Office of
Energy Projects

March 2017

Gulf South Pipeline Company, LP **Docket No. CP16-478-000**

St. Charles Parish Expansion Project

Environmental Assessment

Washington, DC 20426

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas Branch 3
Gulf South Pipeline Company, LP
St. Charles Parish Expansion Project
Docket No. CP16-478-0000

TO THE PARTY ADDRESSED:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared this Environmental Assessment (EA) of the St. Charles Parish Expansion Project (Project) proposed by Gulf South Pipeline Company, LP (Gulf South) in the above- referenced docket. Gulf South requests authorization to construct, operate, and maintain natural gas pipeline facilities in St. Charles and John the Baptist Parishes, Louisiana.

The proposed Project involves constructing and operating a new 5,000-horsepower compressor station, the Montz Compressor Station, and 900 feet of new 16-inch-diameter natural gas pipeline and other auxiliary appurtenant facilities. The Project would provide pressure management between Gulf South's existing 24-inch-diameter Index 270 pipeline and its existing 16-inch-diameter Index 270-94 lateral. The Project would allow Gulf South to provide up to about 0.13 billion cubic feet per day of natural gas to Entergy Louisiana, LLC's proposed natural gas-fired power plant in St. Charles Parish, Louisiana.

This EA assesses the potential environmental effects of the Project in accordance with the requirements of the National Environmental Policy Act of 1969. Through scoping and analysis of environmental information provided by Gulf South, the FERC staff concluded that the Project would not constitute a major federal action significantly affecting the quality of the human environment and that an EA is the appropriate NEPA format for consideration and disclosure of Project impacts.

The FERC staff mailed copies of this EA to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners within 0.5 mile of the Montz Compressor Station and other interested individuals and groups; and newspapers and libraries in the Project area. In addition, the EA is available for public viewing on the FERC's website (www.ferc.gov) using the eLibrary link.

A limited number of copies of the EA are also available for distribution and public inspection at:

Federal Energy Regulatory Commission
Public Reference Room
888 First Street, NE, Room 2A
Washington, DC 20426

Any person wishing to comment on the EA may do so. Your comments should focus on the potential environmental effects, reasonable alternatives, and measures to avoid or lessen environmental impacts. The more specific your comments, the more useful they will be. To ensure that your comments are properly recorded and considered prior to a Commission decision on the proposal, it is important that the FERC receives your comments in Washington, DC on or before **April 3, 2017.**

For your convenience, there are three methods you can use to submit your comments to the Commission. In all instances, please reference the project docket number (CP16-478) with your submission. The Commission encourages electronic filing of comments and has dedicated eFiling expert staff available to assist you at 202- 502-8258 or efiling@ferc.gov.

(1) You may file your comments electronically by using the eComment feature, which is located on the Commission's website at www.ferc.gov under the link to Documents and Filings. An eComment is an easy method for interested persons to submit text-only comments on a project;

(2) You may file your comments electronically by using the eFiling feature, which is located on the Commission's website at www.ferc.gov under the link to Documents and Filings. With eFiling you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on "eRegister." You will be asked to select the type of filing you are making. A comment on a particular project is considered a "Comment on a Filing"; or

(3) You may file a paper copy of your comments at the following address:

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

Although your comments will be considered by the Commission, simply filing comments will not serve to make the commentor a party to the proceeding. Any person seeking to become a party to the proceeding must file a motion to intervene pursuant to Rule 214 of the Commission's Rules of Practice and Procedures (Title 18 Code of Federal Regulations Part 385.214).[1] Only intervenors have the right to seek rehearing of the Commission's decision. Affected landowners and parties with environmental concerns may be granted intervenor status upon showing good cause by stating that they have a clear and direct interest in this proceeding that would not be adequately represented by any other parties. **You do not need intervenor status to have your comments considered.**

Additional information about the Project is available from the Commission's Office of External Affairs, at **1-866-208-FERC (3372)** or on the FERC website (www.ferc.gov) using the eLibrary link. Click on the eLibrary link, click on "General Search," and enter the docket number excluding the last three digits in the Docket Number field (i.e., CP16- 478). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at 1-866-208-3676, or for TTY, contact 1-202-502-8659. The eLibrary link also provides access to the texts of formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription, which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries, and direct links to the documents. Go to www.ferc.gov/docs-filing/esubscription.asp.

[1] Interventions may also be filed electronically via the Internet in lieu of paper. See the previous discussion on filing comments electronically

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St. Charles Expansion Project

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TECHNICAL ACRONYMS AND ABBREVIATIONS

AQCR	Air Quality Control Region
ATWS	Additional Temporary Work Space
BCC	Birds of Conservation Concern
Bcf/d	Billion cubic foot per day
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Commission	Federal Energy Regulatory Commission
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DOT	United States Department of Transportation
EA	Environmental Assessment
ECD	Erosion Control Device
EFT	Enhanced Firm Transportation
EI	Environmental Inspector
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
GHG	greenhouse gas
GWP	Global Warming Potential
HAPs	Hazardous Air Pollutants
hp	horsepower
HUC	Hydrologic Unit Code
IPaC	Information Planning and Conservation System
JPA	Joint Permit Application
LDEQ	Louisiana Department of Environmental Quality
L_{eq}	24-hour equivalent sound level
L_{dn}	day-night sound level
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
MP	Milepost
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969

TECHNICAL ACRONYMS AND ABBREVIATIONS

NGA	Natural Gas Act
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NO_x	Oxides of Nitrogen
NO_2	Nitrogen dioxide
NOI	Notice of Intent to Prepare an Environmental Assessment for the St. Charles Parish Expansion Project and Request for Comments on Environmental Issues
NNSR	Nonattainment New Source Review
NPS	National Park Service
NSA	Noise Sensitive Area
NSPS	New Source Performance Standards
NSR	New Source Review
OEP	Office of Energy Projects
$PM_{2.5}$	Particulate matter with a diameter of 2.5 microns or less
PM_{10}	Particulate matter with a diameter of 10 microns or less
Project	St. Charles Parrish Expansion Project
Secretary	Secretary of the Commission
SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
SPCC Plan	Spill Prevention, Containment, and Countermeasure Plan
Tpy	Tons per year
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geologic Survey

A. PROPOSED ACTION

1. INTRODUCTION

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared an environmental assessment (EA) for the construction and operation of certain natural gas pipeline and associated facilities proposed by Gulf South Pipeline Company, LP (Gulf South). We[1] prepared this EA in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA), Title 40 of the Code of Federal Regulations (CFR), Parts 1500-1508 (40 CFR 1500-1508), and FERC's implementing regulations at (18 CFR Part 380).

On July 11, 2016, Gulf South filed an application for a Certificate of Public Convenience and Necessity (Certificate) in Docket No. CP16-478-000 under Sections 7(c) of the Natural Gas Act (NGA) and Part 157 of FERC's regulations. Gulf South's St. Charles Parish Expansion Project (Project), as detailed below, consists of constructing natural gas transmission pipeline facilities in St. Charles and John the Baptist Parishes, Louisiana. The proposed Project involves the construction and operation of a new 5,000-horsepower (hp) compressor station, the Montz Compressor Station, and 900 feet of new 16-inch-diameter natural gas pipeline and other auxiliary appurtenant facilities. The Project would provide pressure management between Gulf South's existing 24-inch-diameter Index 270 pipeline and its existing 16-inch-diameter Index 270-94 lateral. The Project would allow Gulf South to provide up to about 0.13 billion cubic feet per day (bcf/d) of natural gas to Entergy Louisiana, LLC's (Entergy Louisiana) proposed natural gas-fired power plant in St. Charles Parish, Louisiana.

This EA is an important part of the Commission's decision on whether to issue Gulf South a Certificate to construct the proposed Project. The purposes for preparing this EA are to:

- identify and assess potential impacts on the natural and human environment which could result from the proposed action;
- identify and recommend alternatives and specific mitigation measures, as necessary, to avoid and minimize project related environmental impacts; and
- facilitate public involvement in the environmental review process.

[1] "We", "us," and "our" refer to environmental staff of the Office of Energy Projects.

2. PURPOSE AND NEED

The purpose of the Project is to provide pressure management between Gulf South's Index 270 and Index 270-94 pipeline systems and to meet a new customer's, Entergy Louisiana, required delivery pressure on the 24-inch-diameter Index 270 pipeline system in southeast Louisiana. The Project would provide up to about 0.13 bcf/d of Rate Scheduled Enhanced Firm Transportation of natural gas service to Entergy Louisiana's proposed power plant facility near Montz, Louisiana.

Under section 7(c) of the NGA, the Commission determines whether interstate natural gas transportation facilities are in the public convenience and necessity and, if so, grants a Certificate to construct and operate them. The Commission bases its decisions on technical competence, financing, rates, market demand, gas supply, environmental impact, long-term feasibility, and other issues concerning a proposed project.

2.1. Proposed Facilities

Gulf South proposes to construct approximately 900 feet of new 16-inch-diameter pipeline. The pipeline would commence at the proposed Montz Compressor Station and extend southeast to terminate at Gulf South's existing 270-94 Lateral in St. Charles Parish. The entirety of the pipeline would be collocated with Gulf South's existing Index 270 easement.

The Montz Compressor Station would be built on the border of St. Charles and St. John the Baptist Parishes. It would include two CAT 63608 reciprocating engines and Aerial JGK/6 compressor units and would be capable of providing a total of 5,000 horsepower of compression. The station would also include yard and station piping as well as auxiliary appurtenant facilities and buildings. A gas aftercooler would be installed on the discharge side of the compressor units to allow for gas cooling and operational flexibility. Other ancillary equipment includes an emergency generator, fuel gas heaters, condensate and oily water storage tanks, and jacket water cools. In addition natural gas venting would be installed for maintenance blowdowns and controls to allow for the remote start/stop/by-pass of the compressor unit and air compressors. The new compressor units would be housed in a permanent building. Also, security fencing would be installed around the outer perimeter of the station and two permanent access roads would be constructed. The general location of the project facilities is shown in figure 1 below.

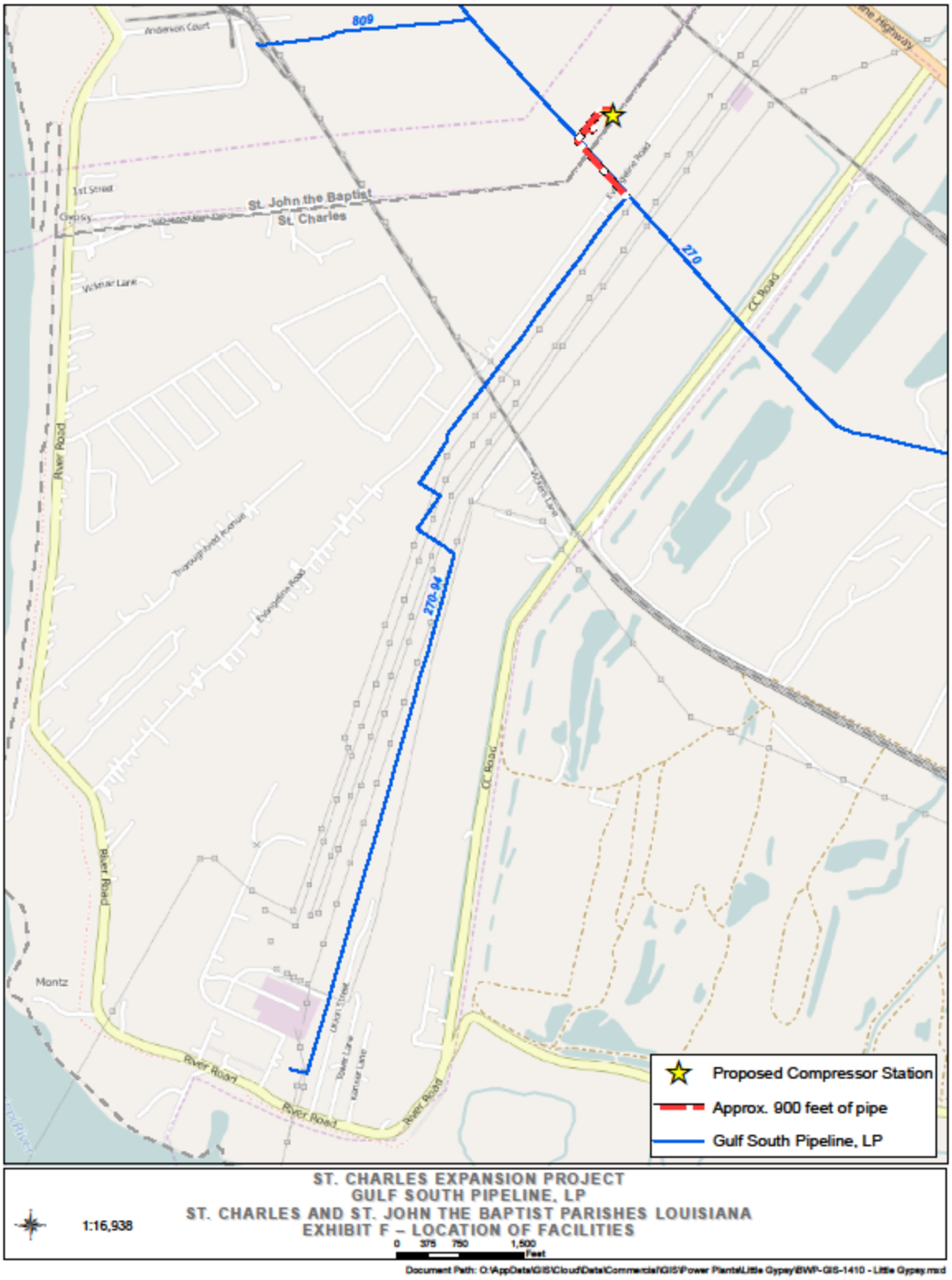

FIGURE 1: General Site Location

2.2. Non-Jurisdictional and 2.55(b) Facilities

Gulf South identified related facilities that would be constructed in conjunction with the Project. These facilities include both non-jurisdictional facilities that would be associated with the Project and jurisdictional activities that would be constructed under the Commission's 2.55(b) authority granted to Gulf South.

A tie-in and associated appurtenant facilities would be constructed at the terminus of the pipeline to connect and tie-in to Gulf South's existing Gulf South's Index 270-94 line. The 16-inch-diameter Index 270-94 lateral currently provides natural gas service to the existing Little Gypsy Power Plant. The line currently has approximately 80 feet of 12-inch-diameter pipeline that is tied into the Index 270 24-inch-diameter mainline with a 12-inch on 24-inch hot tap. The 12-inch-diameter pipeline expands to a 16-inch-diameter pipeline with the use of a reducing fitting. At this location Gulf South would cap the existing 12-inch-diameter tap at the block valve. In addition, Gulf South would remove certain yard and station piping as well as 80 feet of 12-inch-diameter pipeline from the existing Index 270-94 Lateral. This would be replaced with new 16-inch-diameter pipeline up to the new tie-in point. This would allow Gulf South to utilize pigging equipment for inspection and maintenance of the entire Index 270-94 lateral.

As stated in the response to FERC's August 8, 2016 Data Request, the activities surrounding the removal and replacement of 90 feet of 12-inch-diameter pipeline would be completed as a section 2.55(b) action.[2] All impacts associated with this activity would be located within the previously certificated workspaces at the Index 270-94 tie-in. The entire 12-inch tap, buried valve, and above grade hand-wheel would be removed. Gulf South would inspect and clean the entire lateral using in-line tools and would remove 90 feet of existing 12-inch-diameter pipeline at this location. This 12-inch-diameter pipeline would be replaced with 16-inch-diameter pipeline to maintain a uniform pipe diameter for the full length of the Index 270-94 lateral.

[2] Activities allowed under Section 2.55(b) of the NGA are replacements that involve only basic maintenance or repair to relatively minor facilities, and where the existing Certificated right-of-way or previously approved workspaces that were used to construct the original facilities is sufficient for these replacement activities. The work must comply with all environmental restrictions of the original Certificate as well as other applicable federal and state laws.

These abandonment activities would occur prior to the construction of the remainder of the Project. The impacts associated with the abandonment construction would be temporary as all facilities associated with the construction would be below ground and the existing grade would be fully restored. Even though these facilities are not part of the proposed action considered in this EA, these minor facilities share workspaces with the construction areas affected by the Project. Consequently, we have included these impacts in our environmental analysis.

Under Section 7 of the NGA, the Commission is required to consider, as part of the decision to approve facilities under Commission jurisdiction, all factors bearing on the public convenience and necessity. Occasionally, proposed projects have associated facilities that do not come under the jurisdiction of the Commission.

The non-jurisdictional facilities for the Project would include a new electrical power line, a water pipe, and a septic tank at the Montz Compressor Station. The electrical power would be provided by Entergy Louisiana. The water service would be provided by St. Charles Parish Department of Waterworks. A septic tank would be installed within the permanent compressor station footprint.

Approximately 600 feet of three-phase electric power line would be added and would run from an existing power line that runs parallel to the west side of Evangeline Road. An easement would be provided for the electrical service as required. The overhead power line would extend from a drop at Evangeline Road along the 10 foot easement adjacent to the southern permanent access road to a transformer within the Montz Compressor Station facility. A new 650-foot-long utility water pipe would be connected to an existing municipal water pipe that runs parallel to Evangeline Road. This pipe would extend to the southeastern side of the compressor station and would be parallel to and within the power easement.

The power line, water line, and septic tank are private construction projects under state and local jurisdiction. The land use in these areas include forested lands, open land, wetlands, and developed land. Each provider would obtain all necessary permits and approvals prior to construction of the non-jurisdictional facilities.

The Project facilities considered for authorization in this EA do not include these non-jurisdictional facilities. However, the non-jurisdictional facilities would all be installed within areas affected by the proposed footprint of the Project. Consequently, the resource areas and impacts described in this EA would overlap the impacts of the non-

jurisdictional facilities. The non-jurisdictional activity impacts are considered in Section B.10 Cumulative Impacts.

3. LAND REQUIREMENTS

Construction of the project would require 13.3 acres of land and would result in temporary and permanent impacts. Following construction, approximately 9.8 acres of land would be restored to pre-construction conditions. Approximately 3.5 acres of land would be permanently affected and includes the new permanent pipeline right-of-way, the Montz Compressor Station, and two permanent access roads.

The Montz Compressor Station would be constructed on forested land located approximately 2.3 miles northeast of Montz, Louisiana. Gulf South would acquire and own the land parcels for both the station construction and operation. Construction of the Montz Compressor Station would require a total of approximately 6.0 acres and operations would require 2.2 acres.

Constructing the new pipeline would require the use of a 100-foot-wide construction corridor. Following construction a permanent easement centered on the pipeline would be retained. However, this permanent easement would overlap with Gulf South's existing easement by approximately 35 feet resulting in an increase of the existing permanent easement of only 35 feet. The pipeline replacement would be co-located with existing easements for the entire 900 feet. Table 1 below summarizes the land requirements for the project.

Table 1: Land Requirements of the Project		
Facility	**Land Affected During Construction (acres) [a]**	**Land Affected During[b] Operation (acres)**
Pipeline Facilities		
16-inch Pipeline	1.8	0.72
Index 270-94 Tie-in	4.9	0.00
Subtotal	**6.7**	**0.72**
Aboveground Facilities		
Montz Compressor Station	6.0	2.2
Access Roads	0.62	0.62
Subtotal	**6.6**	**2.8**
PROJECT TOTAL	**13.3**	**3.5**

[a] Land affected during construction is inclusive of operation impacts (permanent).

[b] Land affected during operation consists only of new permanent impacts.

[c] Temporary workspace is included with the pipeline acreage as all workspaces are within the existing right-of-way

4. PUBLIC REVIEW AND COMMENT

On August 24, 2016, FERC issued *a Notice of Intent to Prepare an Environmental Assessment for the Proposed St. Charles Parish Expansion Project and Request for Comments on Environmental Issues (NOI).* The NOI was mailed to interested parties; including federal, state and local officials; agency representatives; Native American tribes; and potentially affected property owners within 0.5 mile of the Montz Compressor Station. Environmental comments were received in response to the NOI and the Commission's Notice of Application issued on July 18, 2016 from the United States Environmental Protection Agency (EPA) and the Choctaw Nation of Oklahoma. The primary issues raised by the EPA include air quality, wetlands, environmental justice, and tribal consultations. These issues are discussed in the appropriate resource discussions included in section B of this EA. The Choctaw Nation of Oklahoma requested to be a consulting party on the Project and also requested copies of the EA and any cultural resource survey reports. This comment is addressed in section B.6.

5. PERMITS, APPROVALS, AND REGULATORY CONSULTATIONS

Gulf South would obtain all necessary federal, state, and local permits, licenses, and clearances related to the construction of the Project. Table 2 identifies the other federal and state agencies that have relevant permitting requirements for the project.

Table 2: Federal and State Permits and Approvals			
Agency or Organization	**Permit/Approval**	**Submittal/ Anticipated Submittal**	**Receipt/*Anticipated Receipt***
Federal			
U.S. Army Corps of Engineers – New Orleans District	Section 404 Permit: Joint Application for a Coastal Use Permit (Individual) and USACE Programmatic General Permit (Category I)	July 15, 2016	*1st Quarter 2017*
U.S. Fish and Wildlife Service Louisiana Ecological Field Office	Endangered Species Act, Section 7; Migratory Bird Treaty Act Consultation	July 6, 2016	August 1, 2016
State			
Louisiana Department of Natural Resources– Office of Coastal Management	Section 404 Permit: Joint Application for a Coastal Use Permit (Individual) and USACE Programmatic General Permit (Category I)	July 15, 2016	*1st Quarter 2017*
Louisiana Department of Environmental Quality	Clean Water Act Section 401 Water Quality Certification (automatic with Section 404 Permit)	July 15, 2016	*1st Quarter 2017*
	Hydrostatic Test Water Discharge Permit (LAG-67)	Notification to be provided prior to discharge in accordance with Gulf South's Statewide General Permit	N/A
	State Air Permit	July 7, 2016	*1st Quarter 2017*
Louisiana Department of Wildlife and Fisheries	Threatened and Endangered Species Consultation/Clearance	July 6, 2016	November 3, 2016
Louisiana Office of Cultural Development Division of Historic Preservation	National Historic Preservation Act Section 106 Consultation	July 1, 2016	July 12, 2016

6. CONSTRUCTION PROCEDURES

Gulf South would adhere to the terms and conditions of applicable federal and state permits obtained for the Project. Construction and restoration activities would be conducted in accordance with the measures contained in the requirements of Gulf South's *Upland Erosion Control, Revegetation and Maintenance Plan* (Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures). Gulf South's Plan and

Procedures incorporates the requirements of the Commission's Plan and Procedures.[3] Gulf South requested two site-specific deviations from the Procedures which are presented in table 3 below.

Table 3: Site-Specific Deviations to the FERC Plan and Procedures

Waterbody or Wetland	Section of Plan and Procedures	Deviations to FERC Plan and Procedures	Justification	Equal Compliance Measures
N/A	Plan Section IV.A.2	Construction corridor of 100'	Necessary to accommodate construction within wet and unconsolidated soils where wider trenches and spoil piles are necessary to provide for safe and efficient construction of the 16-inch pipeline.	N/A
WP3003_PFO and WP3001_PFO	Procedures Section VI.A.3	Construction corridor of 100' within wetlands	Additional workspace needed for topsoil storage in unsaturated wetlands, wider trench excavation, and to create a stable surface for equipment during construction in saturated conditions.	Topsoil to be segregated in unsaturated wetlands; temporary timber mats to be installed where necessary to create a stable surface for equipment; trench plugs to be installed at the edges of wetlands to prevent subsurface drainage; and erosion controls to be implemented as needed to control sedimentation until disturbed soils are adequately stabilized and adjacent upland areas are restored.

To clarify its requested deviations, Gulf South states that the soil type present at the Site is Cancienne silt loam. These soils are level and poorly drained with water and air moving through the soil at moderately low rates. Water runs off the surface of this soil type for long periods of time after heavy rains and the soils are rated "somewhat limited" for their suitability for shallow construction due to wetness, low soil strength, and moderate shrink-swell potential. As such these soils cannot safely support loads. To

[3] Copies of our Plan and Procedures are available for review on the FERC website (www.ferc.gov) under the environmental guidelines for the natural gas industry at: http://www.ferc.gov/industries/gas/enviro/guidelines.asp.

ensure safe working conditions, Gulf South stated that work in this soil type would require additional space to manage saturated soils from rain events. As the soil saturation increases, the soils may lose their cohesiveness which may result in trench-wall loss, a reduction in vehicle travel zones, or impacts to stockpiling activities. Based on this information, we find the above mentioned modifications in table 3 acceptable.

6.1. Construction

Pipeline Construction

Typical pipeline construction consists of specific activities that make up a linear construction sequence. First, Gulf South would conduct a standard survey and stakeout to identify the right-of-way and workspace boundaries and to locate any existing foreign utility lines within the right-of-way. Following the survey, Gulf South would clear and grade the construction right-of-way. Large obstacles, such as trees, rocks, brush, and logs would be removed. Fences, erosion control devices (ECD) and other environmental and safety measures would be installed (and maintained) in accordance with Gulf South's Plan and Procedures, all applicable permits, and landowner agreements. As necessary in agricultural and residential areas, segregated topsoil would be stockpiled, usually along one side of the construction corridor.

After clearing and grading the construction right-of-way, a trench would be excavated to a depth of approximately seven feet allowing for a minimum of three feet of soil cover above the top of the pipeline. Pipeline joints would then be strung alongside the trench. Depending on workspace availability some pipe may be fabricated off-site and be transported to the right-of-way in different lengths or configurations. The pipe will be bent by hydraulic bending machines as necessary. Once along the right-of-way the pipe lengths will be aligned, the bends fabricated, and the joints would be welded together. All the welds would be coated for corrosion protection and visually and radiographically inspected.

Once the pipeline is lowered in, the trench would be backfilled using previously excavated materials and if necessary, clean fill. The trench would be backfilled to grade or a small crown of material, approximately six inches, would be left over the trench line to account for potential soil settling.

After backfilling the trench, the pipeline would be hydrostatically tested to ensure its integrity. The test would be performed in accordance with the requirements of US

Department of Transportation (DOT) pipeline safety regulations, 49 CFR 192, Gulf South's testing specifications, and applicable permits.

Hydrostatic test water would be withdrawn and discharged in accordance with the applicable permits and Louisiana Department of Environmental Protection (LADEP) regulations. A chloride reducer may be used as the water would come from a municipal source. The test water would only be in contact with new pipe and any biocides or other chemical additives would be used in accordance with applicable federal state, and local regulations.

Appropriate energy dissipating devices, containment structures and/or other measures would be implemented as necessary to minimize erosion and sedimentation at the discharge point. Following the pipeline installation and hydrostatic testing, disturbed areas would be restored and graded to pre-construction contours as closely as possible. Permanent ECDs would be installed as appropriate and revegetation measures would be implemented. Gulf South would monitor disturbed areas for successful revegetation.

During operation, maintenance of the permanent pipeline right-of-way would be necessary to allow for visibility and access for pipeline monitoring and maintenance activities. In upland areas, the permanent right-of-way would be 35 feet wide. The entire right-of-way would be mowed every 3 years, and a 10-foot-wide corridor centered on the pipeline could be mowed at a frequency necessary to allow for periodic pipeline surveys. In wetlands, maintenance of the permanent right-of-way would be limited to a 10-foot-wide corridor that may be cleared at a frequency necessary to allow for periodic pipeline surveys. In addition, trees that are located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way in wetlands.

Aboveground Construction

To construct the Montz Compressor Station, Gulf South would clear, grade, and level the Project site and compact the soils for the construction of the building foundations. ECDs would be installed where necessary in accordance with Gulf South's Plan and Procedures. Any soils excavated for the foundations would be compacted and any excess soils would be used elsewhere on site or disposed of at an approved offsite location. All facility foundations would be installed on piles and high strength concrete (reinforced as necessary) would be used for building foundations associated with the major compressor equipment. Fencing would then be constructed around the station and disturbed areas within the permanent footprint that are not covered with gravel or asphalt would be graded, restored, and seeded.

All station piping would be hydrostatically tested following construction but prior to being placed into service. As mentioned above, the test would be performed in accordance with the requirements of DOT pipeline safety regulations, 49 CFR 192, Gulf South's testing specifications, and applicable permits.

6.2. Special Pipeline Construction Procedures

Waterbody Crossings

Gulf South proposes to use conventional open-cut crossings (wet crossings) during construction of the Project. In addition, two waterbodies would be crossed by conventional bore.

Conventional Open-Cut Method

The conventional open-cut method is similar to the typical pipeline construction procedures described above. This method includes excavating the pipeline trench across the waterbody from the banks, installing a prefabricated segment of pipeline, and backfilling the trench with native material. Dependent on the width of the crossing and how far excavating equipment can reach, the excavation and backfill of the trench would be accomplished from one or both banks of the waterbody. As required in its Procedures, Gulf South would maintain flow at all times. The pipe segment would be weighted as necessary. Except at field drains and roadside ditches the pipeline would be installed with a minimum of 5 feet of cover, unless otherwise required by applicable federal, state, or local permits. Following backfilling, Gulf South would restore contours, and stabilize the

banks via seeding and/or the installation of erosion control matting. The trench would be excavated immediately before pipeline installation and completed within 24 hours. Excavated materials would be stored at least 10 feet from the edge of the waterbody and Gulf South would install temporary ECDs to prevent the material from entering the water.

Wetland Crossings

Gulf South proposes to use conventional lay or push/float methods during construction in wetlands in accordance with its Procedures. The specific crossing procedures used to install the pipeline across wetlands would depend on the level of soil stability and saturation encountered during construction. With either method Gulf South would mark the right-of-way during construction. In addition, operation of construction equipment through the wetlands would be limited to only the necessary amounts of passes for each stage of installation. All disturbed wetlands would be monitored post-construction. No refueling would occur within 100 feet of wetlands unless approved by the Environmental Inspector (EI).

Conventional Lay

Construction across unsaturated wetlands that can support the weight of equipment would be conducted in a manner similar to the upland construction procedures. However, topsoil would be utilized to preserve the seed bank and to allow for success restoration. In areas that are proposed for conventional open trench construction, but where soil conditions may not support the weight of equipment, construction mats would be used to minimize disturbance to wetland hydrology and maintain soil structure.

Push/Float

The push/float method would be used in inundated lowland or saturated wetland areas and in areas that have a sufficient amount of water that would allow the pipeline to be floated in an open trench. This method involves the excavation of a trench using low-ground weight equipment which limits grubbing and grading activities over the trench line or on the working side of the right-of-way. No topsoil segregation would be implemented where there is standing water or soil inundation during construction.

To complete the push/float method a coated and weighted pipe would be welded at a staging area and floats would be attached. The welded pipe would be pushed along the water-filled trench until it is in place. Then the floats would be cut and the pipe would

sink. Any required staging would occur within the construction right-of-way. If temporary workspace is required Gulf South would ask for approval prior to construction.

Woody vegetation would be cut at ground level and removed, leaving the root systems intact. The pulling of tree stumps and grading activities would be limited to the area directly over the trench line unless it is determined that safety-related construction constraints require grading or the removal of stumps from the working side of the right-of-way. Temporary ECDs would be installed as necessary after initial disturbance of wetlands or adjacent upland areas to prevent sediment flow into wetlands. Trench plugs would be installed as necessary to maintain wetland hydrology. Construction equipment operating in wetlands would be limited to that needed to clear the right-of-way, dig the trench, install the pipeline, backfill the trench, and restore affected lands.

Materials such as timber mats placed in wetlands during construction would be removed during rough grading and final clean-up, and the preconstruction contours of the wetland would be restored. Permanent erosion control measures would be installed. Wetlands would then be allowed to return to preconstruction conditions using the original seed stock contained in the conserved topsoil layer.

Road Crossings

Evangeline Road, two adjacent water body crossings, and the adjacent buried water utility line would be crossed via the use of a subsurface bore. Construction at the road crossing would be conducted in one day. A minimum of 5 feet of cover at the road crossing and 4 feet of cover at the side borrow/drainage ditch crossings would be maintained. Gulf South would add additional cover in accordance with all federal, state, or local regulations for pipeline crossings. In addition, Gulf South would install cathodic protection test stations in proximity to all public roads.

Prior to construction, Gulf South would meet with representatives of the foreign water utility line to inform them of the Project, to obtain their requirements for the crossing, and to solicit cooperation in facilitation a safe crossing. A minimum of 18 inches would be maintained between the utility line and the pipeline. In addition, mechanical excavation will be limited in proximity to any existing pipelines being crossed. Gulf South would have inspectors present to monitor crossing installations and foreign utility operators would be able to have a representative on-site. Should a utility line be damaged, Gulf South would stop work immediately and notify all appropriate personnel and local first responders.

During construction open bore pits may accumulate water from groundwater seepage or from precipitation. Pumps would be used to dewater the bore pits and would transport water to vegetated upland areas. The water would be discharged through filter bags and/or energy dissipation devices.

The boring machine would then be lowered into one pit and a horizontal hole would be bored to a diameter slightly larger than the diameter of the pipe at the depth of the pipeline installation. The pipeline section would then be pushed through the bore to the opposite pit. If additional sections are required to span the length of the bore they would be welded to the first section of pipeline in the bore pit before being pushed through.

A construction entrance would be installed where the construction corridor or access intersects public paved roads. Trenches would be fenced or covered with steel plates during non-working hours. In addition, temporary and permanent ECDs would be installed to prevent sediment from being washed onto roads during a rain event.

Blasting

Gulf South does not expect blasting to be necessary for the Project. Blasting would be required if bedrock less than 5 feet from the surface was encountered during construction; however bedrock in the Project area occurs at a much greater depth.

7. ENVIRONMENTAL INSPECTION AND MONITORING

Gulf South has committed to training company and contractor personnel to familiarize them with environmental requirements, and would provide at least one EI, with additional EIs as necessary, and a Chief Inspector to monitor compliance during construction. Additionally, Gulf South would provide copies of permits, its Plan and Procedures, and other environmental documents to selected contractors prior to construction. In addition, Gulf South would require selected contractors to install facilities according to Gulf South's specifications, the Construction Drawing Package, the terms of the negotiated contract, and all applicable permits and clearances.

Gulf South's EI would have the authority to enforce permit and consideration and comments from the FERC consistent with the duties as specified in its Plan. These duties include ensuring compliance with environmental conditions in the FERC Certificate, Gulf South's designs and specifications, and other permits or authorizations. The EI would also direct and oversee environmental compliance at all certificated facilities.

Gulf South would conduct post-construction monitoring to document restoration and revegetation of the right-of-way and other disturbed areas. Gulf South would monitor wetlands for a period of 3 years or until revegetation is successful in accordance its Procedures. Gulf South would also monitor upland areas after the first and second growing seasons following restoration or until revegetation is successful in accordance with the plan.

8. OPERATION AND MAINTANCE

The project facilities would be designed, constructed, tested, operated, and maintained in accordance with DOT Minimum Federal Safety Standards presented in 49 CFR Part 192. The DOT's regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures. Part 192 specifies material selection and qualification, minimum design requirements, and protection from internal, external, and atmospheric corrosion.

9. FUTURE PLANS AND ABANDONMENT

Gulf South has indicated no plans for abandonment of the Project. If and when a future abandonment or modification is required, Gulf South would need to file an application. The environmental impact of the proposal would be examined at that time in compliance with NEPA.

B. ENVIONMENTAL ANALYSIS

1. GEOLOGY AND SOILS

1.1 Geology

Geologic Setting

The Project is located within the Mississippi Alluvial Plain section of the Coastal Plain Physiographic Province. The Mississippi Alluvial Plain section is characterized by flat alluvial plains, which were formed by the depositions of sediments into a submerged troughs that were then exposed due to sea level subsidence. The Project facilities are located within the Natural Levees geologic formation of the Coastal Plain Physiographic Province from the Cenozoic period. The primary lithology of the region is silt, and the secondary lithology is clay and mud, and the formation is characterized by gray and brown silt, silty clay and some very fine sand (USGS, 2015). The topography across the Project area is generally flat to gently sloping. The elevation of the Project area ranges from 0 to 5 feet above sea level. No bedrock is expected to be encountered within the Project area.

Existing Mineral Resources

According to the Louisiana Department of Natural Resources, Strategic Online Natural Resources Information System, there are eight oil and gas wells located within 1 mile of the Project; however, seven of these wells are “dry and plugged,” and one the permit has expired. There is a small active gravel pit located within 1 mile of the Project area, but it will not be affected by construction or daily operation of the Project facilities (USGS, 1992). There are no other natural resource mines within 1 mile of the Project (USGS, 2016). This Project would not affect mineral resources.

Geologic Hazards

Geologic hazards are naturally occurring physical conditions that are capable of producing property damage and loss of life. Typically, these potential hazards could include seismic related issues such as ground rupture due to faulting, strong ground shaking, liquefaction, subsidence, slope stability and landslides, flash floods, and karst terrain. These conditions are discussed below.

Seismicity

Historically, there is very little seismic activity in the Project area. There are no active faults near the Project area. Because of the lack of active faults and earthquake activity in the area, the risk of soil liquefaction is unlikely, as the most common stress to cause soil liquefaction is seismic activity (Louisiana Geological Survey, 2001). Due to the overall low risk of earthquake activity in the region, the risk to the proposed facilities is expected to be very low. Given these conditions, we conclude that there is a low potential for damage due to prolonged ground shaking, ground rupture, or soil liquefaction to occur within areas of the Project.

Landslides and Slope Stability

Landslides involve the down-slope movement of earth materials under the force of gravity due to natural or man-made causes such as removal of vegetative cover, triggered by events such as prolonged rainfall saturating soil conditions. Landslide susceptibility mapping by the U.S. Geological Survey (USGS) (1997) delineates areas that are susceptible to landslides and areas where landslide events (incidence) have occurred (USGS, 2014b). The Project area is generally flat with low landslide potential or slope instability.

Flooding

Flooding associated with heavy rainfall can occur throughout the majority of the Project area. The Project could be affected by flash flooding due to its proximity to streams, rivers, or nearby waterbodies. According to the Federal Emergency Management Agency (FEMA), the Project is located within the 100-year floodplain (FEMA, 2016).

The installation of impervious surfaces within floodplains can alter the hydrology of an area during a flood event; however, the area of impervious surfaces associated with installation of the aboveground facilities in floodplains is minor and not anticipated to adversely impact the flood storage capacity of the floodplains. The project would displace approximately 15,000 cubic feet of flood storage capacity. Gulf South would obtain all necessary permits and/or approvals from federal, state, and local authorities for construction within the floodplain.

Aboveground facilities would be designed to protect against damage due to high winds, water, and erosion resulting from hurricanes.

Flooding could increase the buoyancy of the pipeline, causing the pipe to rise toward the land surface where they may be exposed; however, the pipeline would be sub-surface and is not anticipated to alter the floodplain areas. The Montz Compressor Station would be constructed above the natural grade and would meet or exceed federal, state, and local standards. Project facilities are not anticipated to be affected by flooding.

Paleontological Resources

Project activities associated with the proposed tie-in and tap facilities would occur within areas that have been previously disturbed and would only require minor amounts of excavation. In addition, shallow bedrock is not present within the Project area; therefore paleontological resources are not expected to be affected by the Project (National Resource Conservation Service [NRCS], 2016). In the unlikely event that paleontological resources are discovered during construction at any of the proposed Project locations, Gulf South would temporarily cease excavation in the area and would notify the relevant local and state agencies as well as the FERC. Based on this, we conclude there would be no impact on paleontological resources.

1.2 Soils

Based on information from the NRCS's Web Soil Survey, there is only one soil type, Cancienne series, within the Project area. These soils consist of level to gently undulating, very deep, and somewhat poorly drained mineral soils that are moderately slowly permeable. The majority of these soils are used for growing crops such as sugar cane, corn, soybeans, and wheat.

The soil encountered at the project is Cancienne silt loam, 0 to 1 percent slopes. This soil is identified as prime farmland and has a high soil rutting hazard. In addition, the Cancienne silt loam, 0 to 1 percent slopes soil unit reportedly has a low erosion potential, does not exist on steep slopes, does not have unconsolidated rock 50 inches or less from the surface, and has a moderate re-vegetation potential. Lastly this soil has a high compaction potential and a low erosion potential.

Prime Farmland

The USDA defines prime farmland as land that is best suited for food, feed, fiber, and oilseed crops. This designation includes cultivated land, pasture, woodland, or other lands that are either used for food or fiber crops or are available for these uses. Urbanized land and open water are excluded from prime farmland. Prime farmland typically contains few to no rocks, is permeable to water and air, is not excessively erodible or saturated with water for long periods, and is not subject to frequent, prolonged flooding during the growing season. Soils that do not meet the above criteria may be considered prime farmland if the limiting factor is mitigated.

The entire Project area is classified as prime farmland, and areas within the permanent compressor station facility fence line and along the permanent access roads would be permanently converted to industrial uses following the completion of construction. The land on which the Project is located is not currently being farmed. Permanent impacts on prime farmland associated with any of the Project sites considered would represent less than 1% of the total area of prime farmland present within St. John the Baptist and St. Charles parishes. Therefore, no adverse impacts on the availability of prime farmland are anticipated to occur as a result of the Project.

Soil Rutting and Compaction

If construction activities, particularly the operation of heavy equipment, occur when soils are saturated, soil compaction and rutting could occur. Gulf South would minimize rutting and compaction by paying particular attention to areas that are vulnerable to these types of impacts. In general, rutting and compaction of soils would be avoided or minimized through the use of timber mats, as deemed necessary during construction. Also, compaction would be minimized through the implementation of the construction and restoration measures outlined in Gulf South's Plan and Procedures. These include the segregation of topsoil/subsoil/hydric soil, the use of timber mats in wetlands, preparation of a proper seed bed prior to seeding, revegetating the right-of-way with seed mixes suitable for the area, and conducting follow-up inspections to evaluate the success of revegetation efforts.

Soil Erosion

Characterization of erosion potential includes both water and wind as agents of erosion. Clearing, grading, and equipment movement can accelerate the erosion process and, without adequate protection, result in discharge of sediment to waterbodies and wetlands. Soil loss due to erosion could also reduce soil fertility and impair revegetation. The soil within the Project area lacks steep slopes and has a high compaction rating, with low erosion potential.

To minimize or avoid potential impacts due to soil erosion and waterbody sedimentation, Gulf South will utilize sediment and erosion controls that will be implemented in accordance with Gulf South's Plan and Procedures. Temporary erosion controls, including interceptor diversions and sediment filter devices, such as silt fences, would be installed immediately following land disturbing activities, as required and as needed. Some areas may require the installation of controls prior to or directly after clearing, based on the techniques utilized in the field. These areas would be evaluated accordingly prior to construction. Temporary erosion control devices would be inspected on a regular basis and after each rainfall event of 0.5 inch or greater to ensure proper functioning.

During construction, the effectiveness of temporary erosion control devices would be monitored by Gulf South’s environmental inspector, and the effectiveness of revegetation and permanent erosion control devices will be monitored by Gulf South operating personnel during the long-term operation and maintenance of the Project facilities. Temporary erosion control devices would be maintained until the Project area is successfully revegetated. Following successful revegetation of construction areas, temporary erosion control devices will be removed.

Inadvertent Spills or Discovery of Contaminants

There are no contaminated sites that are crossed or located within 0.5 mile of the Project area. During construction, contamination from accidental spills or leaks of fuels, lubricants, and coolant from construction equipment could adversely impact soils. The effects of contamination are typically minor because of the low frequency and volumes of spills and leaks. Gulf South will implement their SPCC Plan that specifies cleanup procedures in the event of soil contamination from spills or leaks of fuel, lubricants, coolants, or solvents. Gulf South and its contractors would implement the SPCC Plan to

prevent and contain accidental spills of any material that may contaminate soils, and to ensure that inadvertent spills of fuels, lubricants, or coolants are contained, cleaned up, and disposed of in an appropriate manner.

It is also possible that localized pre-existing evidence of contamination may be encountered during construction of the Project. As such, Gulf South would adhere to its Plan for the Unanticipated Discovery of Contaminated Environmental. This plan identifies the steps to be followed in the event that contaminated sediments or soils, as identified by evidence of subsoil discoloration, odor, sheen, or other such indicators, are encountered during construction

2. WATER RESOURCES

2.1 Groundwater

The Project would be underlain by the principle Coastal Lowlands aquifer system. This aquifer extends from east Texas to Florida. Within the Project area the average depth to water is 350 to 383 feet and wells have an average yield of 22 to 3,460 gallons per minute (USGS 2015b, 2015c). The Project is underlain by the Shallow Aquifers of the New Orleans Area. These are very shallow and discontinuous aquifers and have been reported to be up to 140 feet thick. The aquifers consist of near surface beds of sand and have poor quality water that is subjected to salt water. Water wells in the Project area do not draw from these aquifers (USGS 2003, SONRIS, 2016).

The Chicot Equivalent aquifer system and the Southeast Louisiana aquifer system underlay the Shallow Aquifers of the New Orleans system. These are regionally extensive aquifers which consist of Pleistocene alluvial and terrace deposits and Miocene sediments that outcrop in the southwestern Mississippi. The Chicot Equivalent aquifer is recharged by rainfall, by movement of aquifers in the system, and by movement between aquifers and the Mississippi (Louisiana Department of Environmental Quality [LDEQ], 1996).

Directly underneath the Shallow Aquifers of New Orleans in the Project area is the Norco aquifer. This aquifer is characterized by fine sand in the upper part and coarse sand in the lower. It also contains freshwater near the border of St. Charles and St. John the Baptist parishes with groundwater between 290 and 425 feet in St. John the Baptist Parish (USGS, 2003; 2015a) and 320 to 460 feet in St. Charles Parish (USGS, 2015c).

The primary drinking water source in St. John the Baptist Parish in the area of the Project is groundwater. However, this groundwater is withdrawn from the Covington aquifer. The Project is not underlain by this aquifer (St. John the Baptist Parish, 2015). The drinking water for St. Charles Parish is obtained from the Mississippi River (St. Charles Parish, 2016).

The Project would not be underlain by any Environmental Protection Agency (EPA) -designated Sole Source Aquifers. No springs or public or private drinking wells were identified within 150 feet of the Project area (EPA, 2015). In addition, the Project would not be located in a wellhead protection area (SONRIS, 2016; LDEQ, 2016a).

The Project crosses a buried water line via a conventional bore. Should the buried water line be damaged, Gulf South would provide a temporary water source until the damages could be repaired and the water line is restored to its capacity. This water source would likely entail the use of water trucks. If water system repairs are needed, Gulf South would obtain a water permit from the municipal water supplier. This water supplier is managed by the St. John the Baptist Parish Utilities Department.

Impacts on groundwater could occur during construction of the Project. These include impacts on the overland water flow and recharge of shallow aquifers due to the construction of the compressor station and other aboveground facilities. In addition clearing of vegetation, excavation, and soil compaction could impact the infiltration rate of water into the ground which could impact vegetation.

To minimize impacts from clearing, Gulf South would only clear vegetation where necessary. In addition, vegetation would be allowed to regenerated following construction completion in accordance with its Plan.

Surface hydrology and water table elevations may be affected by excavation activities if proper soil segregation techniques are not used. In addition, water tables may be affected due to soil compaction from heavy equipment. To minimize these impacts, Gulf South would return soil grades to near their natural state. Gulf South would also de-compact soil during restoration.

No leaking underground storage tanks or other sources of groundwater contamination were identified within a half mile of the Project (LDEQ, 2016b). Inadvertent fuel and hazardous materials spills could potentially impact groundwater.

However, Gulf South would implement measures contained in its SPCC Plan and in its Plan and Procedures to avoid and minimize these impacts.

We conclude that with implementation of Gulf South's proposed construction procedures and mitigation measures, the Project would not have a significant impact on existing groundwater resources.

2.2 Surface Water Resources

The Project would be located within the Lake Maurepas watershed. The primary source of drinking water for St. Charles Parish is the Mississippi River. Drinking water is obtained from two surface water intakes. The primary public water supply sources in St. John the Baptist is surface water and groundwater resources. However, the majority of the water sources within the Project area are wells.

Sensitive surface waters include: waters that do not meet water quality standards; are designated for water quality management or improvement; contain threatened or endangered species or critical habitat; are crossed less than 3 miles upstream of potable water intake structures; are listed as having outstanding or exceptional quality; or are located in sensitive or protected watershed areas.

No sensitive waterbodies are located within 0.5 mile of the Project area (National Wild and Scenic Rivers, 2016, NPS 2007, Louisiana Department of Wildlife and Fisheries, 2016). The Project is not located within 1,500 feet of any federal levees. As such a Section 408 permit from the Army Corps of Engineers (USACE) is not needed. In addition no impaired waterbodies are located within 0.5 mile of the Project (EPA, 2013).

The Project would require seven crossings of three waterbodies. None of the waterbodies is perennial and all are less than 10 feet wide. The three waterbodies were identified in field surveys conducted in September 2015 and April 2016. The waterbody crossings are identified in table 4 below.

Impacts on waterbodies that may occur include modification of aquatic habitat, stream bank erosion, increased sedimentation and turbidity, decreased dissolved oxygen concentrations, inadvertent release of chemical and nutrient pollutants from sediments, and introduction of chemical contaminants.

Table 4: Waterbodies within the Proposed Site								
Feature ID	**Waterbody Name**	**Milepost**	**16-inch Pipeline Station Location**	**FERC Classification**	**Flow Regime**	**Approx. Waterbody Width (feet)[a]**	**Pipeline Crossing Length (feet)**	**Proposed Crossing Method**
16-inch Pipeline								
SP2010	Unnamed tributary of Mississippi River	0.11	5+56	Minor	Ephemeral	4	4	Open-cut
SP2011	Road Drainage Ditch	0.14	7+19	Minor	Ephemeral	3	3	Conventional bore
SP2012	Road Drainage Ditch	0.14	7+56	Minor	Ephemeral	3	4	Conventional bore
Access Road (north)								
SP2010	Unnamed tributary of Mississippi River	N/A	N/A	Minor	Ephemeral	4	4	Permanent culvert
SP2011	Road Drainage Ditch	N/A	N/A	Minor	Ephemeral	3	3	Permanent culvert
Access Road (south)								
SP2010	Unnamed tributary of Mississippi River	N/A	N/A	Minor	Ephemeral	4	4	Permanent culvert
SP2011	Road Drainage Ditch	N/A	N/A	Minor	Ephemeral	3	3	Permanent culvert

N/A – not applicable

[a] Approximate waterbody width is based on the ordinary high watermark, as verified by field survey.

As mentioned above, the Project would impact three waterbodies. One would be crossed via the open cut method while the others would be crossed via conventional bore. In addition, at the compressor station site two waterbodies would be affected by the installation of permanent culverts to facilitate the construction of proposed permanent access roads.

To minimize these impacts on waterbodies, Gulf South would avoid stripping vegetation from along the stream banks until the time of crossing and would utilize equipment bridges, mats, and pads when necessary and possible. Upon completion, vegetated areas would be restored to pre-construction conditions to the extent possible and temporary erosion control devices would be installed to minimize erosion until the crossing is stabilized and the stream bank vegetation has re-established. In addition, permanent erosion control devices may be installed to prevent further erosion at the crossing location.

To reduce turbidity and sedimentation impacts, Gulf South would use matting within the workspaces to reduce temporary impacts. Gulf South would implement its Procedures to avoid the movement of sediment off of Project construction sites into surrounding waterbodies. Gulf South would also implement its SPCC Plan to minimize impacts from inadvertent spills of fuels, lubricants, solvents, or other hazardous materials that could affect water quality. Based on Gulf South's implementation of its Procedures and its SPCC Plan, we conclude that there would not be a significant impact on surface water resources.

2.3 Hydrostatic Testing

In accordance with DOT regulations, Columbia would conduct hydrostatic testing of the pipelines prior to placing them into service. Hydrostatic testing is a method by which water is introduced to segments of pipe and then pressurized to verify the integrity of the pipeline. Gulf South would obtain hydrostatic test water from a municipal source, the St. John the Baptist Parish Utilities Department, to avoid impacts on surface waters. The hydrostatic test water may be treated with a chloride reducer. Gulf South would utilize approximately 0.0042 grams of sodium thiosulfate per 1 gallon of water. The Project facilities would be constructed of new materials free of chemicals or lubricants. Any biocides or chemical additives would be used in accordance with federal, state, or local regulations

The rate of discharge would be the lowest possible rate to minimize any potential erosion and would be determined by Gulf South's LDEQ General Permit. The approximate volume needed for testing would be 33,000 gallons of water. After hydrostatic testing is complete, the water would be discharged into a well-vegetated upland area within or adjacent to the existing facility. Discharge waters would be dispersed by an energy-dissipating device to minimize erosion and sedimentation and to provide additional filtering. Test water would not be discharged directly into streams/rivers unless permitted to do so and permit conditions have been met.

2.4 Floodplains

The Project, including the Montz Compressor Station, would be located within the Federal Emergency Management Act (FEMA) 100-year floodplain (FEMA, 2010). The 100-year floodplain constitutes an area having a one percent probability of a flooding event within any given year. The areas of impervious surfaces within the floodplain is minor and constitute less than one percent of the Project.

The Executive Order 11988 directs federal agencies to lead the Nation by example by demonstrating a comprehensive approach to floodplain management. The order requires agencies to: (1) avoid, to the extent possible, the long and short term adverse impacts associated with the occupancy and modification of floodplains, and (2) avoid the direct or indirect support of floodplain development whenever there is a practicable alternative.

The Executive Order 11988 establishes avoidance of actions on the base of the floodplain, or the 100-year floodplain, as the preferred method for meeting these requirements. Gulf South would construct the Montz Compressor Station above the natural grade. The Montz Compressor Station would also be constructed to meet or exceed federal, state, and local standards for construction within a floodplain to minimize any impact on the function of the floodplain. Further the alternative compressor station sites evaluated in section C.3 demonstrates that the proposed site is environmentally preferable. Therefore, our review concludes that impacts would be minimal and unavoidable on floodplains.

The Project is located 1.35 miles northeast of the Bonnett Carre Spillway. This spillway connects the Mississippi River and Lake Pontchartrain (SONRIS, 2016). Two levees, the Mississippi River Levee and the Upper Guide Levee, are associated with this spillway to aid in flood control. As the Project and all constructed is situated greater than 1,500 feet away from the levees, the Project is not anticipated to affect the integrity of the levees (Terry, 2016).

2.5 Wetlands

Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (USACE 1987). We define wetlands as any area that is not actively cultivated or rotated cropland and that satisfies the requirements of the current federal

methodology for identifying and delineating wetlands. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetland surveys were conducted in the Project area in September 2015 and April 2015.

Two wetland types were identified in the Project work areas: Palustrine Emergent marshes (PEM) and Palustrine Forested wetlands (PFO). The classification of wetlands is based on the vegetation present. Construction of the Project would require a total of 18 wetlands crossings. The wetland crossings are depicted in table 5.

As depicted above, 10 PEM wetland crossings would occur. The dominate vegetation associate with these wetlands include alligator weed (*Alternanthera philoxeroides*), peppervine (*Ampelopsis arborea*), yellow nutsedge (*Cyperus esulentus*), green flatsede (*Cypreus virens*), small spikerush (*Eleocharis minima*), pennywort (*Hydrocotyle umbellate*), bulltonguq arrowhead (*Sagittaria lancifolia*), bigpod sesbania (*Sesbania exaltata*), and broadleaf cattail (*Typha latifolia*). Eight PFO wetlands would be crossed by the Project. Vegetation associated with the PFO wetlands include: boxelder (*Acer negundo*), Drummond's maple (*Acer rubrum var. drummondii*), eastern cottonwood (*Populus deltoides*), water oak (*Quercus nigra*), bald cypress (*Taxodium Distichum*), American elm (*Ulmus Americana*), common cottonbush (*Cephalanthus occidentalis*), willow oak (*Quercus phello*s), and poison ivy (*Toxicodendron radicans*).

As noted in the table above, the Project would impact approximately 2.3 acres of wetlands with 2.2 acres being affected temporarily. Temporary construction impacts on wetlands could include the loss of herbaceous vegetation; wildlife habitat disruption; soil disturbance associated with grading, trenching, and stump removal; sedimentation and turbidity increases; and hydrological profile changes. In addition, approximately 0.04 acre of wetlands would be permanently converted from PFO to PEM/PSS, and 0.04 acre of wetlands would be permanently filled due to the aboveground facilities and access roads.

Table 5: Wetland Resources Crossing/Impacts from the Project Facilities							
Feature ID	**Milepost**	**Wetland Type [a]**	**Proposed Crossing Method**	**Approx. Pipeline Crossing Length (feet)**	**Temporary Impacts (acres)**	**10-foot Corridor Operational Impacts (acres)[b]**	**30-foot Corridor Operational Impacts (acres) [c]**
16-inch Pipeline							
WP1018	0.00	PEM	Open-cut	1	0.01	0.00	0.00
WP1018	0.01	PEM	Workspace only[d]	0 [d]	0.02	0.00	0.00
WP3003_PFO	0.03	PFO	Workspace only[d]	0 [d]	0.02	<0.01	<0.01
WP3003_PEM	0.04	PEM	Open-cut	40	0.05	0.00	0.00
WP3001_PEM_ B	0.06	PEM	Workspace only[d]	0[d]	0.02	0.00	0.00
WP3001_PFO	0.06	PFO	Open-cut	67	0.01	0.01	0.01
WP3001_PEM	0.08	PEM	Workspace only[d]	0[d]	0.04	0.00	0.00
WP3001_PFO	0.08	PFO	Workspace only[d]	0[d]	0.01	0.00	0.02
WP1022	0.16	PEM	Workspace only[d]	0[d]	<0.01	0.00	0.00
WP1022	0.17	PEM	Open-cut	21	0.02	0.00	0.00
16-inch Pipeline Total				*129*	*0.02*	*0.01*	*0.03*
Montz Compressor Station							
WP1018	N/A	PEM	Fill	N/A	0.00	NA	<0.01[e]
WP3007	N/A	PFO	Fill	N/A	0.00	NA	0.03[e]
WP3007	N/A	PFO	Geotextile fabric/ Timber mat	N/A	0.89	NA	0.00[e]
WP3003_PFO_ B	N/A	PFO	Geotextile fabric/ Timber mat	N/A	<0.01	NA	0.00[e]

Table 5: Wetland Resources Crossing/Impacts from the Project Facilities							
Feature ID	**Milepost**	**Wetland Type [a]**	**Proposed Crossing Method**	**Approx. Pipeline Crossing Length (feet)**	**Temporary Impacts (acres)**	**10-foot Corridor Operational Impacts (acres)[b]**	**30-foot Corridor Operational Impacts (acres) [c]**
Montz Compressor Station Total				*N/A*	*0.89*	NA	*0.03*
Index 270-94 Tie-In							
WP1023	N/A	PEM	Geotextile fabric/ Timber mat	N/A	0.07	NA	0.00[e]
WP1022	N/A	PEM	Geotextile fabric/ Timber mat	N/A	1.03	NA	0.00[e]
Index 270-94 Tie-In Total				*N/A*	*1.10*	NA	*0.00*[e]
Access Roads							
WP3007 (north access road)	N/A	PFO	Permanent Culvert	N/A	0.00	NA	<0.01[e]
WP3007 (south access road)	N/A	PFO	Permanent Culvert	N/A	0.00	NA	0.01[e]
Access Roads Total				*N/A*	*0.00*	NA	*0.01*[e]

N/A – not applicable

[a] Cowardin Wetland Types: PEM - palustrine emergent; PSS - palustrine scrub-shrub; PFO - palustrine forested

[b] Operational impacts in this column are based on a 10-foot-wide area in PFO and PSS wetlands that will be converted to other wetland types due to pipeline maintenance.

[c] Operational impacts in this column are based on a 10-foot-wide operation impact on PSS wetlands that will be converted to herbaceous wetlands due to pipeline maintenance. Operation impacts on PFO wetlands in this column reflect potential for selective thinning of trees within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating. The 30-foot corridor includes the impacts associated with the 10-foot corridor operational impacts.

[d] Wetland will not be crossed by the pipeline centerline, but is located within the Project footprint.

[e] Acreage presented is associated with the permanent operational impact of aboveground facilities or permanent access roads.

Gulf South would limit impacts on wetlands from construction and operation of the Project by adhering to its Plan, Procedures, and to applicable state and federal permit requirements. Prior to any construction, Gulf South would install erosion and sedimentation barriers that would be maintained throughout construction. Gulf South would also minimize the compaction and rutting of wetlands by using low ground-pressure equipment and/or by the temporary installation of timber equipment mats. In addition, Gulf South would segregate the topsoil up to one foot in depth where hydrologic conditions permit.

To minimize impacts to hydrology any confining layers that are breeched during construction would be restored. In addition all wetlands contours would be returned to pre-construction levels and all construction workspace stabilization measures would be removed.

Along the pipeline, Gulf South would maintain a mowed corridor through the wetlands during the operation of the Project. This would keep a portion of each in an herbaceous state to allow for periodic pipeline corrosion and leak surveys. In PFO wetlands the maintained corridor would be 10 feet wide centered on the pipeline and trees within 15 feet of the pipeline would be selectively removed to prevent any roots from compromising the integrity of the pipeline coating. This would result in the conversion of this corridor in PFO wetlands to PEM and PSS. The impacts on PEM wetlands would be temporary.

Following restoration all wetlands would be monitored in accordance with Gulf South's Procedures and with protocols specified by the applicable permitting agencies. Revegetation would be monitored periodically for the first three years or until restoration is complete. If revegetation is not successful, Gulf South would develop and implement a remedial revegetation plan.

Based on the mitigation measures stated above, we conclude that impacts on wetlands would not be significant.

2.6 Agency Consultation and Permitting

The Project would impact wetlands and waterbodies subject to Section 404 of the Clean Water Act (CWA). The Project is also located within the Louisiana Coastal Zone and is subject to permitting requires pursuant to the Louisiana State and Local Coastal Resources Management Act and in accordance with the federal Coastal Zone

Management Act (CZMA). The USACE is the delegated authority for permitting under Section 404 of the CWA while the Louisiana Department of Natural Resources, Office of Coastal Management (OCM) is responsible for permitting associated with activities occurring in the Louisiana Costal Zone. A Joint Permit Application (JPA) was developed to streamline the USACE and OCM permitting process. Through this process Gulf South simultaneously applied for a Coastal Use Permit from the OCM as well as a Programmatic General Permit (PGP) from the USACE. In addition, in Louisiana Section 401 of the CWA has been delegated to the LDEQ. The Section 401 permit would be obtained in conjunction with the Section 404 permit.

Gulf South filed the JPA on July 12, 2016 and anticipates receipt of the permit in the first quarter of 2017. Based on this information **we recommend that**:

- **Gulf South should not begin construction of the project until it files with the Secretary a copy of the coastal zone consistency determination by the OCM.**

The USACE requires applicants to demonstrated avoidance of a regulated feature, to demonstrate minimization of impact to features that could not be avoided, and mitigation for loss of function and value of wetlands affected by a project. Through facility siting and construction and equipment workspace configuration, Gulf South minimized adverse impacts to jurisdictional waters of the United States to less than 0.10 acre of permanent impacts.

3. FISH, WILDLIFE, AND VEGETATION

3.1 Vegetation

The Project is located in the ecological Outer Coastal Plain Mixed Province (USDA, 2016a). Construction and operation of the Project would affect the following general vegetative cover types: open land, wetlands, developed land, and forested lands. Field surveys were completed in September 2015 and April 2016. A summary of the impacts to each of these vegetative cover types is provided in table 6 below.

Table 6: Summary of Vegetative Community Impacts (acres)										
Facility	**Forest**		**Open Land**		**Wetlands**		**Developed**		**Project Total**	
	Const.[a]	**Op.[b]**	**Const.[a]**	**Op.[b]**	**Const.[a]**	**Op.[b]**	**Const.[a]**	**Op.[b]**	**Const.[a]**	**Op.[b]**
16-inch Pipeline	0.70	0.28	0.75	0.26	0.24	0.11	0.10	0.07	**1.8**	**0.72**
Index 270-94 Tie-in	0.00	0.00	3.6	0.00	1.1	0.00	0.22	0.00	**4.9**	**0.00**
Montz Compressor Station	4.5	2.0	0.53	0.16	0.92	0.03	0.02	0.00	**6.0**	**2.2**
Access Roads	0.54	0.54	0.04	0.04	0.01	0.01	0.03	0.03	**0.62**	**0.62**
Total	**5.8**	**2.9**	**4.9**	**0.46**	**2.3**	**0.15**	**0.37**	**0.10**	**13.3**	**3.5**

Note: The values in this table have been rounded for presentation purposes.

[a] Land affected during construction consists of temporary and new permanent impacts associated with facility operations.

[b] Land affected during operation consists only of new permanent impacts.

The Project would temporarily impact 5.8 acres of forested land and permanently impact 2.8 of these acres. This forested land generally consists of American elm (*Ulmus americana*), American sycamore (*Platanus occidentalis*), water oak (*Quercus nigra*), boxelder (*Acer negundo*), sugarberry (*Celtis laevigata*), Drummond's maple (*Acer rubrum var. drummondii*), southern pecan (*Carya illinoensis*), Chinese tallow (*Triadica sebifera*), red maple (*Acer rubrum*), yaupon (*Ilex vomitoria*), and Chinese privet (*Ligustrum sinense*).

The Project would temporarily impact 4.9 acres of open land and permanently impact 0.46 of these acres. Open land is comprised of non-agricultural, non-forested areas and includes rights-of-way. Dominant vegetative species in open land include hairy crabgrass (*Digitaria sanguinalis*), bahia (*Paspalum notatum*), giant ragweed (*Ambrosia trifida*), Johnsongrass (*Sorghum halepense*), and Mexican primrose-willow (*Ludwigia octovalvis*).

A total of 2.3 acres of wetlands would be temporarily affected by construction. Wetland vegetation affected by the Project is discussed in section B.2.5.

Construction of the Project facilities would temporarily impact 0.37 acre of developed land. Operation of facilities would permanently impact 0.10 acre of developed land. Developed land includes industrial and residential areas. Industrial areas crossed by the Project include existing utility stations and facilities and transportation corridors. No residential areas are crossed by the Project. Industrial areas are often sparsely vegetated due to the presence of impervious structures. However, some vegetation species within these areas include bermudagrass (*Cynodon dactylon*), Canada goldenrod (*Solidago canadensis*), peppervine, and giant ragweed.

As noted above, Project activities would result in the temporary loss of vegetation and the permanent conversion of vegetation from one type to another. The loss and conversion of vegetation could affect soils and wildlife. To avoid and minimize these affects, Gulf South would implement measures described in its Plan and Procedures and would restore/revegetate affected lands. Revegetation would be considered successful when native vegetation cover and diversity within the disturbed areas are similar to adjacent, undisturbed lands. Based on the types and amounts of vegetation affected by the Project and Gulf South's proposed avoidance, minimization, and mitigation measures to limit Project impacts, we conclude that impacts on vegetation from the proposed Project would not be significant.

3.2 Wildlife

Four general habitat types exist in the Project area: open land, wetlands/waterbodies, developed land, and forested. Open lands support herbaceous and low-level woody vegetation which may provide habitats for mammals such as coyote, deer mouse, eastern cottontail, and rabbit. In addition these habitats support multiple bird species such as red-tailed hawk, eastern kingbird, American kestrel, and field sparrow. Typical wildlife species found in forested habitats include white-tailed deer, squirrels, eastern cottontail rabbit, northern mockingbird, northern cardinal, wild boar striped skunk, raccoon, copperhead, and eastern diamondback rattlesnake. Common species found in wetlands are wild boar, raccoons, squirrels, wood duck, American alligator, box turtle, and cotton mouth. Lastly wildlife species typically found in developed land include raccoons, squirrels, northern mockingbird, house finch, mourning dove, and common garter snake.

Construction and operation of the Project would result in short- and long-term impacts on wildlife. Potential short-term impacts on wildlife include the displacement of individuals from construction areas and adjacent habitats and the direct mortality of small, less mobile mammals, reptiles and amphibians that are unable to leave the construction area. Long-term impacts would include permanent conversion of forested or scrub-shrub habitats to cleared and maintained right-of-way, and periodic disturbance of wildlife during operation and maintenance.

Fragmentation of forested areas results in changes in vegetation (for example, invasion of shrubs along the forest edge) which may limit the movement of species between adjacent forest blocks, increase predation, and decrease reproductive success for some species (Rosenberg et al. 1999). Thus, a potential long-term impact on wildlife could result from the clearing of forest vegetation for the operational lifetime of the Project. Gulf South has collocated the replacement pipeline with existing utility rights-of-way to minimize habitat fragmentation.

Based on the collocation of the pipeline with existing rights-of-way, the presence of similar habitats adjacent to and in the vicinity of construction activities, and the implementation of Gulf South's Plan and Procedures, we conclude that construction and operation of the Project would not significantly impact wildlife.

3.2.1 Migratory Birds

Migratory birds are species that nest in the United States and Canada during the summer and then migrate to and from the tropical regions of Mexico, Central and South America, and the Caribbean for the non-breeding season. Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) (16 U.S. Code 703-711), and bald and golden eagles are additionally protected under the Bald and Golden Eagle Act (16 U.S. Code 668-668d). The MBTA, as amended, prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. Executive Order 13186 (66 FR 3853) was enacted in 2001 to, among other things; ensure that environmental analyses of federal actions evaluate the impacts of actions on migratory birds. Executive Order 13186 directs federal agencies to identify where unintentional take is likely to have a measurable negative effect on migratory bird populations and avoid or minimize adverse impacts on migratory birds through enhanced collaboration with the United States Fish and Wildlife Service (USFWS). The environmental analysis should further emphasize species of concern, priority habitats, and key risk factors, and that particular focus should be given to population-level impacts. On March 30, 2011, the USFWS and the Commission entered into a Memorandum of Understanding (MOU) that focuses on avoiding or minimizing adverse impacts on migratory birds and strengthening migratory bird conservation through enhanced collaboration between the Commission and the USFWS. This voluntary MOU does not waive legal requirements under the MBTA, the Endangered Species Act (ESA), the NGA, or any other statutes and does not authorize the take of migratory birds.

The entire Project would be within Bird Conservation Region 26 (Mississippi Alluvial Valley). The USFWS established Birds of Conservation Concern (BCC) lists for various regions in the country in response to the 1988 amendment to the Fish and Wildlife Conservation Act, which mandated USFWS to identify migratory nongame birds that, without additional conservation actions, were likely to become candidates for listing under the Endangered Species Act (ESA). The BCC lists were last updated in 2008. BCC located within Bird Conservation Region 28 are listed in in appendix 1.

The primary concern for impacts on migratory birds is mortality of eggs and/or young as mature birds could avoid active construction. Tree clearing and ground disturbing activities could cause disturbance during critical breeding and nesting periods, resulting in the loss of nests, eggs, or young. In addition, forest fragmentation could increase predation, competition, and reduce nesting and mating habitat for migratory and ground-nesting birds (Faaborg et al. 1995).

To minimize disturbance during migratory bird critical nesting periods, Gulf South would fell trees outside the nesting season (prior to April 15 and after August 1). Additionally, the collocation of the pipeline would minimize impacts on migratory birds. In order to minimize impacts on bald eagles, tree clearing would be conducted outside of the nesting season (prior to April 15 and after August 1). No eagle nests were observed in the Project area during field studies.

Based on the characteristics and habitat requirements of wildlife and migratory birds known to occur in the proposed Project area, the amount of similar habitat adjacent to and in the vicinity of the Project, and Gulf South's implementation of its Plan and Procedures, we have determined that the Project would not result in population-level impacts or significant measureable negative impacts on migratory birds.

3.2.2 Special Status Species

Special status species are those species for which state or federal agencies provide an additional level of protection by law, regulation, or policy. Included in this category are federally listed and federally proposed species that are protected under the ESA, or are considered as candidates for such listing by the USFWS, and those species that are state-listed as threatened or endangered.

Federal Listed Species

Gulf South, acting as the FERC's non-federal representative for the purpose of complying with Section 7(a)(2) of the ESA, initiated informal consultation with the USFWS regarding federally listed threatened and endangered species potentially affected by the Project. Four federally listed species that could potentially occur in the Project area were identified. Gulf South also contacted the LDWF regarding state-listed species in the Project area and one additional state-listed species, the Bald Eagle, was identified.

Gulf South submitted a letter to the USFWS on July 6, 2016 as the FERC's non-Federal representative requesting concurrence with the determinations listed above. On August 1, 2016, the USFWS provided concurrence with the *no effect* determination for all four species with the potential to occur: the Alabama heelsplitter mussel, West Indian manatee, Atlantic sturgeon, and pallid sturgeon. We agree with this determination.

3.3 Fisheries

As mentioned above, three minor ephemeral streams are located in the Project area. Based on the size and flow regime, and observations during field surveys, the waterbodies affected by the Project do not contain fishery resources. In addition, only minor in-stream disturbances would occur including the installation of culverts. Based on the lack of fishery habitat and the mitigation measures Gulf South would employ at stream crossings, we do not anticipate significant impacts to fishery resources.

4. LAND USE and VISUAL RESUORCES

The proposed route would traverse a variety of land uses including forested land, wetlands, industrial land, and open land. The Project would affect about 13.3 acres of land during construction. Following construction 3.5 acres would be maintained for operation of the proposed Project.

The pipeline would cross one public road (Evangeline Road) and one buried water line. These would be crossed via a conventional bore. No permanent impacts on the existing use of the road or utilities crossed by the project would be expected.

The tie-in to Gulf South's existing 270-94 Lateral would require 4.9 acre of open land, wetlands, and industrial land. No permanent aboveground facilities would be installed. The land associated with the tie-in would be allowed to return to its previous uses.

A total of 6.0 acres would be utilized for the construction of the Montz Compressor Station with 2.2 acres being utilized for the operation of the station. Following construction the compressor station would be fenced and land not within the permanent footprint would be maintained in a herbaceous state. Two permanent access roads would be constructed through predominantly forested land.

Approximately 5.8 acres of forested land would be affected by construction, of which, 2.8 acres would be retained for operation of the Project right-of-way. This accounts for approximately 45 percent of the Project area. Impacts on forested lands would be long-term or permanent, as it would take 10 years or more for mature trees to re-establish within the construction areas, and they would not be allowed to re-establish within the operational right-of-way.

As noted above, wetlands in the Project area consist of PEM and PFO wetlands. Wetlands account for 17 percent of the Project area. Construction of the Project would affect approximately 2.3 acres of wetlands with about 0.15 being associated with the new permanent right-of-way, the compressor station, and permanent access roads. Approximately 0.11 acre would be affected by the pipeline right-of-way but only a 10-foot corridor centered on the pipeline would be maintained in an herbaceous state. Wetlands located within temporary workspaces would be allowed to revegetate and revert to preconstruction conditions.

Open land includes unimproved pastures and existing utility easements. Construction of the proposed Project would affect approximately 4.9 acres of open land. Approximately 0.26 acres would be would be within the new maintained right-of-way and 0.20 acres would be permanently converted to developed land for the aboveground facilities and access roads. As such, impacts on open land would be predominantly short term and minor. Following construction activities Gulf South would reseed disturbed areas, not including those permanently affected by aboveground facilities, according to its Plan and Procedures as well as in accordance with the Natural Resource Conservation Service's (NRCS) Louisiana Field Office Guide.

Industrial land encompasses most developed land that is not residential, including existing electric and gas facilities and transportation corridors. About 0.37 acres of industrial land would be affected during construction. Approximately 0.1 acre would be required for the operation of the Project, including as permanent access roads. All affected industrial lands would be returned to original conditions and uses after construction; therefore, impacts would be temporary and minor.

No residential land occurs within the Project area. One shed was identified within the temporary workspace associated with the Index 270-94 tie-in. This shed would be avoided during construction activities. Construction of the Project could result in short-term impacts on adjacent residential areas. These include increased construction-related traffic on local roads and increased dust and noise.

Gulf South would minimize these impacts through implementation of mitigation measures which include:

- conducting construction activities during daytime hours;

- taking measures to ensure that utilities are not disrupted during construction and providing adequate notice should a disruption occur; and
- maintaining traffic flow and emergency vehicle access.

Given the measures outlined above, and as the Project does not impact residential land, impacts on residences would be insignificant.

The Project would not directly affect any public lands and is not within 0.25 mile of any National Park System Unit nor does it cross within 0.25 mile of any National Wilderness Area or Registered National Landmarks (NPS, 2016a, 2016b, 2016c). In addition the project is not within 0.25 mile of any state parks, forests, or wildlife management areas (LDWF, 2016).

4.1 Visual Resources

The Project is not located within any federal, state, or locally designated scenic areas. Temporary visual impacts in the area would occur during construction and permanent visual impacts would occur due to the Montz Compressor Station. The compressor station would be situated in an area surrounded by forest and is 0.30 mile from the nearest residence. Dense trees would be left in place around the facility to act as a visual screen. As such, visual impacts from construction and operation of the Project are minimal.

5. SOCIOECONOMIC RESOURCES

The EPA filed comments requesting that our analysis include consideration of socioeconomic impacts, including environmental justice impacts. The following section provides this.

The Project is located in a forested area surrounded by industrial and suburban developments. It is located near the New Orleans metropolitan area and is approximately 23 miles from the center of New Orleans. The population conditions in the Project area are depicted in table 7 below.

Table 7: Existing Population Conditions in the Project Area				
Country/ State/ Parish/ City	**Population (2010 Census)**	**Estimated Population in 2015**	**Estimated Population Change since 2010 (%)**	**Population Density (persons per square mile)**
St John the Baptist Parish	45,817	43,626	-4.8	215.5
Laplace	29,872	NA	NA	1,409.9
St Charles Parish	52,887	52,812	-0.1	189.1
Luling	12,119	NA	NA	520.1
Montz	1,918	NA	NA	896.9
Orleans Parish	343,829	389,617	13.3	2,029.4
New Orleans	343,829	389,617	13.3	2,029.4
Source: 2010 U.S. Census DataNA – Not available				

The largest industries in the project area include educational, health, and social services. The unemployment rate in St. Charles Parish is 8.2 percent and is 10.8 percent in St. John the Baptist Parish. The existing socioeconomic conditions in the Project area are presented in table 8.

Currently there are approximately 14,696 rental housing units available in the City of New Orleans. In addition, there are approximately 88 hotels and 22 recreational vehicle parks within 30 miles of the Project area and 3,803 units available for recreational or occasional use (U.S. Census Bureau, 2014; Good Sam Club, 2016; Google Maps, 2016).

The Project area is in a mostly suburban setting with public services equal to surrounding towns and cities in the region. The Project is also located near Interstate 10, U.S. Highway 61, Louisiana State Highway 3217, and Louisiana State Highway 628. These provide general access during construction. Prior to construction Gulf South would initiate discussions with local officials concerning the impacts on roadways. Table 9 lists the existing public resources in the Project area.

Table 8: Existing Socioeconomic Conditions in the Project Area					
Country/ State/ Parish/ City	**Per Capita Income (U.S. dollars)**	**Median Household Income (U.S. dollars)**	**Civilian Labor Force**	**Unemployment Rate(% of civilian labor force)**	**Major Industry**
Louisiana	24,775	44,991	2,192,054	8.7	Educational, health, and social services
St. John the Baptist Parish	22,785	50,716	22,028	10.8	Educational, health, and social services
Laplace	24,088	54,278	14,667	8.9	Educational, health, and social services
St. Charles Parish	26,623	57,785	27,136	8.2	Educational, health, and social services
Luling	27,532	62,176	6,334	7.0	Educational, health, and social services
Montz	26,424	71,186	1,045	10.6	Educational, health, and social services
Orleans Parish	27,255	48,381	185,616	11.6	Educational, health, and social services
New Orleans	27,255	36,964	185,616	11.6	Educational, health, and social services
Source: U.S. Census, 2014					

Table 9: Existing Public Services and Facilities in the Vicinity of the Project Area					
Parish	**Community Medical Services**	**Emergency Medical Services**	**Police Services**	**Fire Services**	**Major Transportation Routes a**
St. John the Baptist	5	2	3	5	LA3217, US61, LA628, I10
St. Charles	2	2	2	10	LA3217, US61, LA628, I10
Orleans	12	3	6	2	LA3217, US61, LA628, I10
Source: Google Earth, 2016					
[a] I – Interstate; US – U.S. highway; LA – Louisiana State highway					

As the majority of the construction workforce will consist of personnel hired locally from the Project area and as the compressor station would only require one to two new permanent employees, the Project is not expected to induce growth, displace permanent residences or businesses, or cause any permanent population increase. In addition, as the majority of the construction workforce is anticipated to live in the vicinity of the Project, no significant impacts on housing markets are expected.

The project would result in short-term, beneficial impacts in terms of increased payroll and local material purchases. The payroll for the Project would be approximately $18,000,000 and the local economy would also benefit from purchases made by the construction workforce. Sales tax revenue would also increase. Under the assumptions that one third of the Project costs for materials and supplies are local expenditures, that two percent of the Project costs for fuel and miscellaneous Project expenditures are subject to local sales tax, and that all purchases are taxable at the general sales tax rate in each Parish, it is estimated that the local sales tax revenues would be approximately $36,000.

The Project would also affect property tax revenue in the vicinity of the Project. Based on the cost of the facilities and the cost of the land, Gulf South estimated that the Project facilities would generate annual property tax revenue of approximately $856,338. However, actual property taxes would only be accurately ascertained once the construction of the Project is completed.

The Project is expected to have minimal public service requirements except in the event of a fire or other emergency, in which the service requirements would be temporary. Emergency services would be provided by entities available in each affected Parish. The construction foreman and operation manager would be aware of the public services available and would maintain up to date contact information for those entities.

The movement of construction personnel, equipment, and materials to the Project area may affect local transportation in the Project area. Once materials and equipment reach the workspaces, construction traffic would be confined to designated workspaces. As such, traffic within the Project is expected to be temporary and minimal. Construction working hours and community times would typically occur at off-peak hours and Gulf South anticipates that workers would carpool to the worksites. When needed, Gulf South would use appropriate traffic control measures. In addition Gulf South would ensure that construction contractors comply with local weight limitations and restrictions on area roadways. Lastly Gulf South would coordinate with state and local officials to obtain all

necessary permits. Based on these measures, we conclude that traffic is not expected to be significantly affected by the Project.

Environmental Justice

EO 12898 on Environmental Justice recognizes the importance of using the NEPA process to identify and address, as appropriate, disproportionately high adverse human health and environmental effects of federal programs, policies, or activities on minority populations and low-income groups. The provisions of the EO 12898 apply equally to Native American programs. Consistent with EO 12898, the Council on Environmental Quality (CEQ) has called on federal agencies to actively scrutinize the following issues with respect to environmental justice:

- the racial and economic composition of affected communities;
- health-related issues that may amplify Project effects to minority or low-income individuals; and
- public participation strategies, including community or tribal participation in the NEPA process (CEQ 1997).

The EPA provides guidance on determining whether there is a minority or low-income community to be addressed in a NEPA analysis. According to this guidance, minority population issues must be addressed when they comprise over 50 percent of the affected area or when the minority population percentage of the affected area is meaningfully greater (i.e., 25 percent or greater) than the minority percentage in the larger area of the general population. Low-income areas are defined as locations in which the percentage of the population below poverty status exceeds 50 percent, or is meaningfully greater (i.e., 25 percent or greater) than the general population (respective county average poverty level) (EPA 1998).

In comments provided by the EPA dated October 7, 2016 it was requested that population demographics in relation to environmental justice concerns be provided for a five-mile radius from the parameter of the Project area. This data is provided in appendix 2.

The average percentage of persons below the poverty level in the U.S. Census block groups located within 5 miles of the Project is 14.9 percent, and the average percentage of the population represented by minorities is 54.8 percent. These population percentages are consistent with the greater surrounding area in which the Project is located. The average

percentages of persons below the poverty line and minority populations within St. Charles, St. John the Baptist, and Orleans parishes, are 19.3 percent and 54.9 percent, respectively

Two census blocks are located within the direct project area. The Project area is located within census block group 1, Tract 601. Census block group 1, track 710 is located approximately 100 feet east of the Project area. The percentage of the population in these census block groups with incomes below the poverty line are 7.1 percent (Track 601, block group 1) and 25.2 percent (Track 710, block group 1). The percentage of people living below poverty line in Louisiana is 19.6 percent. The percentage of the population represented by minorities for the two census blocks within 0.25 mile of the Project are 27.7 percent (Tract 601, block group 1) and 48.5 percent (Tract 710, block group 1). The percentage of minority populations in the State of Louisiana is 40.3 percent (U.S. Census, 2014).

Neither of the census block that the Project is located in nor the directly adjacent census block has a minority population that exceeds the 50 percent minority threshold identified by EO 12898. Therefore there would be no disproportionately high impacts to minority populations in the Project vicinity. Though a census block adjacent to the Project (Track 710, block group 1) has a higher percentage of people below the poverty level than the State of Louisiana, the census block in which the Project is located has a 7.1 percent population below the poverty level which is significantly lower than the State of Louisiana. In addition, positive benefits of the Project to these communities include short- and long-term opportunities in tax revenue.

Our environmental mailing list includes federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American Tribes; other interested parties; and local libraries. This list also includes all affected landowners (as defined in the Commission’s regulations) who are potential right-of-way grantors, whose property may be used temporarily for project purposes, or who own homes within certain distances of aboveground facilities, and anyone who submits comments on the project. All environmental notices for the Project were sent to the entire mailing list. Copies of the EA will also be sent to the environmental mailing list for public review and comment.

Based on the factors mentioned above, the Project is not expected to disproportionately affect minority or low-income communities.

6. CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act, as amended, requires the FERC to take into account the effects of its undertakings on properties on or eligible for listing on the National Register of Historic Places (NRHP) and to afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment. Gulf South, as a non-federal party, is assisting us in meeting our obligations under Section 106 and the implementing regulations at 36CFR800.

Gulf South conducted cultural resource surveys of the construction workspaces, including for the compressor station, pipeline right-of-way, extra workspaces, and access roads. Cultural resource surveys included archival research, archeological, and an above ground resources survey. Archeological survey methodology included surface inspection and shovel testing. Testing occurred before Gulf South had finalized plans; therefore an area significantly larger than the current project area was surveyed. In total, 70 acres were surveyed for cultural resources.

No archaeological sites or historic structures were identified within the project area. The survey identified one above ground structure within 0.50 mile of the project, but stated that it would not have a view of the project area due to the vegetation.

Gulf South provided the cultural resources survey report to the FERC and the Louisiana State Historic Preservation Office (SHPO). In a letter dated August 2, 2016, the SHPO concurred that the project would have no effect on historic properties. We concur as well.

Gulf South sent project information to the following 15 federally recognized Native American tribes that were identified as having a potential interest in Project effects:

- Alabama-Coushatta Tribe of Texas
- Alabama Quassarte Tribal Town, Oklahoma
- Apache Tribe of Oklahoma
- Chitimacha Tribe of Louisiana
- Choctaw Nation of Oklahoma
- Coushatta Tribe of Louisiana
- Jena Band of Choctaw Indians
- Kialegee Tribal Town

- Mississippi Band of Choctaw Indians
- Muscogee Creek Nation
- Poarch Band of Creek Indians
- Seminole Nation of Oklahoma
- Seminole Tribe of Florida Tunica Biloxi Tribe of Louisiana
- Thlopthlocco Tribal Town
- Tunica Biloxi Tribe of Louisiana

The Choctaw Nation of Oklahoma, the Mississippi Band of Choctaw Indians, and the Jena Band of Choctaw Indians all requested to receive the cultural resource survey report. Following review of the reports, all three tribes indicated that they concurred with the recommendation that no historic properties would be affected by the project, but would like to be informed if any unanticipated discoveries of cultural material were found during construction. Additionally, the Coushatta Tribe of Louisiana indicated that they had no concerns with the Project.

On September 20, 2016, we sent letters to the same tribes inviting their participation in consultation. The Choctaw Nation of Oklahoma responded that they would like to be a consulting party for the Project. FERC staff followed up with a phone call. At that time, the Choctaw Nation of Oklahoma indicated that they had already received the cultural resources report, and provided the response to Gulf South described above. They did not identify further concerns with the Project.

Gulf South provided an *Unanticipated Discovery Plan* to deal with the unexpected discovery of historic properties and human remains during construction. We find this plan acceptable.

Based on the information provided by Gulf South, and in consultation with the Louisiana SHPO, and Native American tribes, we conclude that the project would have no effect on cultural resources.

7. AIR QUALITY

Air quality would be affected by construction and operation of the Project. Although air emissions would be generated by construction activities involving the proposed pipeline, appurtenant facilities and Montz Compressor Station, the majority of air

emissions associated with the Project would result from operation of the new compressor station.

7.1 Existing Air Quality

The climate in the Project area is characterized as humid with mean temperature fluctuations from the mid-40s to the low-90s throughout the year. There is an average annual accumulation of precipitation of over 60 inches, with the rainiest periods occurring from mid-December to mid-March. From mid-June through September, frequent afternoon thunderstorms occur. Snowfall is generally infrequent and light.

Ambient air quality is protected by federal and state air quality standards. The EPA establishes National Ambient Air Quality Standards (NAAQS) under the Clean Air Act (CAA) and its amendments to protect human health and welfare.[5] Primary standards protect human health, including sensitive populations such as children, the elderly, and asthmatics. Secondary standards set limits to protect public welfare, including protection against reduced visibility and damage to crops, vegetation, animals, and buildings. NAAQS have been developed for seven "criteria air pollutants", including nitrogen dioxide (NO_2), carbon monoxide (CO), ozone; sulfur dioxide (SO_2), particulate matter less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$), particulate matter less than or equal to 10 microns in aerodynamic diameter (PM_{10}), and lead, and include levels for short-term (acute) and long-term (chronic) exposures. The LDEQ has adopted the NAAQs, as promulgated by the EPA, and has developed additional regulations as well. With the exception of the opacity standard, none of the LDEQ regulations apply or impose additional requirements beyond compliance with the federal standards.

Air quality control regions (AQCR) are areas established by the EPA and local agencies for air quality planning purposes, and through State Implementation Plans, describe how the NAAQS would be achieved and maintained. The AQCRs are intra- and interstate regions, such as large metropolitan areas, where improvement of the air quality in one portion of the AQCR requires emission reductions throughout the AQCR. Each AQCR, or portion thereof, is designated based on compliance with the NAAQS, for each pollutant. Attainment areas are in compliance (below) with the NAAQS and nonattainment areas are not in compliance (exceed) with the NAAQS. Areas that have been designated nonattainment, but have since demonstrated compliance with the NAAQS are designated as

[5] The current NAAQS are listed on EPA's website at https://www.epa.gov/criteria-air-pollutants/naaqs-table.

"maintenance" for that pollutant. Maintenance areas may be subject to more stringent regulatory requirements to ensure continued attainment of the NAAQS pollutant. St. Charles and St. John the Baptist parishes are both located in the Southern Louisiana-Southeast Texas Interstate AQCR.

The EPA now defines air pollution to include greenhouse gases (GHGs), finding that the presence of GHGs in the atmosphere may endanger public health and welfare through climate change. As with any fossil fuel-fired project or activity, the Project would contribute GHG emissions. The primary GHGs that would be emitted by the Project are carbon dioxide (CO_2), methane, nitrous oxide. Emissions of GHGs are typically quantified and regulated in units of carbon dioxide equivalents (CO_2e). The CO_2e takes into account the global warming potential (GWP) of each GHG. The GWP is a ratio relative to CO_2 that is based on the properties of the GHG's ability to absorb solar radiation as well as the residence time within the atmosphere. The GWP allows comparison of global warming impacts between different gases; the higher the GWP, the more that gas contributes to climate change in comparison to CO_2. Thus, CO_2 has a GWP of 1, methane has a GWP of 25, and nitrous oxide has a GWP of 298.[6]

The EPA as well as state and local agencies have established a network of ambient air quality monitoring stations to measure ambient concentrations of criteria pollutants across the U.S. The data are then used by regulatory agencies to determine the air quality of an area and if the area is in compliance (i.e. attainment) with the NAAQS. The entire Project area is designated attainment for all criteria pollutants.

7.2 Permitting/Regulatory Requirements

Air quality in the United States is regulated by federal statutes in the CAA and its amendments. The provisions of the CAA that are applicable to the Project are discussed below.

[6] These GWPs are based on a 100-year time period. We have selected their use over other published GWPs for other timeframes because these are the GWPs the EPA has established for reporting of GHG emissions and air permitting requirements. This allows for a consistent comparison with these regulatory requirements.

Prevention of Significant Deterioration, Nonattainment New Source Review, and New Source Review

The Prevention of Significant Deterioration (PSD), Nonattainment New Source Review (NNSR), and minor source New Source Review (NSR) air permit programs are designed to protect air quality when air pollutant emissions are increased either through the construction of new major stationary sources or major modifications to existing stationary sources. PSD, NNSR, and NSR are applicable to projects depending on the size of the proposed project, the projected emissions, and if the project is located in an attainment area or nonattainment/maintenance area. The LDEQ administers the PSD, NNSR, and NSR permitting programs in Louisiana. PSD regulations define a major source as any source type belonging to a list of name source categories that have a potential to emit 100 tons per year (tpy) or more of any regulated pollutant or 250 tpy for sources not among the listed source categories. These are referred to as the PSD major source thresholds. The Montz Compressor Station is not anticipated to exceed the PSD major source thresholds for any pollutants, and is located in an attainment area; therefore, the proposed construction and operation of the Montz Compressor Station is a minor source and does not trigger PSD or NNSR Review.

One additional factor considered in the PSD permit review process is the potential impacts on protected Class I areas. Class I Areas were designated because the air quality was considered a special feature of the area (e.g., national parks, wilderness areas, national forests). The nearest Class I area to the Project, which is the Breton National Wildlife Refuge, is 97 miles away. Because the Project does not trigger PSD or NNSR an assessment of the impact on Class I areas is not required.

Title V Permitting

Title V is an operating air permit program run by each state for each facility that is considered a "major source" and has the potential to emit criteria pollutants or hazardous air pollutants (HAP) greater than established thresholds. The proposed Montz Compressor Station would not require a Title V permit.

New Source Performance Standards

The EPA promulgates New Source Performance Standards (NSPS) to establish emission limits and fuel, monitoring, notification, reporting, and recordkeeping requirements for stationary source types or categories. NSPS Subpart JJJJ sets emissions

standards for nitrogen oxides (NOx), CO, and volatile organic compounds for emergency and non-emergency engines. Subpart JJJJ would apply to all the engines installed at the Montz Compressor Station. NSPS Subpart OOOOa sets limits for bleed rates for natural-gas driven pneumatic controllers, requires work practice standards for compressor rod packing compressor units, and sets leak detection and repair requirements for fugitive emission components. Various components of Subpart OOOOa would apply to the Montz Compressor Station.

National Emission Standards for Hazardous Air Pollutants

The 1990 CAA Amendments established a list of 189 HAPs, resulting in the promulgation of National Emission Standards for Hazardous Air Pollutants. The National Emission Standards for Hazardous Air Pollutants regulate HAP emissions from specific source types located at major or area sources of HAPs by setting emission limits, monitoring, testing, record keeping, and notification requirements. The Montz Compressor Station would be a minor source of HAPs. Subpart ZZZZ applies to all reciprocating internal combustion engines at the Montz Compressor Station, however the Applicants would comply with Subpart ZZZZ by meeting the requirements of NSPS JJJJ.

General Conformity

The lead federal agency must conduct a conformity analysis if a federal action would result in the generation of emissions that would exceed the conformity threshold levels of the pollutant(s) for which an air basin is designated nonattainment or maintenance.

Estimated emissions for the Project are not subject to review under the general conformity thresholds because the Project is in an area classified as attainment/unclassifiable for all criteria pollutants.

Greenhouse Gas Emissions and the Mandatory Reporting Rule

The EPA's Mandatory Reporting of Greenhouse Gases Rule requires reporting from applicable sources of GHG emissions if they emit greater than or equal to 25,000 metric tons of GHG (as CO_2e) in 1 year. The Mandatory Reporting Rule does not require emission control devices and is strictly a reporting requirement for stationary sources based on actual emissions. Although the rule does not apply to construction emissions, we have provided GHG construction emission estimates, as CO_2e, for accounting and disclosure purposes in section 7.3. Also, operational GHG emission estimates for the Project are

presented, as CO_2e, in section 7.3. Based on the emission estimates presented, actual GHG emissions from operation of the Montz Compressor Station is not likely to exceed the 25,000-metric tons per year (tpy) reporting threshold for the Mandatory Reporting Rule.

Recent additions to the Mandatory Reporting Rule effective for calendar year 2016 require reporting of GHG emissions generated during operation of natural gas pipeline transmission system, which would include blowdown emissions, equipment leaks, and vent emissions at compressor stations, as well as blowdown emissions between compressor stations (40 CFR 98 Subpart W). The applicability of 40 CFR 98 Subpart W would apply to the entire commonly owned Gulf South system. If the actual emissions from any of each compressor stations or from the operation of the Montz Compressor Station are equal to or greater than 25,000 metric tpy, Gulf South would be required to comply with all applicable requirements of the rule.

State Air Quality Regulations

In addition to federal standards, the Montz Compressor Station would be subject to opacity standards pursuant to Louisiana Administrative Code 33:III.1311.C. Each emission unit at the Montz Compressor Station would be limited to 20 percent opacity. Gulf South would comply with the requirement of the opacity standard through combustion of pipeline-quality natural gas. LDEQ also requires issuance of a state air permit prior to the commencement of construction. Gulf South would obtain the necessary air permits prior to commencement of construction. Additional state air quality regulations either do not apply or impose general requirements.

7.3 Emissions

The project would result in air emissions from both construction and operation, as described in the following summaries.

Construction Emissions

Air emissions would be generated during construction of the new pipeline segment, installation of associated appurtenant facilities, removal of yard and station piping, and construction of the Montz Compressor Station.

Construction activities for the proposed facilities and pipeline replacement activities would result in temporary increases in emissions of some pollutants due to the use of

equipment powered by diesel or gasoline engines. Construction activities would also result in the temporary generation of fugitive dust due to land clearing, ground excavation, and cut and fill operations. Emissions would also be generated by delivery vehicles and construction workers commuting to and from work areas.

Construction emission estimates were based on the fuel type and anticipated frequency, duration, and levels of use of various types of construction equipment. Based on emission factors provided in EPA's AP-42 guidance, construction emissions were modeled using EPA's Motor Vehicle Emissions Simulator 2014 software. Table 10 presents the total construction emissions of both combustion-related exhaust and fugitive dust-related emissions generated by construction equipment, earthmoving activities, and project-related traffic on both paved and unpaved roads.

Table 10: Potential Construction Emissions for the Project

Project Component	NO_x (tons)	CO (tons)	SO_2 (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)	VOC (tons)	CO_2e (tons)	HAP (total) (tons)
Montz Compressor Station	1.49	6.21	0.003	3.04	1.02	0.98	763	0.015
16-inch Pipeline	1.75	0.84	0.004	1.84	0.31	0.25	705	0.016
Totals	**3.24**	**7.05**	**0.01**	**4.89**	**1.33**	**1.23**	**1,468**	**0.031**

The construction phase of the proposed Project would result in the generation of diesel and gasoline combustion emissions associated with the operation of construction equipment and vehicles. Gulf South would use construction equipment and vehicle engines that comply with EPA mobile and non-road emission regulations, including equipment certified to meet EPA's Tier IV exhaust emission standards, where feasible, to limit emissions from diesel combustion. In addition Gulf South would instruct Project staff to minimize idling time in diesel-fueled equipment to the extent practicable.

Fugitive dust would result from land clearing, grading, excavation, concrete work, and vehicle traffic on paved and unpaved roads. The amount of dust generated would be a function of construction activity, soil type, soil moisture content, wind speed, precipitation, vehicle traffic, vehicle types, and roadway characteristics. Emissions would be greater during dry periods and in areas of fine-textured soils subject to surface activity. Gulf South has prepared a Dust Control Plan[7] that describes the mitigation measures that would be

[7] The Applicants' Dust Control Plan was included as appendix 1C to Resource Report 1 in its July 2016 application (Accession No. 20160711-5216).

implemented to control fugitive dust during Project construction. We have reviewed the Dust Control Plan and find it acceptable.

Project construction would occur over an approximate 12-month period commencing in the Fall of 2017. These construction emissions would occur over the duration of construction activity and would be emitted at different times and locations throughout the Project site. Construction emissions would be minor and would result in short-term impacts along the length of the pipeline and at the Montz Compressor Station site. With the mitigation measures proposed by Gulf South, air quality impacts from construction equipment would be temporary and would not result in a significant impact on regional air quality.

Operational Emissions

The Project would generate air emissions during the operation of the Montz Compressor Station, including two new 2,500 horsepower (hp) natural gas-driven compressor engines and an emergency generator. Table 11 provide the potential emissions for the Montz Compressor Station.

Estimates of annual fugitive releases at the Montz Compressor Station were included in table 11. In order to minimize fugitive emissions from valves, seal, and other piping components, and from operation and maintenance activities, the Applicant would comply with EPA's 40 CFR Part 98, Subpart W and would comply with EPA's proposed 40 CFR Part 60, Subpart OOOOa standards, which both require leak detection and repair programs. Fugitive methane emissions are a source of GHG emissions from the proposed Project.

Air quality modeling was completed for NO_2, $PM_{2.5}$, PM_{10}, CO, and SO_2 to determine the Project's impact on regional air quality using EPA's AERMOD model. The facility's maximum modeled concentration for each pollutant was added to the existing background concentration from nearby monitors to determine the air quality impact of the project. The total facility impact and background concentrations were less than the respective NAAQS concentration for all pollutants, as shown in table 12.

Table 11: Potential Operational Emissions for the Montz Compressor Station									
Source	**Emissions (tons per year)**								
	NO_X	**O**	**OC**	**O_2**	**PM_{10}/ $PM_{2.5}$**	**Formaldehyde**	**Acetalde -hyde**	**Total HAPs**	**CO_2e**
Proposed Compressor Engine #1	2.07	.72	.91	.04	0.72	0.83	0.091	1.13	10365.00
Proposed Compressor Engine #2	2.07	3.72	5.91	0.04	0.72	0.83	0.091	1.13	10365.00
Proposed Emergency Generator	0.22	0.04	0.04	0.001	0.03	0.003	2.48E-04	0.02	153.25
Proposed Storage Tanks	NA	NA	0.57	NA	NA	NA	NA	NA	30
Proposed Condensate Loading	NA	NA	0.05	NA	NA	NA	NA	NA	0
Equipment Leaks [a]	NA	NA	0.13	NA	NA	NA	NA	NA	296.43
Natural Gas Venting [b]	NA	NA	1.34	NA	NA	NA	NA	NA	2598
Project Totals [c]	**24.36**	**7.49**	**13.95**	**0.09**	**1.47**	**1.67**	**0.18**	**2.28**	**23,807.68**
PSD Major Source Thresholds	*250*	250	250	250	250	NA	NA	NA	100,000
Title V Major Source Thresholds	*100*	100	100	100	100	10	25	25	100,000
Louisiana Permit Thresholds	*5*	5	5	5	5	0.13	NA	NA	NA

[a] Estimate includes leaks from all valves, open-ended lines, pressure reduction valves, compressor seals, and flanges/connectors within the station

[b] Estimate conservatively assumes 365 engine starts per year and 365 engine blowdowns per year

[c] Rows may not sum to total due to rounding

Additionally, as a conservative measure, the maximum concentrations of all permitted emissions sources (off-site inventory) within 10 km of the Montz Compressor Station was modeled for NO_2 and $PM_{2.5}$ (no other pollutants exceeded the significant impact level). The projected emissions from the planned Entergy St. Charles Power Project were also included for $PM_{2.5}$ (no other pollutants exceeded the significant impact level). These concentrations were added to the maximum modeled Montz Compressor Station impacts and background concentrations in order to conservatively assess cumulative air quality within 10 km of the site, including present and future projects. Table 12 summarizes the results of the modeling analyses and indicates that the total cumulative air quality impacts were less than the respective NAAQS for all pollutants.

Table 12: Summary of Predicted Air Quality Impacts for the Montz Compressor Station

Pollutant	Averaging Period	Existing Back-ground ($\mu g/m^3$)	Max Modeled Facility Impact ($\mu g/m^3$)	Facility Impact + Background ($\mu g/m^3$)	Max Overlapping Concentration from Facility Impact and Off-Site Inventory [a] ($\mu g/m^3$)	Facility Impact + Off-site Inventory+ Background ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)
NO_2	1-Hour [b]	30.6	86.4	117	107.8	138.4	188
	1-Hour [c]	83.2	86.4	169.6	NA	NA	188
	Annual	12.2	10.1	22.3	12.8	25	100
$PM_{2.5}$	24-Hour	17.3	4.27	21.57	7.2	24.5	35
	Annual	7.5	0.66	8.16	1.7	9.2	12

[a] Includes the maximum overlapping pollutant concentration of 271 emission sources for NOx and 240 emission sources for PM2.5 within 10 km of site

[b] Background monitor in rural location 44 km from site used; offsite inventory included

[c] Background monitor in industrial location 20 km from site used; offsite inventory not evaluated because concentrations already reflected in background monitor

The air quality analysis indicates that the Project would not cause or significantly contribute to a degradation of ambient air quality and would result in continued compliance with the NAAQS, which are protective of human health, including children, the elderly, and sensitive populations.

The projected GHG emissions from the Project would total about 23,808 tpy. . The Project's requested certificated capacity is designated for the Entergy St. Charles Power Project (Power Project). The estimated GHG emissions from the Power Project are publicly available and are estimated at 3.5 million tpy of CO2e. However, it is not clear if the Power Project would use natural gas from other sources or projects. Therefore, the downstream GHG emissions associated with the Project were approximated by FERC staff based on full capacity (i.e. 8,760 hours per year at full load) and are about 2.6 million tpy of CO2e.

8. NOISE

Construction and operation of the Project may affect overall noise levels in the Project area. The magnitude and frequency of environmental noise may vary considerably over the course of the day, throughout the week, and across seasons, in part due to changing weather conditions and the effects of seasonal vegetative cover. Two measures that relate

the time-varying quality of environmental noise to its known effect on people are the 24-hour equivalent sound level (L_{eq}) and day-night sound level (L_{dn}). The L_{eq} is the level of steady sound with the same total (equivalent) energy as the time-varying sound of interest, averaged over a 24-hour period. The L_{dn} is the L_{eq} plus 10 dBA added to account for people's greater sensitivity to nighttime sound levels (typically considered between the hours of 10:00 p.m. and 7:00 a.m.). The A-weighted scale is used to assess noise impacts because human hearing is less sensitive to low and high frequencies than mid-range frequencies. The human ear's threshold of perception for noise change is considered to be 3 dBA; 6 dBA is clearly noticeable to the human ear, and 10 dBA is perceived as a doubling of noise.

8.1 Noise Regulatory Requirements

Federal Noise Regulations

In 1974, the EPA published *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. This document provides information for state and local governments to use in developing their own ambient noise standards. The EPA has indicated that an L_{dn} of 55 dBA protects the public from indoor and outdoor activity interference. We have adopted this criterion and use it to evaluate the potential noise impacts from the proposed Project at NSAs. Due to the 10 dBA nighttime penalty added prior to the calculation of the L_{dn}, for a facility to meet the 55 dBA L_{dn} limit, it must be designed such that actual constant noise levels on a 24-hour basis do not exceed 48.6 dBA L_{eq} at any NSA. No other state or local noise regulations were identified for the Project.

8.2 Construction Noise Impacts and Mitigation

Noise would be generated during construction of the pipeline and Montz Compressor Station. Construction activities in any one area could last from several weeks to several months on an intermittent basis. Construction equipment would be operated on an as-needed basis during this period. While individuals in the immediate vicinity of the construction activities would experience an increase in noise, this effect would be temporary and local. Noise mitigation measures that would be employed during construction include ensuring that the sound muffling devices, which are provided as standard equipment by the construction equipment manufacturer, are kept in good working order. If needed, additional noise abatement techniques and other measures could be implemented during the construction phase to mitigate construction noise disturbances at

NSAs. Generally, nighttime noise is not expected to increase during construction because most construction activities would be limited to daytime hours.

8.3 Operation Noise Impacts and Mitigation

The Montz Compressor Station would generate noise on a continuous basis (i.e., up to 24 hours per day) when operating. The noise impact associated with the Montz Compressor Station would be limited to the vicinity of the facility. The specific operational noise sources associated with the Montz Compressor Station and the estimated impact at the nearest NSAs are described below.

Gulf South provided ambient noise surveys and acoustical analyses for NSAs nearest to the Project. The distances and directions to these NSAs as well as the results of the noise survey are presented in table 13.

Table 13: Noise Quality Analysis for the Montz Compressor Station

NSA / Type	Distance and Direction to NSA	Existing Ambient Sound Level (dBA)	Estimated Sound Level Attributable to compressor station (dBA)	Total Sound Level (Station L_{dn} + Ambient L_{dn}) (dBA)	Potential Noise Increase Attributable to the Station (dBA)
NSA #1 / residence	1,595 feet northeast	47.0	48.3	50.7	3.7
NSA #2 / residence	2,869 feet southwest	42.0	49.0	49.8	7.8
NSA #3 / residence	3,148 feet southwest	43.1	48.3	49.4	6.3

The results of these acoustical analyses presented above in table 13 included various assumed noise control measures. The noise control measures that Gulf South committed to take are as follows:

- enclose the new turbines and compressors, including the use of appropriate building materials;
- ensure building ventilation inlets and exhaust outlets do not exceed 55 dBA at 50 feet from the building penetration;
- install adequate silencer for each turbine exhaust system;
- install adequate silencer and air intake filter for each turbine air inlet system;
- ensure engine jacket water cooler units should not exceed 100 dBA;
- ensure gas compression after cooler units should not exceed 103 dBA; and

- install silencers on each compressor unit blowdown vent.

In addition to the operational noise discussed above, there would also be blowdown events during which the pipeline would generate noise for short periods of time (e.g., 1 to 5 minutes). Gulf South has indicated that these potential blowdown events would be associated with each of the new compressor units, which would each be outfitted with a blowdown silencer to ensure that the noise attributable to these blowdown events would be 65 dBA at a distance of 300 feet. Given the non-routine nature and short-term duration of these blowdown events, we do not believe that they would be a significant contributor to operational noise from the Project. To verify compliance with the FERC's noise standards, **we recommend that**:

- **Gulf South should file a noise survey with the Secretary no later than 60 days after placing the Montz Compressor Station in service. If a full load condition noise survey is not possible, Gulf South should provide an interim survey at the maximum possible horsepower load and provide the full load survey within 6 months. If the noise attributable to the operation of all of the equipment at the Montz Compressor Station under interim or full horsepower load conditions exceeds an Ldn of 55 dBA at any nearby (NSAs or noise-sensitive areas), Gulf South should file a report on what changes are needed and shall install the additional noise controls to meet the level within 1 year of the in-service date. Gulf South should confirm compliance with the above requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.**

Based on the analyses conducted and mitigation measures proposed, we conclude that the Project would not result in significant noise impacts on residents, and the surrounding communities.

9. RELIABILITY AND SAFETY

The transportation of natural gas by pipeline involves some risk to the public in the event of an accident and subsequent release of gas. The greatest hazard is a fire or explosion following a major pipeline rupture. Methane, the primary component of natural gas, is colorless, odorless, and tasteless. It is not toxic, but is classified as a simple asphyxiate, possessing a slight inhalation hazard. If breathed in high concentration, oxygen deficiency can result in serious injury or death.

The pipeline and aboveground facilities associated with the project must be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR Part 192. The regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures.

The DOT pipeline standards are published in Parts 190-199 of Title 49 of the CFR. Part 192 of 49 CFR specifically addresses natural gas pipeline safety issues, prescribes the minimum standards for operating and maintaining pipeline facilities, and incorporates compressor station design, including emergency shutdowns and safety equipment. Part 192 also requires a pipeline operator to establish a written emergency plan that includes procedures to minimize the hazards in a natural gas pipeline emergency.

The operator must also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a gas pipeline emergency and report it to appropriate public officials.

The Project's facilities must be designed, constructed, operated, and maintained in accordance with DOT standards, including the provisions for written emergency plans and emergency shutdowns. Gulf South would provide the appropriate training to local emergency service personnel before the facilities are placed in service.

The Montz Compressor Station and pipeline construction and operation would represent a minimum increase in risk to the public and we are confident that with the options available in the detailed design of the Project's facilities, that they would be constructed and operated safely.

10. CUMULATIVE IMPACTS

The parishes affected by the Project have a long history of anthropogenic influence. The region was first settled in the early 1720s by German pioneers. The fertile land was used for agriculture that helped support populations in New Orleans. In the late 18th century, sugar cane became the dominant crop in the region. The largest industries in the project area today include educational, health, and social services. However, the economic base is also supported by the petrochemical, grain, and steel industries located along the Mississippi River.

In accordance with NEPA, we identified other actions located in the vicinity of the Project and evaluated the potential for a cumulative impact on the environment. As defined

by CEQ, a cumulative effect is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. CEQ guidance states that an adequate cumulative effects analysis may be conducted by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions. In this analysis, we consider the impacts of past projects within the regions of influence as part of the affected environment (environmental baseline) which was described and evaluated in the preceding environmental analysis. However, present effects of past actions that are relevant and useful are also considered.

Consistent with CEQ guidance and to determine cumulative impacts, we expanded the geographic boundaries of our review into regions of influence as described below. Actions located outside the geographic scope of our review are generally not evaluated because their potential to contribute to a cumulative impact diminishes with increasing distance from the Project.

As described in the environmental analysis section of this is EA, constructing and operating the Project would temporarily and permanently impact the environment. The Project would impact geology, soils, water resources, vegetation, wetlands, wildlife, cultural resources, visual resources, air quality, noise, and some land uses. However, we conclude that these impacts would not be significant. We also conclude that nearly all of the project-related impacts would be contained within or adjacent to the temporary construction right-of-way and additional temporary workspace. Based on these conclusions and determinations, implementation of Gulf South's Plan and Procedures, and Gulf South's adherence to our recommendations, we conclude that the impacts of the Project would be highly localized.

Furthermore, the impacts of the Project would only contribute incrementally to a cumulative impact in the geographic scope. As a result, the scope of our analysis is consistent with the magnitude of the aforementioned environmental impacts.

Based on the impacts of the Project as identified and described in this EA and consistent with CEQ guidance, we have determined that the following resource-specific geographic scopes are appropriate to assess cumulative impacts:

- Impacts on fish, wildlife, vegetation, wildlife, and water resources (primarily increased turbidity) could extend outside of the workspaces, but would be

contained to a relatively small area. Therefore, for these resources we evaluated other projects/actions within the Hydraulic Unit Code (HUC) 12 sub-watershed. We conclude in section B.3.2 of this EA that the Project would have no effect on any federally listed species. Consequently, cumulative impacts on federally listed species are not considered further.

- Impacts on cultural resources would also be largely contained within or adjacent to proposed Project workspaces. Therefore, we evaluated other projects/actions that overlapped with known areas of potential; effects for cultural features potentially affected by the Project. However, as no projects were identified within or adjacent to the Project resources, cumulative impacts on cultural features are not discussed further.

- Temporary impacts on air quality, including fugitive dust, would be largely limited to areas immediately around active construction. We evaluated other projects/actions within 0.25 mile that overlap in time with construction activities.

- Long-term impacts on air quality would be largely contained within about a 50-kilometer radius. We considered projects with long-term stationary emission sources within a 50-kilometer radius of the Project. A table of the projects/actions analyzed can be found in appendix 3.

- Long-term impacts on NSAs were evaluated by identifying other stationary source projects with the potential to result in significant noise that would affect the same NSAs within 1 mile of the Project compressor stations.

- Short-term impacts on NSAs during construction would be temporary and short-term in nature, and limited to 10 hour days, six days per week; however, specialized construction techniques, and/or weather-related events may require 24-hour construction on a limited basis. Due to the limited scope of the short-term cumulative noise impacts to NSAs we did not consider this any further in this analysis.

- We used 0.5 mile as the geographic scope for the analysis of cumulative impacts on land use.

- The geographic scope identified for the cumulative impacts on socioeconomics was the parishes in which the Project is being constructed.

Our preliminary analysis determined that the Project would contribute either minimal or no cumulative impact on soils and geology, as discussed further below. Potential cumulative impacts associated with geologic mineral resources may include disruption or loss of access to potential resource at mining facilities or reserves. No mineral resources would be affected by the Project. Given the relative distance to active mining or mineral resource exploration, no anticipated cumulative impacts to geologic resources are expected.

Gulf South would utilize sediment and erosion controls that will be implemented in accordance with its Plan and Procedures. Temporary erosion controls, including interceptor diversions and sediment filter devices, such as silt fences, would be installed immediately following land disturbing activities, as required and as needed. The likelihood of cumulative impacts on soils is minimal and would be limited to development or construction activities from other projects directly adjacent to the right-of-way that could increase the erosion potential or affect soils in agricultural or residential areas.

Projects within the Geographic Scope

Table 14 identifies the past, present, and reasonably foreseeable projects or actions within the geographic resource scopes defined above, excluding those only within the geographic scope for air quality which are listed appendix 3. These projects were identified by a review of publicly available information; aerial and satellite imagery; consultations with federal, state, and local agencies/officials and development authorities; and information provided by Gulf South.

The impacts associated with the abandonment activities would be temporary as all facilities associated with the construction would be below ground and the existing grade would be fully restored. This action shares workspaces with the construction areas affected by the Project. The non-jurisdictional electric power line and waterline would all be installed within areas proposed to be cleared for temporary workspace associated with the Project access roads and with the Montz Compressor Station. As such we have included these impacts of these actions in our environmental analysis above and any cumulative impacts are not discussed further.

Table 14: Other Projects Potentially Contributing to Cumulative Impacts					
Project Name	**Description**	**Estimated Construction Date**	**Location Relative to the Proposed Project**	**Permits required**	**Resource Areas Cumulatively Affected [a]**
Electric power line installation	Installation of a 600-foot electric power line by Entergy to provide power to the Montz Compressor Station	Late 2017-2018	Within Project footprint	Appropriate federal, state, and local permits as determined and secured by the utility company	Water Use and Quality; Wetlands, Fish, Wildlife, and Vegetation; Soils; Geology; Cultural Resources; Noise
Waterline installation	Installation of water line by St. Charles Parish Department of Waterworks to provide municipal water to the Montz Compressor Station	Late 2017-2018	Within Project footprint	Appropriate federal, state, and local permits as determined and secured by the utility company	Water Use and Quality; Wetlands, Fish, Wildlife, and Vegetation; Soils; Geology; Cultural Resources; Noise
Abandonment Activities at Index 270-94 tie-in	Removal of approximately 80 feet of 12-inch-diameter pipeline by Gulf South	Prior to construction of the Project	Within Project footprint	Appropriate federal, state, and local permits	Water Use and Quality; Wetlands, Fish, Wildlife, and Vegetation; Soils; Geology; Cultural Resources; Noise; and Socioeconomic Resources
Entergy St. Charles Power Project	Entergy's proposed existing power plant expansion located adjacent to the Little Gypsy Power Plant	Late 2016 – 2019	1.72 miles southwest	Title V Operating Permit; New Source Review, PSD Permit Modification; Threatened and Endangered Species Clearance; National Historic Preservation Act Clearance Letter; Coastal Use Permit; Section 10 and 404 Permit; FAA Obstruction Evaluation/Airport Airspace Analysis – Temporary Crane; Pipeline Crossing and Utility Permit Supplemental; Highway Access Connection	Water Use and Quality; Wetlands, Fish, Wildlife, and Vegetation; and Air Quality
Monsanto Plant Expansion	Expansion of the Monsanto's existing Dicamaba Manufacturing Plant in Luling, LA.	Late 2016 – mid 2019	Approximately 9 miles southeast	Title V Air Permit Renewal: Permit Number: 2557-V6	Air Quality, Socioeconomics
Ascension Pipeline, LLC	35 miles of new 12-inch pipeline, spanning Ascension, St. James, and St. John the Baptist parishes.	Late 2016 – 2017 (in-service)	Approximately 10 miles west	Section 401, Section 404 (Permit numbers MVN: 2015-01960-CM WQC #151201-01)	Air Quality, Socioeconomics

Cumulative impacts on wetlands; water use and quality; fish, wildlife, and vegetation; air quality; noise; and socioeconomics could occur and are discussed further.

Wetlands

The Entergy St. Charles Project and the proposed Project are both subject to Section 404 permitting with the USACE. According to the USACE Section 404 of the CWA permit for the Entergy St. Charles Power Project (Permit Application Number MVN-2008-0031-EOO) the proposed power station would permanently impact 0.89 acres of Waters of the United States and temporarily impact 0.58 acres. In addition it is stated that the project would be located within the existing boundary of the Entergy Louisiana, LLC Little Gypsy Generating Plant. This permit was issued on July 22, 2016 and reportedly Entergy Louisiana LLC received a "letter of no objection" on August 29, 2016.

Gulf South's project would affect about 2.3 acres of wetlands. The other projects listed in table 14 may also impact wetland resources. However, we conclude that with implementation of Gulf South's proposed construction procedures and mitigation measures, the Project would not contribute to a significant cumulative impact on wetland resources.

Water Use and Quality

The Project would not contribute to cumulative groundwater impacts. The Entergy St. Charles project is located within the same watershed as the Project. Concurrent construction of the Entergy St. Charles Power Project, which is expected to impact approximately 12.7 acres, within the vicinity of the proposed Project could increase the amount of exposed soil in the area and potentially extend the time it is exposed. These exposed soils may increase the potential for soil erosion and result in increased sedimentation in surface waterbodies. To minimize impacts from clearing, Gulf South would only clear vegetation where necessary. In addition, vegetation would be allowed to regenerated following construction completion in accordance with Gulf South's Plan.

Gulf South would implement best management practices required by the USACE and EPA, which would ensure avoidance, minimization, and or/ mitigation of potential impacts on surface water. Additionally, all impacts on waterbodies crossed by the Project would be temporary and minor, as discussed in section B.2.2 of this EA and

impacts on wetlands in the Project area would not be significant as discussed in section B.2.5 of this EA. Therefore, the Projects' contribution to cumulative impacts on surface water resources would be minor and the cumulative impacts of all projects within the same geographic scope would also be minor.

We conclude that with implementation of Gulf South's proposed construction procedures and mitigation measures, the Project would not contribute to a significant cumulative impact on water resources.

Fish, Wildlife, and Vegetation

Clearing and grading of pipeline rights-of-way, contractor yards, well pads, and temporary access roads for the proposed projects and other nearby projects would result in vegetation impacts ranging from temporary to permanent. Impacts on agricultural areas, open lands and other herbaceous areas would be temporary, as these areas would be restored quickly following construction. Longer-term impacts would occur where forested areas are cleared for temporary workspaces because these areas could take decades to return to pre-construction conditions. Permanent impacts would occur where forested lands are cleared for establishment and maintenance of permanent rights-of-way, access roads, or aboveground structures.

The Entergy St. Charles Project is within the same HUC 12 watersheds of the Project. Impacts on vegetation and wildlife habitat due to the construction of the Entergy St. Charles Project are expected to be minor as construction of the project would take place within the existing boundary of the Entergy Louisiana, LLC Little Gypsy Generating Plant.

Gulf South would minimize impacts on vegetation and wildlife habitat by collocating the Project with existing rights-of-way where practicable and by implementing the measures in its Plan and Procedures. As described in section B.3 of this EA, impacts on vegetation and wildlife would be mostly short-term. Based on the fact that the Project would contribute minor and mostly temporary impacts and the limited footprint of the other projects in the geographic scope, we conclude that cumulative impacts on vegetation and wildlife would be minor.

Cumulative impacts on fish would be similar to what is discussed for surface water resources. We conclude that the Project's contribution to cumulative impacts on

fisheries would be minor and would not cause a significant cumulative impact when considered with the other identified projects within the geographic scope.

Air Quality and Noise

Construction of most of the reasonably foreseeable future projects and activities listed in table 14 and appendix 3 would involve the use of heavy equipment that would generate emissions of air contaminants, fugitive dust, and noise. Construction and operation of the Montz Compressor Station would contribute cumulatively to air quality impacts. The Project area is designated attainment for all criteria pollutants.

Construction activities for the proposed Project would result in temporary increases in emissions of some pollutants due to the use of equipment powered by diesel or gasoline engines. Construction activities would also result in the temporary generation of fugitive dust due to land clearing and grading, ground excavation, and cut and fill operations. The construction equipment emissions would result in short-term fugitive emissions that would be highly localized, temporary, and intermittent. There are no projects listed in table 14 and appendix 3 that are located within 0.25-mile of the Project and would have construction activities occurring at the same time. All of the projects with construction occurring concurrently are located sufficiently far away so as not to result in cumulative air quality impacts.

The operation of the Montz Compressor Station would be a source of air emissions and will impact air quality. Gulf South's air quality modeling included all permitted emissions sources within 10-kilometers of the Project. The air quality model is further discussed in section B.7.3. Modeled emission sources included the Entergy St. Charles Power Project, among hundreds of other individual sources.

We reviewed the list of existing and future emission sources listed in appendix 3. The majority of these projects are considered minor emissions sources, and given the distance and the magnitude of emissions, we determined that there would not be cumulative air quality impacts near the Project significantly in excess of the cumulative air quality model developed by Gulf South.

The results indicate that future emission sources, combined with operational project emissions, would not result in exceedences of the NAAQS and will therefore remain protective of human health. Based on these results, we conclude there will not be a significant impact to cumulative air quality.

Operation of the Montz Compressor Station would contribute to noise impacts within a mile of the Project. The analysis completed in section 6.3.3 quantifies predicted noise levels, including estimates of project-related noise based on proposed equipment and existing ambient noise levels collected by a noise survey. Predicted impacts to noise levels would likely range from 3.7 dBA to 7.8 dBA at nearby NSAs. However, the mitigation measures proposed by Gulf South would ensure that the FERC's noise criterion of 55 dBA would not be exceeded and the overall impact to noise levels would not be significant. In considering other potential noise sources in the geographic scope and the contributing of the Project, we conclude that a significant cumulative noise impact would not occur during construction or operation of the Project.

Socioeconomics

The parishes where the Project would be constructed were considered to be the geographic scope for socioeconomic impacts. As discussed in section B.5.2, the majority of the workforce for the Project is anticipated to be local residents. Based on the construction schedule of the Ascension Pipeline, LLC's project most of the temporary construction workers associated with the pipeline would have relocated prior to the start of the Project.

Construction of Monsanto's Plant Expansion is expected to create approximately 450 temporary and 100 permanent jobs. It is unknown how many potential jobs Entergy's St. Charles Power Project is expected to create. Concurrent construction of these two projects with the Project may result in cumulative impacts on socioeconomics in the Project area. However, it is not anticipated that the permanent workforce would significantly impact housing or public services in St. Charles or St. John the Baptist parishes. In addition, due to the proximity of all three projects to the New Orleans Louisianan area, a significant population area, the need for temporary housing could be accommodated.

The local economy is expected to experience a small amount of growth due to spending of non-local workers associated with the three projects. In addition an increase in tax revenue is likely to have a positive cumulative impact on the parishes. Lastly, as discussed in section B.5.3 there are no significant impacts on environmental justice communities from the Project.

Conclusion

The Project would occur in a region that has been substantially affected by previous human activity and development is expected to continue in the region. As discussed in this EA, the environmental impacts associated with the Project would be less than significant and we conclude that construction and operation of the Project would not result in a significant cumulative impact on any resource in the region.

C. ALTERNATIVES

In accordance with NEPA, we evaluated alternatives to Gulf South's proposed action to determine whether they would be preferable to constructing the Project as proposed. Our evaluation criteria for selecting potentially preferable alternatives are:

- technical and economic feasibility and practicality;
- significant environmental advantage over the proposed action; and
- the ability to satisfy Gulf South's stated purpose.[8]

Our evaluation of alternatives is based on project-specific information provided by the applicant; input from stakeholders; publicly available information; our consultations with federal and state resource agencies; and our expertise and experience regarding the siting, construction, and operation of natural gas transmission facilities and their potential impact on the environment.

Evaluation Process

Through environmental comparison and application of our professional judgment, each alternative is considered to a point where it becomes clear if the alternative could or could not meet the three evaluation criteria. To ensure a consistent environmental comparison and to normalize the comparison factors, we generally use desktop sources of information (e.g., publicly available data, geographic information system data, aerial imagery) and assume the same right-of-way widths and general workspace requirements. Where appropriate, we also use site-specific information (e.g., field surveys or detailed designs). Our environmental analysis and this evaluation consider quantitative data (e.g., acreage or mileage) and uses common comparative factors such as total length, amount of collocation, and land requirements. Our evaluation also considers impacts on both the natural and human environments. These impacts were described in detail in section B of this EA. Because the alternatives represent mostly alternative locations for natural gas facilities, the specific nature of these impacts on the natural and human environments would generally be similar to the impacts described in section B. In

[8] As indicated in Section A, Gulf South proposes to provide pressure management between its Index 270 and Index 270-94 pipeline system in order to provide about 0.13 billion cubic feet per day of enhanced firm transport service to Entergy Louisiana's proposed power plant facility.

recognition of the competing interests and the different nature of impacts resulting from an alternative that sometimes exist (i.e. impacts on the natural environment versus impacts on the human environment), we also consider other factors that are relevant to a particular alternative and discount or eliminate factors that are not relevant or may have less weight or significance.

The Evaluation Criteria

Many alternatives are technically and economically feasible. Technically practical alternatives, with exceptions, would generally require the use of common construction methods. An alternative that would require the use of a new, unique or experimental construction method may not be technically practical because the required technology is not available or is unproven. Economically practical alternatives would result in an action that generally maintains the price competitive nature of the proposed action. Generally, we do not consider the cost of an alternative as a critical factor unless the added cost to design, permit, and construct the alternative would render the project economically impractical.

Determining if an alternative provides a significant environmental advantage requires a comparison of the impacts on each resource as well as an analysis of impacts on resources that are not common to the alternatives being considered. The determination must then balance the overall impacts and all other relevant considerations. In comparing the impact between resources, we also considered the degree of impact anticipated on each resource. Ultimately, an alternative that results in equal or minor advantages in terms of environmental impact would not compel us to shift the impacts from the current set of landowners to a new set of landowners.

Lastly we determine if an alternative has the ability to satisfy Gulf South's State purpose of providing pressure management between its Index 270 and Index 270-94 pipeline system in order to provide 0.13 Dth/d of enhanced firm transport service to Entergy Louisiana's proposed power plant facility.

One of the goals of an alternatives analysis is to identify alternatives that avoid significant impacts. In section B, we evaluated each environmental resource potentially affected by the Project and concluded that constructing and operating the Project would not significantly impact these resources. Consistent with our conclusions, the value gained by further reducing the (not significant) impacts of the Project when considered

against the cost of relocating the route/facility to a new set of landowners was also factored into our evaluation.

1. NO-ACTION ALTERNATIVE

If the Commission decides to deny the proposed action, the environmental impacts addressed in this EA would not occur. Under this alternative, the Project would not meet its purpose and need as the currently existing facilities are not adequate to supply additional pipeline capacity for the transportation of natural gas to meet customer demand. This would lead to other projects and activities, with their own environmental footprint, to be constructed to meet the demand for natural gas transportation in the Project area. Therefore, we conclude that the no-action alternative would not meet the objectives of the proposed action and is unlikely to provide a significant environmental advantage over the proposed action.

2. SYSTEM ALTERNATIVES

Several system alternatives were evaluated that consisted of including various pipe looping configurations and/or increases in compression at existing sites. These alternatives are as followed:

- System Alternative 1: This alternative involves building only pipeline looping (no compression) to increase system capacity. The pipe loop only alternative requires approximately 43.5 miles of 24-inch-diameter loop, assuming Gulf South follows their existing right-of-way.
- System Alternative 2: This alternate involves looping and minimal compression to increase system capacity. It requires 42.5 miles of 24-inch-diameter loop. This alternative would require modifications to the existing Rodrigue Compressor Station.
- System Alternative 3: This alternative involves the expansion of the existing Rodrigue Compressor Station, with only minimal pipeline construction to increase system capacity. This alternative would require additional compression of approximately 4,800 horsepower (hp) to be installed, as well as modification and overhaul of two existing units at the Rodrigue Compressor Station totaling 14,500 hp. This amount is greater than the 5,000 hp proposed at Montz Compressor Station. In addition, this alternative would require the construction of approximately 2 miles of 16-inch-diamter loop of Index 270-94.

Systems Alternative 1 and 2 would result in significantly more environmental impacts compared to the currently proposed Project as they would require more than 40 miles of pipeline construction. System Alternative 3 would affect approximately 7.7 acres due to temporary workspaces and permanent right-of-way associated with the 2 miles of 16-inch-diamter pipeline. In addition, System Alternative 3 would result in greater emissions from the additional compression that would be necessary to transport the gas a greater distance. Based on the information above, we conclude that no system alternative would provide a significant environmental advantage over the Project.

3. PIPELINE ROUTE ALTERNATIVE

During our review of the Project, we were unable to identify any pipeline route alternatives that would satisfy the evaluation criteria. Further, we received no requests from stakeholders to evaluate a pipeline alternative. Therefore, we did not conduct any further analysis of a pipeline alternative.

4. ABOVEGROUND FACILITY SITE ALTERNATIVES

The factors considered for an aboveground facility are different than those considered for a pipeline route because an aboveground facility is a fixed location rather than a linear facility. Unlike a pipeline, an aboveground facility is visible during operations and, in most cases, generates noise and air emissions. In evaluating alternative locations, we consider: amount of available land; current land use, as well as adjacent land use; location accessibility; engineering requirements; and impacts on the natural and human environments. Whether or not a parcel is available for purchase is also a factor in determining the suitability of a site as an alternative.

We evaluated two alternative site locations for the Montz Compressor Station. These alternative sites were identified as possible locations based on their proximity to Gulf South's Index 270 and Index 270-94 Lateral in addition to Entergy’s proposed St. Charles Power Station.

Alternative Site One is located approximately 0.3 mile to the northwest of the proposed compressor station site and would require 27.1 acres of land for construction of the station, access roads, and pipeline and would require 2.2 acres for the operation of the station. The pipeline associated with Alternative Site 1 would be 0.51-mile-long.

Alternative Site Two is located 0.20 mile to the southwest of the proposed compressor station site and would require 7.0 acres for construction with 2.2 acres converted to industrial use for the compressor station.

Prior to the submission of its application, Gulf South conduced preliminary site evaluations for the location of the Montz Compressor Station. No sites were considered directly to the south and southeast of the Project site due to the presence of extensive wetlands in these areas as noted on the USFWS National Wetland Inventory data. In addition, sites south of Alternative 1 were determined to be subject to USACE Section 408 permitting due to their proximity to levees. Also, based on aerial photographs it was determined that sites in these locations would result in greater land disturbance impacts, especially to forested areas, in comparison to the Project.

Table 15 below compares the Project site to Alternative Sites One and Two.

Table 15: Montz Compressor Station Site Alternatives Comparison

Category	Proposed Site	Alternative Site 1	Alternative Site 2
Construction Land Disturbance (acres) [a]	13.3	27.1	7.0
Operation Land Disturbance (acres) [b]	2.2	2.2	2.2
Land Use (acres) [a, c]			
Forest (non-wetland)	0.00	5.6	0.00
Open	0.00	4.9	1.0
Developed	0.00	6.3	0.00
Wetland Impacts (acres) [a, e]			
Total Wetland Conversion	**10.5**	**9.3**	**4.7**
Total Wetland Fill	**2.8**	**0.89**	**1.2**
Approximate Length of Pipeline (feet)	900	2,697	314
Prime Farmland Impact (acres) [b]	2.2	2.2	2.2
Noise Sensitive Areas within 0.50 mile	8	7	71
Waterbody Impacts [d]			
Minor Waterbodies	7	11	3
Intermediate Waterbodies	0	1	0
Total Waterbody Impacts	**7**	**12**	**3**

[a] Acreage presented consists of land affected during construction of the Project facilities, including the proposed compressor station, pipeline, and access roads, and is inclusive of land affected during operation.
[b] Acreage presented includes permanent impacts associated with only the compressor station facility footprint.
[c] Land Use numbers are based on a desktop review of National Wetlands Inventory data and aerial imagery.
[d] Waterbody impacts represent the total number of waterbody crossings associated with construction of the Project facilities, including the proposed compressor station, pipeline, and access roads.
[e] Wetland impacts for the Proposed Site, Alternative Site 1, and Alternative Site 2 assumes that any permanent impact associated with the compressor station facility footprint and access roads was considered wetland fill and any impact associated with the pipeline right-of-way and/or temporary impact is considered wetland conversion.

As depicted in the table 15, implementing Alternative Site 1 would affect slightly less wetlands, but would impact more waterbodies. It would also have slightly greater forest impacts than the proposed site. In addition, it would have a similar impact on noise sensitive areas. It should be noted that the land for the compressor station at this location was not available for purchase. Given these considerations, we conclude that Alternative Site 1 would not provide a significant environmental advantage over the proposed site.

Alternative Site 2 would have less impacts on wetlands and waterbodies. However, it would have a far greater number of noise sensitive areas within 0.5 miles of the facility. Based on impacts on the human environment, we conclude that Alternative Site 2 would not provide a significant environmental advantage over the proposed site.

5. CONCLUSION

We reviewed alternatives to Gulf South's proposal based on our independent analysis and solicited input from stakeholders. No system or pipeline route alternatives were identified. Neither of the two compressor station alternatives identified provided a significant environmental advantage over the proposed location. Based on these findings we conclude that the proposed action is the only identified alternative that meets our evaluation criteria.

D. STAFF'S CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this EA, we conclude that approval of the project would not constitute a major federal action significantly affecting the quality of the human environment. This finding is based on our environmental analysis as described above, information provided in Gulf South's application and supplemental filings, and its implementation of our recommended mitigation measures. We recommend that the Commission order include the mitigation measures listed below as conditions to any certificate the Commission may issue.

1. Gulf South shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the EA, unless modified by this Order. Gulf South must:

    a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);
    b. justify each modification relative to site-specific conditions;
    c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
    d. receive approval in writing from the Director of the Office of Energy Projects (OEP) **before using that modification**.

2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during the construction and operation of the project. This authority shall allow:

    a. the modification of conditions of this Order; and
    b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project abandonment, construction, and operation.

3. **Prior to any construction**, Gulf South shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors and contractor personnel will be informed of the environmental inspector's authority and have been or will be trained on the

implementation of the environmental mitigation measures appropriate to their jobs before becoming involved with construction and restoration activities.

4. The authorized facility locations shall be shown in the EA, as supplemented by filed alignment sheets of plot plans. **As soon as they are available, and before the start of construction,** Gulf South shall file with the Secretary any revised detailed survey alignment maps/sheet at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheet.

   Gulf South's exercise of eminent domain authority granted under NGA section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Gulf South's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipeline to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

5. Gulf South shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, and documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area.**

   This requirement does not apply to extra workspace allowed by the FERC *Upland Erosion Control, Revegetation, and Maintenance Plan* and/or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

a. implementation of cultural resources mitigation measures;
b. implementation of endangered, threatened, or special concern species mitigation measures;
c. recommendations by state regulatory authorities; and
d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

6. **Within 60 days of the acceptance of the Certificate and before construction begins**, Gulf South shall file an Implementation Plan with the Secretary for review and written approval by the Director of OEP. Gulf South must file revisions to the plan as schedules change. The plan shall identify:

a. how Gulf South will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EA, and required by the Order;
b. how Gulf South will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;
c. the number of EIs assigned and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;
e. the location and dates of the environmental compliance training and instructions Gulf South will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change),
f. the company personnel (if known) and specific portion of Gulf South's organization having responsibility for compliance;
g. the procedures (including use of contract penalties) Gulf South will follow if noncompliance occurs; and
h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
   (1) the completion of all required surveys and reports;

(2) the environmental compliance training of onsite personnel;
(3) the start of construction; and
(4) the start and completion of restoration.

7. Gulf South shall employ at least one EI per construction spread. The EIs shall be:

a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;
b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;
c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;
d. a full-time position, separate from all other activity inspectors;
e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
f. responsible for maintaining status reports.

8. Beginning with the filing of its Implementation Plan, Gulf South shall file updated status reports with the Secretary on a **biweekly basis until all construction and restoration activities are complete**. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:

a. an update on Gulf South's efforts to obtain the necessary federal authorizations;
b. the construction status of the project, work planned for the following reporting period, and any schedule for stream crossings or works in
c. other environmentally sensitive areas;
d. a listing of all problems encountered and each instance of noncompliance observed by the EI(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permits requirements imposed by other federal, state, or local agencies);
e. a description of the corrective actions implemented in response to all instances of noncompliance, and their cost;
f. the effectiveness of all corrective actions implemented;

g. a description of any landowner/resident complaints which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and

h. copies of any correspondence received by Gulf South's from other federal, states, or local permitting agencies concerning instances of noncompliance, and Gulf South's response.

9. **Prior to receiving written authorization from the Director of OEP to commence construction of any project facilities**, Gulf South shall file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).

10. Gulf South must receive written authorization from the Director of OEP **before placing the project into service.** Such authorization will only be granted following a determination that rehabilitation and restoration of the right- of-way and other areas affected by the project are proceeding satisfactorily.

11. **Within 30 days of placing the authorized facilities in service**, Gulf South shall file an affirmative statement with the Secretary, certified by a senior company official:

a. that the facilities have been constructed in compliance with all applicable conditions, and the continuing activities will be consistent with all applicable conditions; or

b. identify which of the certificate conditions Gulf South has complied with or will comply with. This statement shall also identify any areas affected by the project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

12. Gulf South shall **not begin construction** of the project until it files with the Secretary a copy of the coastal zone consistency determination by the OCM.

13. Gulf South shall file a noise survey with the Secretary **no later than 60 days** after placing the Montz Compressor Station in service. If a full load condition noise survey is not possible, Gulf South shall provide an interim survey at the maximum possible horsepower load and provide the full load survey **within 6 months.** If the noise attributable to the operation of all of the equipment at the

Montz Compressor Station under interim or full horsepower load conditions exceeds an L_{dn} of 55 dBA at any nearby (NSAs or noise-sensitive areas), Gulf South shall file a report on what changes are needed and shall install the additional noise controls to meet the level within 1 year of the in-service date. Gulf South shall confirm compliance with the above requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.

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APPENDIX 1
Birds of Conservation Concern with Potential to Occur within the Project Area

Birds of Conservation Concern with Potential to Occur within the Project Area				
Common Name	**Scientific Name**	**Season Present**	**Preferred Habitat**	**Assessment of Potential Impacts**
American Bittern	Botaurus lentignosus	Wintering	Prefers large freshwater and sometimes brackish marshes, including lake and pond edges with vegetative cover and marshes with open water patches and bottom aquatic vegetation, for wintering habitats.	Suitable habitat is not present in the Project area.
American Oystercatcher	Haematopus palliatus	Year- round	Occur along tidal flats, coastal beaches, salt marshes, estuaries and river mouths. Nests on islands, among dunes, in salt marsh, on dredge spoil islands.	Suitable habitat is not present in the Project area.
Bald Eagle	Haliaeetus leucocephalus	Year- round	Breed and winter in areas close to a coast, river or lake. Prefer conifers for nesting and roosting and tend to avoid areas with high human traffic.	Suitable habitat exists in Project area; however, no nests were observed during field surveys. If individuals are present during winter clearing activities, they will likely relocate to adjacent suitable habitat.
Black Skimmer	Rynchops niger	Year- round	Prefers tidal flats and ocean beaches, and calm coastal waters protected by open surf. Nesting occurs on beaches, shell banks and sandy islands.	Suitable habitat is not present in the Project area.
Brown-headed Nuthatch	Sitta pusilla	Year- round	Prefers mature, open pine forests. Typically nests in dead tree cavities.	Suitable habitat is not present in the Project area.
Henslow's Sparrow	Ammodramus henslowii	Wintering	Various types of rank weedy field are preferred wintering habitats.	Suitable wintering habitat exists in the Project area; however, individuals potentially present during construction would likely avoid the area or displace to similar adjacent habitats.
Le Conte's Sparrow	Ammodramus leconteii	Wintering	Winters in damp weedy fields, coastal prairies, and shallow freshwater marshes.	Suitable wintering habitat exists in the Project area; however, individuals potentially present during construction would likely avoid the area or displace to similar adjacent habitats.
Least Bittern	Ixobrychus exilis	Breeding	Breeds in freshwater or brackish marshes and reedy ponds.	Suitable habitat is not present in the Project area.

Least Tern	Sterna antillarum	Breeding	Breeds on sandy or gravelly beaches. Found along the coasts of bays, estuaries, lagoons, beaches, lakes, and rivers.	Suitable habitat is not present in the Project area.
Lesser Yellowlegs	Tringa flavipes	Wintering	Wintering occurs in various habitats such as tidal flats during the dry season and adjacent marshes and shallow lagoons during the rainy season.	Suitable habitat is not present in the Project area.
Loggerhead Shrike	Lanius ludovicianus	Year- round	Occurs in semi-open country with good lookout posts such as trees, wires, and shrubs. Breeds in semi-open areas including large clearings in wooded regions to open grasslands with scattered trees or shrubs.	Suitable habitat exists in Project area; however, species is highly mobile and will most likely relocate to adjacent suitable habitat. Additionally, all clearing activities will occur outside of the nesting season.
Marbled Godwit	Limos fedoa	Wintering	Winters mostly in coastal regions, but can be found around marshes, ponds, and tidal mudflats.	Suitable habitat is not present in the Project area.
Mississippi Kite	Ictinia mississippiensis	Breeding	Breeds in tall trees near open country, often along rivers or groves near prairies.	Suitable breeding habitat exists in Project area; however, clearing activities will occur outside of the nesting season.
Nelson’s Sparrow	Ammodramus nelson	Wintering	Prefers coastal marshes as wintering habitat.	Suitable habitat is not present in the Project area.
Orchard Oriole	Icterus spurius	Breeding	Breeds in semi-open areas with deciduous trees including orchards, suburbs, forest edges and clearings, and prairie groves.	Suitable breeding habitat exists in Project area; however, clearing activities will occur outside of the nesting season.
Painted Bunting	Passerina ciris	Breeding	Breeds in thickets, hedgerows, forest edges and clearings, and brushy undergrowth of open woods.	Suitable breeding habitat exists in Project area; however clearing activities will occur outside of the nesting season.

Peregrine Falcon	Falco peregrinus	Wintering	Wintering habitat includes open lands, such as farmlands, marshes, lakeshores, river mouths, tidal flats, and broad river valleys.	Suitable wintering habitat exists in Project area; however, individuals potentially present during construction would likely avoid the area or displace to similar adjacent habitats.
Prothonotary Warbler	Protonotaria citrea	Breeding	Breeds in flooded river bottomland hardwoods; borders of lakes, rivers, and ponds in areas with slow- moving or standing water. Preferred areas for nesting sites found over or near water within a cavity, snag, or living tree.	Suitable breeding habitat exists in Project area; however, clearing activities will occur outside of the nesting season.
Red Knot	Calidris canutus rufa	Wintering	Wintering habitat primarily includes intertidal, marine habitats, especially near coastal inlets, estuaries, and bays.	Suitable habitat is not present in the Project area.
Red-headed Woodpecker	Melanerpes erythrocephalus	Wintering	Occurs in open areas such as clearings in woods, forest edges, orchards, and groves of tall trees in open areas. Wintering habitat is influenced by food source, such as acorns or beechnuts.	Suitable wintering habitat exists in the Project area; however, individuals potentially present during construction would likely avoid the area or displace to similar adjacent habitats.
Rusty Blackbird	Euphagus carolinus	Wintering	Winters in areas with trees near water such as wooded swamps and riverside forest.	Suitable wintering habitat exists in the Project area; however, individuals potentially present during construction would likely avoid the area or displace to similar adjacent habitats.
Sedge Wren	Cistothorus platensis	Wintering	Coastal prairies and rank weedy meadows are preferred wintering habitat.	Suitable wintering habitat exists in the Project area; however, individuals potentially present during construction would likely avoid the area or displace to similar adjacent habitats.
Short-eared Owl	Asio flammeus	Wintering	Winters in open country including meadows, coastal dunes, and shrubby areas.	Suitable wintering habitat exists in the Project area; however, individuals potentially present during construction would likely avoid the area or displace to similar adjacent habitats.

Snowy Plover	Charadrius alexandrinus	Wintering	Wintering occurs on barrier islands or along the coast above the high tide mark. Dry, sandy, or shell beaches are preferred.	Suitable habitat is not present in the Project area.
Swainson's Warbler	Limnothlypis swainsonii	Breeding	Breeds within bottomlands as well as swamps that consist of large tracts with dense understory and sparse ground cover. Most likely to occur in canebrakes and dwarf palmetto. Nest sites found at edge of dense vegetative growth. Nests placed near or over water.	Suitable breeding habitat exists in Project area; however, clearing activities will occur outside of the nesting season.
Swallow-tailed Kite	Elanoides forficatus	Breeding	Nesting occurs within open woodland in tall trees, such as pine, cypress, and cottonwood. Prefers to place nest near the top of the tallest tree (>60′ above ground).	Suitable breeding habitat exists in Project area; however, clearing activities will occur outside of the nesting season.
Whimbrel	Numenius phaeopus	Wintering	Tidal flats, shorelines and occasionally inland habitats for wintering, such as wetlands, short-sward wet and dry grasslands, and farmland.	Suitable wintering habitat exists in the Project area; however, individuals potentially present during construction would likely avoid the area or displace to similar adjacent habitats.
Worm-eating Warbler	Helmitheros vermivorum	Migrating	Migration occurs in forest, woodland, scrub, and thicket habitats.	Suitable habitat exists in Project area; however, individuals potentially present during construction would likely avoid the area or displace to similar adjacent habitats.
Yellow Rail	Coturnicops noveboracensis	Wintering	Winters in dense, deep grass, rice fields and drier brackish and fresh-water marshes.	Suitable wintering habitat exists in the Project area; however, individuals potentially present during construction would likely avoid the area or displace to similar adjacent habitats.

Sources: BirdLife International, 2016; Louisiana Department of Wildlife and Fisheries (LDWF), 2016a; National Audubon Society, 2016; USFWS IPaC System USFWS, 2016a

APPENDIX 2
Demographics and Low Income Populations for Census Block Groups within 5 miles of the Project Area

Census Tract	Census Block Group	Total Population	Persons Below Poverty Level (%)	White Non-Hispanic (%)	African American (%)	Hispanic (%)	Asian (%)	Native American (%)	Pacific Islander (%)	Some Other Race (%)	Two or More Races (%)
St. Charles Parish											
601	1	2,061	7.1	72.3	22.2	3.8	0.3	0.0	0.0	0.0	1.4
624	1	373	18.8	3.2	96.8	0.0	0.0	0.0	0.0	0.0	0.0
	2	1,105	10.9	86.0	11.0	1.8	0.0	0.0	0.0	0.0	1.3
625	1	724	6.1	94.2	1.8	0.0	0.0	0.0	0.0	0.0	4.0
	2	1,450	14.3	89.9	6.3	3.2	0.0	0.0	0.0	0.0	0.6
	3	76	21.1	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
	4	788	17.8	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
627	1	1,407	13.0	66.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0
	2	935	74.0	7.7	90.5	1.8	0.0	0.0	0.0	0.0	0.0
	3	2,003	15.9	31.8	51.0	9.6	0.0	0.0	0.0	0.0	7.6
632	2	775	4.4	89.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0
St. John the Baptist Parish											
701	1	1,389	4.9	64.4	30.1	4.7	0.9	0.0	0.0	0.0	0.0
	2	1,102	6.7	80.4	9.3	8.8	0.0	0.0	0.0	1.5	0.0
702	1	2,185	2.2	44.7	34.5	12.8	0.0	0.0	0.0	0.7	7.4
	2	2,733	23.3	4.0	90.5	5.6	0.0	0.0	0.0	0.0	0.0
	3	2,461	8.7	0.0	93.7	6.3	0.0	0.0	0.0	0.0	0.0
703	1	1,547	20.7	42.1	56.7	1.2	0.0	0.0	0.0	0.0	0.0
	2	768	11.1	77.7	22.3	0.0	0.0	0.0	0.0	0.0	0.0
	3	1,036	26.3	55.1	9.7	35.2	0.0	0.0	0.0	0.0	0.0
	4	2,505	2.0	56.0	25.0	0.0	6.5	0.0	0.0	0.0	12.5
704	1	2,557	1.6	63.2	25.9	6.0	3.2	0.0	0.0	0.9	0.8
	2	1,719	18.8	57.7	35.3	5.4	0.0	0.0	0.0	0.0	1.6
705	2	1,459	13.8	4.7	83.8	2.7	0.0	0.0	6.8	0.0	2.1
	3	1,897	5.4	45.7	39.0	15.3	0.0	0.0	0.0	0.0	0.0
708	1	976	22.2	0.0	99.2	0.0	0.1	0.0	0.0	0.0	0.7
709	1	1,444	20.3	18.7	79.3	0.0	0.0	0.0	0.0	0.0	2.0

	2	1,835	5.5	47.1	48.1	4.4	0.4	0.0	0.0	0.0	0.0
710	1	1,593	25.2	51.5	37.7	7.5	0.0	0.0	0.0	0.0	3.3
	2	1,079	12.0	53.6	46.4	0.0	0.0	0.0	0.0	0.0	0.0
711	4	428	12.1	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Total		**1,414**	**1,414**	**46.9**	**46.4**	**4.5**	**0.4**	**0.0**	**3.3**	**0.1**	**1.5**
Source: U.S. Census, 2016 (https://factfinder.census.gov/faces/nav/jsf/pages/download_center.xhtml)											

APPENDIX 3

Pending LEDQ Air Permit Actions January 1st through June 16th 2016 within 50 kilometers of the Montz Compressor Station

FACILITY NAME	TRACKING #	PERMIT #	PERMIT TYPE	STATUS	RECEIVED DATE
PCS Nitrogen Fertilizer LP - Geismar Agricultural Nitrogen & Phosphate Plant	PER20160004	2240-V10	Title V Regular Permit Minor Mod	PENDING	2/25/2016
Impala Terminals Burnside LLC - Burnside Terminal	PER20160001	0180-00030-02	Minor Source/Small Source Mod	PENDING	2/18/2016
Chevron Midstream Pipelines LLC - Sorrento TENDS Pumping Station	PER20160001	0180-00215-01	Minor Source/Small Source Mod	PENDING	2/8/2016
Air Liquide Large Industries US LP - Geismar Utility Services	PER20160001	0180-00002- V3	Title V Regular Permit Admin Amendment	PENDING	1/26/2016
Bridgeline Holdings LP - Sorrento Underground Gas Storage Facility	PER20160001	0180-00048- V5	Title V Regular Permit Renewal	PENDING	1/26/2016
Rubicon LLC - Geismar Plant	PER20160003	2278-V5	Title V Regular Permit Minor Mod	PENDING	1/21/2016
BASF Corp - Geismar Site	PER20160002	3159-V0	Title V Regular Permit Initial	PENDING	1/15/2016
Kinder Morgan Liquid Terminals LLC - Geismar Methanol Terminal	PER20160001	0180-00213- V0 AA	Title V Regular Permit Admin Amendment	PENDING	1/4/2016
Boardwalk Louisiana Midstream LLC - Statewide Pipeline Operations	PER20160005	Regper - Flaring Other	Reg Permit Flaring Other	PENDING	5/18/2016
FMT Shipyard & Repair LLC - Vessel Maintenance Repair & Fabrication Yard	PER20160001	1340-00172-03	Minor Source/Small Source Mod	PENDING	5/20/2016
Cintas Corp - Cintas New Orleans #544	PER20160001	1340-00365-00	Minor Source/Small Source Initial	PENDING	3/7/2016
Entergy Louisiana LLC - Ninemile Point Plant	PER20160005	1340-00006- IV3	Title IV Permit Renewal	PENDING	2/25/2016
Safety Kleen Systems Inc	PER20160001	1340-00149-06	Minor Source Renewal/Minor Mod	PENDING	2/18/2016

IESI LA Corp - Jefferson Parish Sanitary Landfill	PER20160002	1340-00140- V7	Title V Regular Permit Minor Mod	PENDING	2/18/2016
Blackwater Harvey LLC	PER20160002	1340-00005-09	Minor Source/Small Source Mod	PENDING	2/10/2016
Entergy Louisiana LLC - Ninemile Point Plant	PER20160003	1340-00006- V4	Title V Regular Permit Renewal	PENDING	2/10/2016
Entergy Louisiana LLC - Ninemile Point Plant	PER20160004	PSD-LA- 752(M-2)	PSD Permit Modification	PENDING	2/10/2016
Harvest Pipeline Co - Golden Meadow Station	PER20160001	1560-00324-00	Minor Source/Small Source Initial	PENDING	6/6/2016
Timbalier Bay Production Complex	PER20160001	1560-00138- V7	Title V Regular Permit Admin Amendment	PENDING	6/2/2016
Leeville CF 11	PER20160001	1560-00250-03	Minor Gen Permit-Oil and Gas Initial	PENDING	4/28/2016
Golden Meadow Field Production Facility #1	PER20160001	1560-00286-01	Minor Gen Permit-Oil and Gas Mod	PENDING	4/11/2016
Cut Off 2 Tank Battery	PER20160001	1560-00141-00	Minor Source/Small Source Admin Amendmt	PENDING	4/5/2016
Valentine Chemicals	PER20160001	1560-00007-02	Minor Source Renewal/Minor Mod	PENDING	3/24/2016
Discovery Producer Services LLC - Larose Gas Processing Plant	PER20160001	1560-00120- V11	Title V Regular Permit Minor Mod	PENDING	3/21/2016
Virdia B2X LLC - Raceland Plant	PER20160001	1560-00315-01	Minor Source/Small Source Mod	PENDING	3/18/2016
Cintas Corp - Cintas Thibodaux #541	PER20160001	1560-00323-00	Minor Source/Small Source Initial	PENDING	3/7/2016
Chevron USA Inc - Bay Marchand C&I Structure	PER20160001	Variance	Variance	PENDING	2/5/2016
Clean Waste Holdings LLC - Fourchon Dock	PER20160002	1560-00322-00	Minor Source/Small Source Initial	PENDING	2/3/2016
Angelle Concrete aka Delta Concrete Products LLC - Denham Springs	PER20160001	1740-00022-01	Minor Source Renewal	PENDING	4/11/2016

Kloeckner Metals Corp - New Orleans Facility	PER20160001	2140-00122-02	Minor Gen Permit-Surf Coat & Fab Initial	PENDING	5/4/2016
Entergy New Orleans Inc - Michoud Electric Generating Plant	PER20160002	2140-00014- V5	Title V Regular Permit Minor Mod	PENDING	3/18/2016
Entergy New Orleans Inc - Michoud Electric Generating Plant	PER20160003	2140-00014- IV4	Title IV Permit Modification	PENDING	3/18/2016
East Bay Central Facility	PER20160001	2240-00145- V8AA	Title V Regular Permit Admin Amendment	PENDING	6/3/2016
Hilcorp Energy Co - West Bay Compressor Station	PER20160001	2240-00084-03	Minor Gen Permit-Oil and Gas Initial	PENDING	6/3/2016
Main Pass Block 35 Central Facility - Main Pass Block 35 Field	PER20160001	2240-00197- V10	Title V Significant Modification	PENDING	5/23/2016
Lake Washington Central Production Platform	PER20160001	2240-00065-05	Minor (Synthetic) Modification	PENDING	5/18/2016
Cox Bay Compressor Station	PER20160001	2240-00214-02	Minor Source Renewal/Minor Mod	PENDING	5/18/2016
West Delta Block 83 W5 Production Facility	PER20160001	2240-00238-07	Minor Gen Permit-Oil and Gas Mod	PENDING	5/18/2016
Venice Central Facility Tank Battery #5/BLD Tank Battery	PER20160001	2240-00158-02	Minor Gen Permit-Oil and Gas Initial	PENDING	5/5/2016
West Bay North Production Facility	PER20160001	2240-00368-01	Minor Gen Permit-Oil and Gas Mod	PENDING	5/5/2016
Tiger Pass Field Production Facility #1 - Tiger Pass Field	PER20160001	2240-00351-02	Minor Gen Permit-Oil and Gas Initial	PENDING	4/20/2016
West Delta Block 54 - Tank Battery #3	PER20160001	2240-00251- V6	Title V Regular Permit Admin Amendment	PENDING	4/7/2016
Lake Hermitage Production Facility #1	PER20160001	2240-00175-08	Minor Source/Small Source Mod	PENDING	3/30/2016

Grand Bay Compressor Station Facility	PER20160001	2240-00236- V10	Title V Regular Permit Renewal	PENDING	3/18/2016
American Midstream (LA Intrastate) LLC - Gloria Compressor Station	PER20160001	2240-00119-07	Minor Source/Small Source Mod	PENDING	3/9/2016
Valero Refining - Meraux LLC - Meraux Refinery	PER20160002	2500-00001- V13	Title V Regular Permit Minor Mod	PENDING	5/25/2016
High Point Gas Transmission LLC - Toca Junction & Separator Station	PER20160001	2500-00319- V1	Title V Regular Permit Minor Mod	PENDING	4/21/2016
Chalmette Refining LLC	PER20160012	3018-V4	Title V Regular Permit Renewal	PENDING	3/8/2016
Chalmette Refining LLC	PER20160002	3023-V7	Title V Regular Permit Renewal	PENDING	1/20/2016
Entergy Louisiana, LLC – St. Charles Power Station	PER20150001, PER20150002, PER20150003	2520-00174- V0 & PSD-LA-804	Initial Application for Part 70 Permit, PSD Permit, & Acid Rain Permit	PENDING	6/29/2015
Occidental Chemical Corp - Taft Plant	PER20160002	Regper-ENG	Reg Permit Permanent Nonemergency Engine	PENDING	6/7/2016
Enterprise Gas Processing LLC - Norco Fractionation Plant	PER20160001	Emergency	Reg Permit Permanent Emergency Engines	PENDING	6/7/2016
Jackie Bee Investments LLC - Jackie Bee Bulk Fuel Terminal	PER20160001	2520-00176-00	Minor Source/Small Source Initial	PENDING	6/2/2016
Concrete Busters of LA Inc - Ellington Levee	PER20160001	2520-00175-00	Reg Permit Air Curtain Incin. (Initial)	PENDING	5/25/2016
Monsanto Co - Luling Plant	PER20160003	2596-V4	Title V Regular Permit Renewal	PENDING	5/17/2016
Praxair Inc - Praxair St Charles Plant	PER20160002	2520-00163-02	Minor Source/Small Source Mod	PENDING	5/17/2016
Sherwood Production Facility	PER20160001	2520-00169-01	Minor Source/Small Source Mod	PENDING	4/27/2016

SL 20626 #1 Production Facility	PER20160001	2520-00166-03	Minor Gen Permit-Oil and Gas Mod	PENDING	4/26/2016
Valero Partners LA LLC St Charles Terminal	PER20160002	3161-V0	Title V General Permit Initial	PENDING	4/26/2016
Valero Refining Co - New Orleans LLC- St Charles Refinery	PER20160006	PSD-LA-619 (M12)	PSD Permit Modification	PENDING	4/16/2016
Motiva Enterprises LLC - Norco Refinery	PER20160006	2602-V9	Title V Regular Permit Minor Mod	PENDING	4/13/2016
Valero Partners LA LLC St Charles Terminal	PER20160001	PSD-LA-816	PSD Permit Administrative Amendment	PENDING	4/11/2016
Motiva Enterprises LLC - Norco Refinery	PER20160005	2913-V4	Title V Significant Modification	PENDING	3/16/2016
Valero Refining Co - New Orleans LLC- St Charles Refinery	PER20160004	2520-00027- V15	Title V Regular Permit Minor Mod	PENDING	2/26/2016
Hexion Inc - Norco Facility	PER20160001	2764-V4	Title V Regular Permit Minor Mod	PENDING	2/2/2016
Motiva Enterprises LLC - Convent Refinery	PER20160004	2560-00001- V15	Title V Regular Permit Minor Mod	PENDING	5/25/2016
Air Products & Chemicals Inc - Convent Facility	PER20160002	Variance	Variance	PENDING	4/14/2016
Rain CII Carbon LLC - Gramercy Coke Plant	PER20160004	2560-00047- V3	Title V Regular Permit Minor Mod	PENDING	4/6/2016
Shell Pipeline Co LP - Acadian River Terminal	PER20160001	2560-00299- V0	Title V Regular Permit Initial	PENDING	2/24/2016
Air Products Performance Manufacturing Inc - Reserve Plant	PER20160001	2580-00023-06	Minor Source/Small Source Admin Amendment	PENDING	5/11/2016
Pin Oak Holdings LLC - Pin Oak Terminal	PER20160001	2580-00051-02	Minor Source/Small Source Mod	PENDING	3/17/2016

Marathon Petroleum Co LP - LA Refining Division - Garyville Refinery	PER20160002	2580-00013- V18	Title V Regular Permit Minor Mod	PENDING	2/16/2016
National Oilwell Varco LP - NOV Rig Systems - Covington Facility	PER20160001	2680-00042-02	Minor Source/Small Source Mod	PENDING	4/27/2016
Trinity Marine Products Inc - Madisonville Facility Plant 1038	PER20160001	2680-00016- V3	Title V Regular Permit Minor Mod	PENDING	2/12/2016

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