"-wide reflective band at top provides excellent nighttime visibility.
- Self-righting without tackle.
- Recessed cap allows buoy to stand upright.
- Heavy steel galvanized anchoring eye cast in an internal concrete ballast.
- Includes choice of standard symbols and messages.

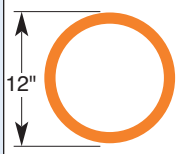
Available Options

- Pickup eye built into top.
- Stainless steel anchoring eye for salt water applications.
- Agency or name identification.
- Cone cap top.
- Special non-standard messages.
- Solar lights (see page 11).
- Available in yellow.
- Side mooring eyes for swim areas, float lines.

STANDARD INLAND WATERWAY SYMBOLS AND MESSAGES

Special messages are available. Request a quotation.

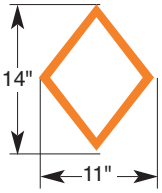
CONTROLLED AREA SYMBOL



2" band width

STANDARD MESSAGES
SLOW 5 MPH
SLOW NO WAKE
SKI AREA
NO SKI
SLOW 10 MPH
SPEED ZONE
NO WAKE IDLE SPEED

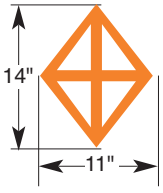
HAZARD WARNING SYMBOL



2" band width

STANDARD MESSAGES
ROCK
DANGER
RAPIDS
SHOAL
STUMP
SHALLOW AREA
HAZARD AREA
DANGER DAM

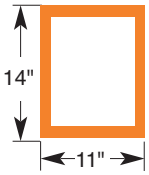
RESTRICTED AREA SYMBOL



2" band width

STANDARD MESSAGES
SWIM AREA
KEEP OUT
NO BOATS
BOATS KEEP OUT
CLOSED AREA
NO BOATING
DANGER DAM

INFORMATION SYMBOL



2" band width

STANDARD MESSAGES
REST ROOM 1 MILE
STATE PARK AHEAD
MARINA ENTRANCE
FISH ATTRACTOR

PERMAFLEX® CABLE

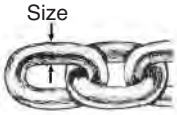
Lightweight
High strength
Safe to handle
Tough, durable, bright yellow, waterproof plastic covering is highly resistant to alkalis and salt

Covering O.D.	Part No.	Cable Dia.	Construction ①	Weight Lb./Ft.	Breaking Strength Lbs.	Standard Reel Size②	Reel Wt. Lbs.
5/32"	B1934	1/8"	7 x 7	.028	920	1000'	28
1/4"	B1936	3/16"	7 x 7	.065	3700	500'	37
5/16"	B1931	1/4"	7 x 7	.12	6100	500'	60
15/32"	B1933	3/8"	7 x 19	.28	14400	500'	180

Permaflex Cable – Galvanized steel wire rope coated & Impregnated with yellow polypropylene plastic.

CHAIN

Size



	Size	Part No.	Weight Lb./Ft.	Working Load Limit Lbs.	Standard Drum Size①
Proof Coil Heavy Duty	1/4"	B1828	.42	1300	400'
Steel Chain	3/8"	B1829	1.36	2650	200'
Hot Dipped Galv.	1/2"	B18210	2.3	4500	100'

NOTES: ① Chain may also be purchased by the foot. Subject to cut charge.

GALVANIZED HARDWARE

CABLE THIMBLES
Standard
Electro Galvanized

Heavy Duty
Hot Dipped Galvanized

Size	Part No.	Weight Lb./Ft.
3/16"	B2311	.03
1/4"	B2312	.04
5/16"	B2313	.05
1/2"	B2316	.15
1/4"	B2324	.08
5/16"	B2321	.11
1/2"	B2323	.47

CABLE CLAMPS
Standard
Electro Galvanized

Heavy Duty
Hot Dipped Galvanized

3/16"	B1831	.2
1/4"	B1832	.3
5/16"	B1833	.4
1/2"	B1835	.5
3/16"	B2331	.11
1/4"	B2332	.16
5/16"	B2333	.28
1/2"	B2335	.82

CONNECTING LINKS
Electro Galvanized

1/4"	B1891	.10
3/8"	B1892	.25
1/2"	B1893	.54

QUICK LINKS
Electro Galvanized

1/4"	B1801	.10
3/8"	B1803	.19
1/2"	B1804	.38

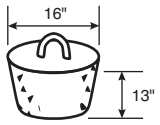
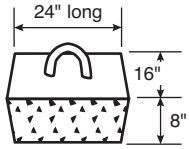
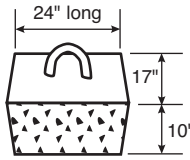
ANCHOR SHACKLES
Hot Dipped Galvanized

5/16"	B1900	.25
3/8"	B1901	.30
1/2"	B1902	.75

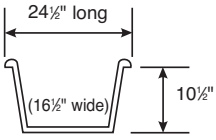
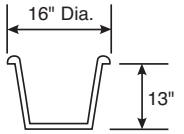
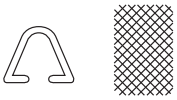
SWIVELS
Hot Dipped Galvanized

1/4"	B1921	.21
3/8"	B1922	.61
1/2"	B1923	.93

ANCHORS

ANCHORS CONCRETE	Avg. Wt. Lbs.	Under-water Wt. Lbs.
 B1842 ½" Round Steel Eye Hot Dipped Galvanized	90	54
 B21620 ½" Round Steel Eye Hot Dipped Galvanized	200	164
 B2152 ½" Round Steel Eye Hot Dipped Galvanized	300	180

ANCHOR KITS

	**B2161** Tough, high-density polyethylene anchor form. Cast up to 300 lb. concrete anchors.
	**B2163** Plastic anchor form for 90 lb. concrete anchors.
	**B2162** 1/2" Steel anchor eye and steel wire mesh.

Stainless steel hardware available.
Call for pricing.

Warning and Portage Signs

Bold black message on white reflective background with orange border. .080" aluminum base material. Excellent visibility, day and night.

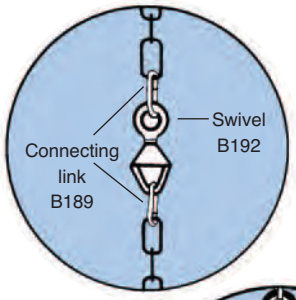
DAM	
SIZE (IN.)	PART NO.
24 x 24	B2011
30 x 30	B2021
36 x 36	B2031
48 x 48	B2211

THIN ICE	
24 x 24	B2013
30 x 30	B2023
36 x 36	B2033
48 x 48	B2213

SLOW NO WAKE	
SIZE (IN.)	PART NO.
24	B22258
30	B22259
36	B22260

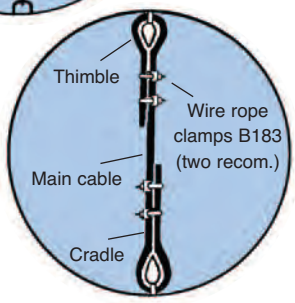
TAKE OUT		
SIZE (IN.)	PART NO.	RIGHT ARROW
24 x 24	B2012L	B2012R
30 x 30	B2022L	B2022R
36 x 36	B2032L	B2032R
48 x 48	B2212L	B2212R

Mooring Suggestions



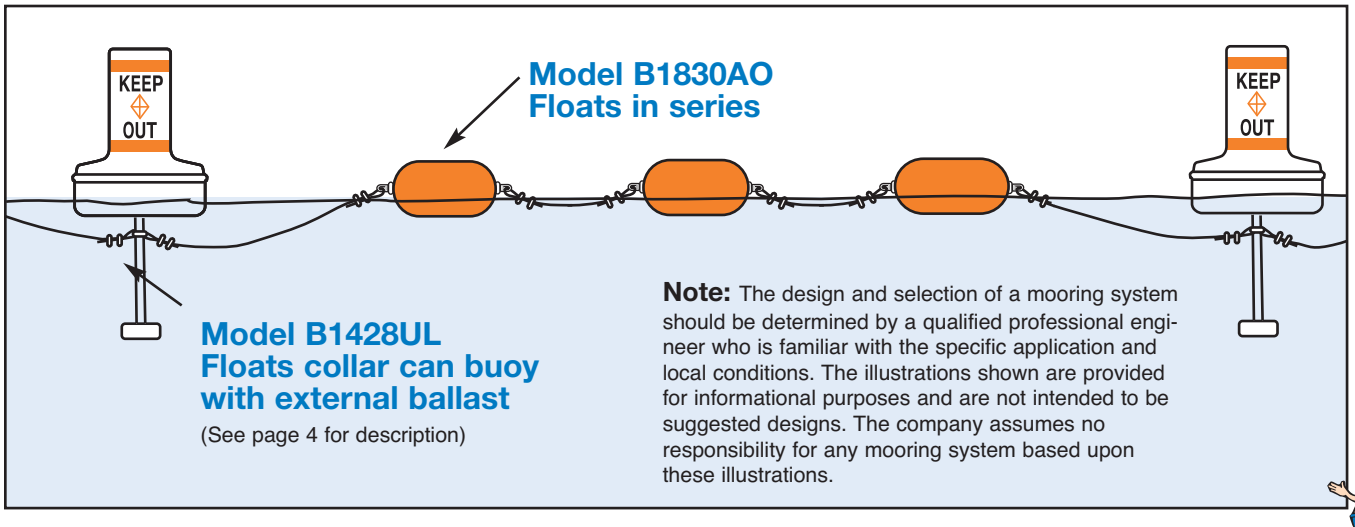
Use swivels to cut chain wear and increase buoy performance. Wind, wave, and current action causes buoys to rotate. This rotation, if severe, can cause chain or cable to twist, which will eventually submerge the buoy, increase chain wear, and increase the load on the anchor.

NOTE - The design and selection of a mooring system should be determined by a qualified professional engineer who is familiar with the specific application and local conditions. The illustrations shown are provided for informational purposes and are not intended to be suggested designs. The company assumes no responsibility for any mooring system based upon these illustrations.



Correct cable clamp assembly. Note from the sketch that the cradle is tightened against main cable. This is the correct assembly method to insure against the clamps, slipping while in service. Be sure to tighten nuts down, alternating from side to side frequently. Thimbles should be assembled so they are firmly trapped within the cable loop.

Typical Barrier Float System



Note: The design and selection of a mooring system should be determined by a qualified professional engineer who is familiar with the specific application and local conditions. The illustrations shown are provided for informational purposes and are not intended to be suggested designs. The company assumes no responsibility for any mooring system based upon these illustrations.

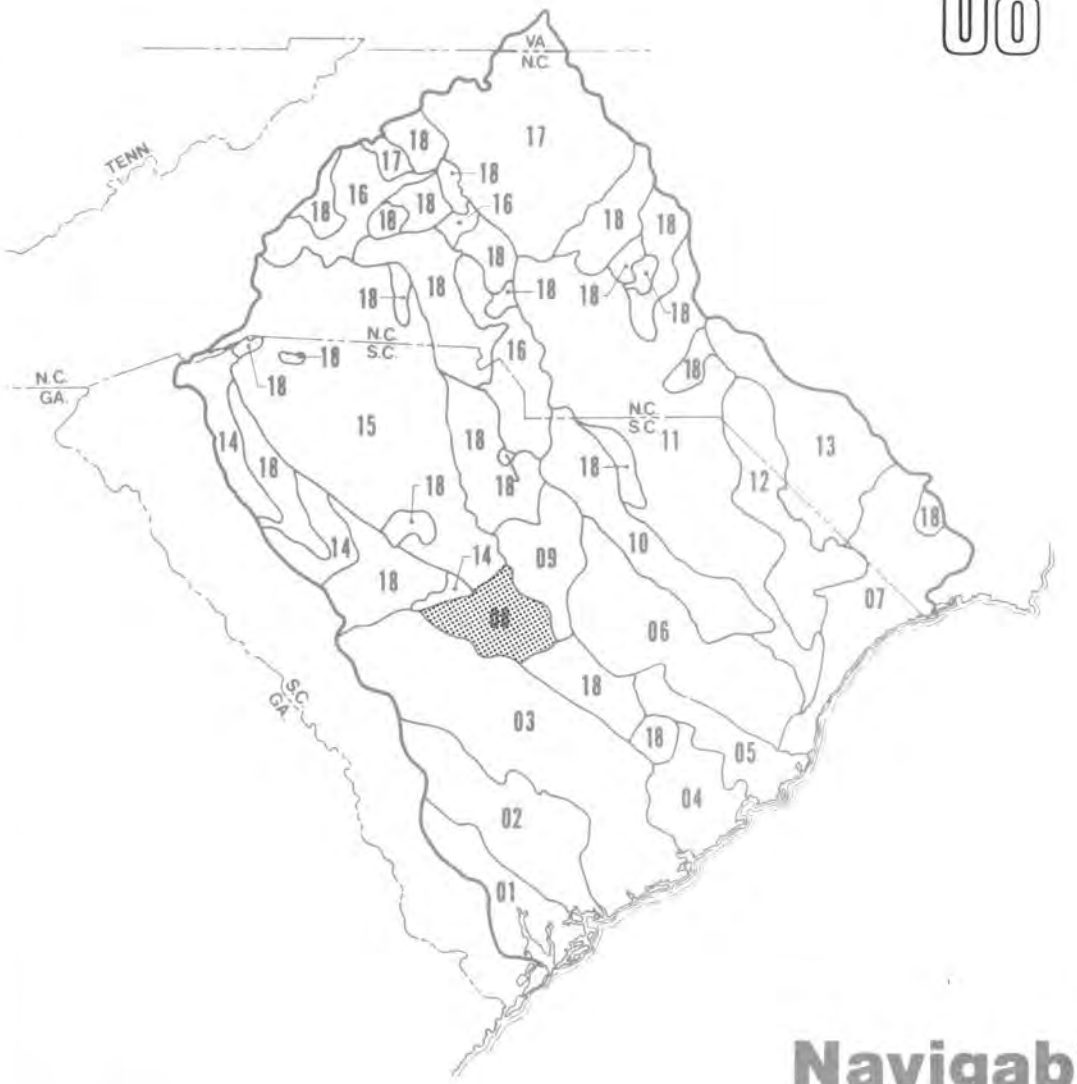
APPENDIX D

Excerpts from the 1977 Navigability Study of the Congaree River Basin

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

CONGAREE RIVER BASIN

Report No. 08



Navigability Study 1977

STANLEY CONSULTANTS

Navigation Classification Categories

This study classifies streams into several different categories, each of which is discussed subsequently:

1. Present "navigable waters of the U. S." (by regulatory procedures).
2. Historically navigable waters (based on literature review).
3. Recommended "navigable waters of the U. S." (based upon data developed as a part of this investigation).
4. Recommended waters for practical navigation (within "navigable waters of the U. S.").
5. Headwaters for all waterbodies (five cfs points).

The first four navigation classifications are displayed on the plates presented later in this report. The headwater limits are summarized in Appendix A.

Present Navigable Waters of the U. S.

Currently, the Congaree River is classified as "navigable waters of the U. S." from its confluence with the Wateree River (R.M. 125.3) to the Gervais Street bridge, U. S. 378, (R.M. 175.9). (3)(4)(20) This classification is based on the limits of the Federally authorized project, as discussed in Section 3, as well as Federal and state court decisions, as discussed in Section 5. (See plate 08-2 for map location.)

Historically Navigable Waters

The Congaree River was extensively used for navigation throughout the earlier development of the state. After the construction of the Columbia Canal, as referred to in Section 4, navigation extended over the entire length of the Congaree River (R.M. 176.9), and continued up the Broad River (see Report 15).

Recommended and Practical Navigable Waters of the U. S.

The recommended and practical limit of "navigable waters of the U. S." is at the Gervais Street bridge (R.M. 175.9). This is the same limit as the present classification, and is based on the Federal court

decisions and authorized project limits that established the present classification, as well as observations and calculations, which establish the practicality of navigation at all six bridges crossing the river. Analysis at each of the locations resulted in an approximate mean water depth of at least 7 feet, approximate channel width of at least 50 feet, and an average slope within the ranges for practical navigation. The river extends upstream for about one mile beyond R.M. 175.9; however, it becomes shallower and spotted with sandbars as it nears the confluence of the Broad and Saluda Rivers and would require extensive improvements to be navigable. In addition, entrance to the Columbia Canal, used at one time to by-pass this shallow area, is no longer operational due to installation of electric generating turbines and would also require extensive renovation to become functional.

These conclusions on the navigation limit meet the criteria established for the Federal test of navigability that the body of water is used, or is capable of being used, in conjunction with other bodies of water to form a continuous highway upon which commerce with other states or countries might be conducted.

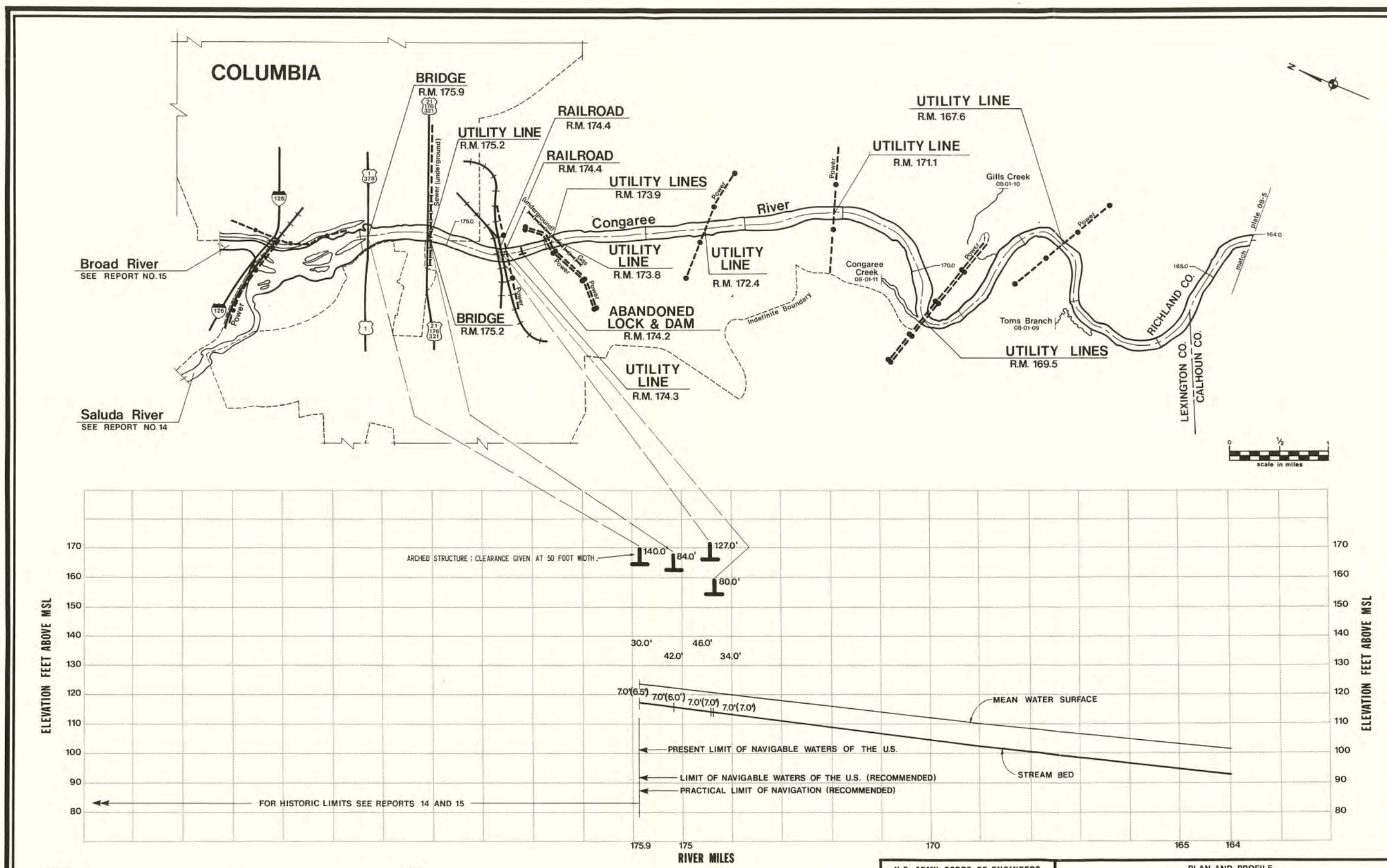
There are no significant tributaries to the Congaree River capable of supporting navigation.

Plates 08-4 through 08-6 are plan and profiles of the recommended "navigable waters of the U. S." The plan and profile plates show mean water surface as determined from USGS maps, stream bed depth, 50 feet wide navigable channel depth, pier spacing for bridges crossing the river, and vertical clearances at structures. Approximate vertical clearances for overhead utilities are shown later in this Section in Table 4. It is emphasized that all references to elevation are approximate since vertical control was established from USGS contour maps and not field instrument surveys. Water depth and structure vertical clearance measurements are also approximate due to the accuracy inherent in the field techniques. (See the Summary Report for a detailed description of field procedures and the methodology used to calculate water depth at mean flow.)

SECTION 7 - CONCLUSIONS AND RECOMMENDATIONS

Five classifications of navigation on streams in the Congaree River basin have been determined and are presented below. The first two are classifications developed from historical evidence and current Federal stream classifications. Classification 3 is based on field measurements, observations, and data analysis for the river. Classification 4 is based on review of all previously determined limits with a recommendation of the most upstream location with supporting evidence of navigability. The fifth classification accounts for all streams not otherwise classified and was determined based on the drainage area and hydrological aspects of the stream.

1. The Congaree River is presently classified "navigable waters of the U. S." between its mouth at the confluence with the Wateree River (R.M. 125.3) to the Gervais Street bridge in Columbia (R.M. 175.9).
2. The historical limit of navigation on the Congaree River is, with the use of the Columbia Canal, to R.M. 177. The classification extends beyond the Congaree basin boundary to the Broad River (see Report 15).
3. The recommended practical limit of navigation is at the Gervais Street bridge (R.M. 175.9). Reasonable channel improvements will be necessary for commercial river traffic to actually use the river up to this point.
4. It is recommended that the Congaree River be classified "navigable waters of the U. S." between its mouth at the confluence with the Wateree River (R.M. 125.3) to the Gervais Street bridge, U. S. 378 (R.M. 175.9) based on the analytical procedures and tests of navigability used in this study effort.
5. All streams not recommended for classification as "navigable waters of the U. S." are recommended for classification as "waters of the U. S." throughout their entire length.



LEGEND:

OVERHEAD STRUCTURE — 75' — HORIZONTAL CLEARANCE IN MAIN CHANNEL

12' — VERTICAL CLEARANCE TO STRUCTURE

MEAN WATER SURFACE — MAXIMUM DEPTH AT MEAN FLOW

STREAM BED — 8' (6') — MAXIMUM DEPTH OF 50 FOOT WIDE CHANNEL AT MEAN FLOW

STRUCTURE RIVER MILE LOCATION

NOTES:

1. ELEVATION AND SLOPE OF MEAN WATER SURFACE ARE BASED ON USGS TOPOGRAPHIC MAPS AND ARE THEREFORE ONLY APPROXIMATIONS. VERTICAL DIMENSIONS FROM STREAM BED TO OVERHEAD STRUCTURES ARE FIELD MEASUREMENTS. RELATIVE LOCATION OF MEAN WATER SURFACE IS APPROXIMATED FROM CONTOUR MAPS, MEASURED CROSS SECTIONS AND VELOCITIES, STREAM FLOW RECORDS, THE MANNING EQUATION, AND FIELD OBSERVATIONS. SEE SUMMARY REPORT FOR COMPLETE EXPLANATION.

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

PLAN AND PROFILE

CONGAREE RIVER

Congaree River Basin

CALHOUN-LEXINGTON-RICHLAND CO., S.C.

NAVIGABILITY STUDY

Miles 164.0-175.9 Plate 08-6

APPENDIX P

NOTIFICATION PLAN

NOTIFICATION PLAN

CONGAREE RIVER MODIFIED REMOVAL ACTION
COLUMBIA, SOUTH CAROLINA

May 2022

Prepared for:

Dominion Energy South Carolina, Inc.
400 Otarre Parkway
Cayce, Carolina 29033

Prepared by:

Apex Companies, LLC
975 Georges Station Road, Suite 100
Greensburg, PA 15601

NOTIFICATION PLAN

CONGAREE RIVER MODIFIED REMOVAL ACTION
COLUMBIA, SOUTH CAROLINA

INTRODUCTION

Dominion Energy South Carolina, Inc. (DESC), formerly South Carolina Electric and Gas Company (SCE&G), plans to complete a Modified Removal Action (MRA) to address the occurrence of a tar-like material (TLM) that is commingled with sediment along the eastern shoreline of the Congaree River, just south of the Gervais Street Bridge in Columbia, South Carolina. The project area location is shown on Figure 1 in Attachment A. The TLM is believed to be a coal tar material that originated from the Huger Street former manufactured gas plant (MGP) site, located approximately 1,000 feet to the northeast of the project area. The proposed work is being performed by DESC at the direction of South Carolina Department of Health and Environmental Control (SCDHEC) and is subject to permits and approvals from the U.S. Army Corps of Engineers (USACE) and other agencies.

The overall objective of this project is to remove impacted sediment from the Congaree River within two areas. The current plan is to construct temporary cofferdams around each area to facilitate removal of the impacted sediment. As currently envisioned, the temporary cofferdams will be constructed sequentially and the MRA will occur over several years. The construction and active remediation season will occur from approximately May through October of each year. Figure 2 illustrates the current site operations plan scenario and the landside support zone components. After each cofferdam is constructed, the isolated area will be dewatered, and the impacted sediment removed and transported off-site for disposal. Following completion of the removal activities in Area 1, the cofferdam will be removed, and a cofferdam will be constructed around Area 2. After the removal activities are completed in Area 2, the cofferdam materials will be removed from the river. Due to documented historical activities conducted in the vicinity of the project area, this project will include screening the planned cofferdam and sediment removal areas for potential Civil War era unexploded ordnance (UXO).

This Notification Plan describes various potential situations/site conditions and the planned response steps that DESC will undertake to notify regulatory agencies, emergency response agencies, local officials, and stakeholders of significant events that may occur during project implementation. Timely notification of appropriate agencies, officials and the general public is critical in certain situations to assure proper management of conditions that may result in significant interruptions or disturbances due to project activities, or potential violation of permit or approval conditions.

NOTIFICATIONS

This Plan contains a contact list of State and Federal agencies, City and County government officials, and project stakeholders that may be contacted should the project conditions identified below occur.

UXO-Related Conditions - On-Site Demilitarization

During the implementation of this project (and for contingency planning purposes), the UXO contractor may encounter Munitions and Explosives of Concern/Material Potentially Presenting an Explosive Hazard (MEC/MPPEH). The possibility of actually encountering MEC/MPPEH is considered unlikely. However,

consistent with the SCDHEC-approved UXO management plans, the UXO contractor may need to address the MEC/MPPEH in-situ or on-site using procedures described in the approved UXO management plans. In the unlikely event that detonation is required, the entities listed below in the "Type D Condition" will be notified in advance.

UXO-Related Conditions – Off-Site Demilitarization

In the unlikely event that MEC/MPPEH is encountered during implementation of this project and considered "safe to move," but not appropriate for demilitarization on-site, the UXO contractor will follow procedures set forth in the SCDHEC-approved UXO management plans. The UXO contractor will not transport any MEC/MPPEH off-site for demilitarization/disposal without first providing notifications to the entities listed in "Type D Condition" listed below. If MEC/MPPEH are required to be demilitarized off-site, procedures will include the UXO contractor reporting this to the DESC on-site representative and implementing explosive safety measures to secure the recovered munitions. The UXO contractor in conjunction with DESC will contact the Richland County Sheriff's Department bomb squad at (803) 576-3000 for assistance. If Richland County Sheriff's Department bomb squad cannot respond, DESC will request the Sheriff's Department to contact the South Carolina State Law Enforcement Division (SLED) for assistance with the munition. If SLED cannot support a response, DESC will request SLED to contact U.S. Military explosive ordnance disposal (EOD) to assist with the demilitarization of the item.

Other Project-Related Conditions

Other currently anticipated conditions that would require notification of the entities identified in this Plan include:

- **Type A** - Security breach (beyond that managed by on-site security);
- **Type B** – On-site medical emergencies;
- **Type C** - Significant traffic incidents (including loss of TLM material); and
- **Type D** - Catastrophic failure of cofferdam, water management system, on-site structures, or other critical operational assets.

The following Notification List is provided to identify category types for each contact:

Name	Contact Information	Type of Event Requiring Notification
SC Regulatory Agencies:		
SCDHEC **Bureau of Land and Waste Management** Greg Cassidy	803-898-0910	A, B, C, D
South Carolina State Historic Preservation Office Elizabeth Johnson	803-896-6168	A, C, D (applicable to historical preservation issues)
South Carolina Institute of Archeology and Anthropology Jim Spirek	803-576-6566	A, C, D (applicable to historical preservation issues)

Name	Contact Information	Type of Event Requiring Notification
Federal Regulatory Agencies:		
USACE Columbia Office Amy Cappellino	803-253-3992	A, B, C, D
City of Columbia:		
Emergencies	911	A, B
City Manager Teresa Wilson	803-545-3026	C, D
Columbia Traffic Engineering Robert Anderson	803-545-3782	C
Columbia Water (POTW Discharge) Gregory Tucker	803-545-4309	D (as appropriate)
Development Center (NPDES Permit) Krista Hampton	803-545-3483	D (as appropriate)
Richland County:		
Richland County Contact: Ombudsman's Office	803-929-6000	D (as appropriate)
Project Stakeholders:		
Congaree Riverkeeper Bill Stangler	803-760-3357	D
City Club Condos Homeowners Association Gordon M. Langston, President	803-312-2577	C, D
Guignard and Associates Charlie Thompson	803-254-2125 (office) 803-513-2660 (mobile)	A, C, D
Girl Scouts of America Lynn Arve	864-901-4089	C, D

ATTACHMENTS

A Figures

ATTACHMENT A

FIGURES

BROAD RIVER

INTERSTATE I-126

SALUDA RIVER

HUGER ST. FORMER MGP SITE LOCATION

GIST STREET

SENATE STREET

GERVAIS STREET BRIDGE

MRA REMOVAL AREAS

BLOSSOM STREET BRIDGE

Timmerman Bridge

St Peters Cem

Randolph Cem

ELMWOOD

Governors Mansion

HUGER

LAUREL

Howard Sch

Reservoirs

WT

Irwin Park

TAYLOR

Correctional Institution

CONGAREE RIVER

BDY

232

250

150

12

378

Powerplant

4 LANE

LEARY

LUCAS

ST

Saging Sta

RICHLAND

LEXINGTON

CO

Brookland Sch

AVE

200

2

6TH

DRIVE

Brookland-Cayce

PO

0 537 1,074 1,611 2,148

SCALE (APPROXIMATE)

FIGURE 1
DOMINION ENERGY
SOUTH CAROLINA, INC.

SITE LOCATION MAP

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

U.S.G.S. 7 1/2' TOPOGRAPHIC QUADRANGLES OF SOUTHWEST COLUMBIA AND COLUMBIA NORTH
DATED: 1972 REVISED: 1982

DATE: 06/18/19 FILE NAME: CONG523

APEX COMPANIES, LLC

LEGEND

– STREAM/RIVER/WETLAND EDGE
– TREELINE
– 5 FOOT CONTOUR INTERVALS
– REMOVAL AREAS FROM STAKEHOLDER DEVELOPED MRA PLAN
– SITE PERIMETER FENCE
– APPROXIMATE EXTENT OF GRAVEL AREAS
– APPROXIMATE LEASE AREA

NOTES:
1) LAND TOPOGRAPHY BASED ON LIDAR SURVEY CONDUCTED ON APRIL 18, 2018.
2) CONGAREE RIVER GAGE (02169500) HEIGHT DURING LIDAR SURVEY WAS 6.18' (119.20' ELEVATION NGVD 29).
3) RIVER BOTTOM CONTOURS BASED ON BATHYMETRIC SURVEYS CONDUCTED MAY 7 THRU JULY 17, 2018.

0' 180' 360'

N

GERVAIS STREET BRIDGE
GIST STREET
SENATE STREET
JOB TRAILERS
OFFICE AREA
GATE
SITE ACCESS ROAD
TEMPORARY STRUCTURE MATERIAL HANDLING AND STORAGE
STAGING AREA
ADDITIONAL OFFICE/STORAGE TRAILERS
PRIMARY SETTLING
POTENTIAL FILTERED WATER DISCHARGE POINT
AREA 1
ADDITIONAL SETTLING/STORAGE TANKS
CONTACT WATER TRANSFER LINE
FILTRATION UNITS
DISCHARGE TANKS
PROPOSED MEC STORAGE MAGAZINE
CONGAREE RIVER
AREA 2

FIGURE 2
DOMINION ENERGY
SOUTH CAROLINA, INC.

CONCEPTUAL SITE OPERATIONS PLAN

COLUMBIA, SOUTH CAROLINA

DATE: 3/8/21 FILE NAME: CONG604

APEX COMPANIES, LLC