Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

Gulf Crossing Pipeline Company, LLC
Gulf Crossing Pipeline Co LLC - Sterlington Compressor Station
Sterlington, Ouachita Parish, Louisiana
Agency Interest Number: 151188
Activity Number: PER20070002
Proposed Permit Number: 2160-00150-V0

I. APPLICANT

Company:
Gulf Crossing Pipeline Company, LLC
9 Greenway Plaza Ste 2800
Houston, Texas 77046

Facility:
Gulf Crossing Pipeline Co LLC - Sterlington Compressor Station
Keystone Rd
Sterlington, Ouachita Parish, Louisiana
Approximate UTM coordinates are 642.117 kilometers East, 3595.74 kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS

Gulf Crossing Pipeline Company, LLC proposes to construct a natural gas compressor station located adjacent to the Gulf South Pipeline Co – Sterlington Compressor Station located at 1476 Keystone Rd., Sterlington, LA, in Ouachita Parish. Gulf Crossing Pipeline Company, LLC and Gulf South Pipeline Company, LP are subsidiaries of Boardwalk Pipelines Partnerships, LP. This is the initial Part 70 Operating Permit for the facility, and it includes provisions of the Prevention of Significant Deterioration (PSD) review from Permit PSD-LA-729.

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application and Emissions Inventory Questionnaire were submitted by Gulf Crossing Pipeline Company, LLC dated October 3, 2007, requesting a Part 70 operating permit and a PSD permit for the Gulf Crossing Pipeline Co LLC - Sterlington Compressor Station. Additional information dated March 26, 2008, consolidating and certifying all previous additional information submittals was also received.

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Project

Natural gas will be transported to the Gulf Crossing Pipeline Co LLC - Sterlington Compressor Station via pipeline. To provide for more efficient transportation (compression) of the gas, condensate will be separated from the natural gas and stored in a 100 barrel storage tank and periodically loaded into a tank truck and shipped off-site. Two natural gas-fired compressor turbines rated at 10,311 horsepower each, and one compressor engine equipped with oxidation catalyst controls and rated at 4,735 horsepower will be used to transport the natural gas by pipeline from the compressor station to commerce. Air emissions will consist primarily of combustion products generated from firing natural gas in the turbines and reciprocating engine. Volatile organic compounds will be generated during loading operations from the condensate tank to tank trucks, flashing at the condensate tank, the blowdown vent, area releases of natural gas from possible miscellaneous engine/compressor vents and/or gas controlled valve operators, and fugitive emissions from equipment components. Additionally, minimal fugitive particulate emission will be generated by traveling on unpaved roads. The facility will also consist of a natural gas-fired emergency use backup generator engine rated at 838 horsepower.

Proposed Permit

Permit 2160-00150-V0 will be the initial Part 70 operating permit and PSD-LA-729 will be the initial PSD for the Gulf Crossing Pipeline Co LLC - Sterlington Compressor Station.

Permitted Air Emissions

The compressor station will be built on property adjacent to Gulf South Pipeline Company, LP's existing Gulf South Pipeline Co - Sterlington Compressor Station (AI No. 3954) permitted under permit no. 2160-00046-V1, issued August 11, 2006. The two compressor stations are contiguous facilities. The estimated emissions for NO_X and CO from the contiguous Gulf South Pipeline Co - Sterlington Compressor Station (AI No. 3954) are 642.77 tpy and 999.87 tpy respectively which are above the PSD Major Source Levels (250 tpy). Therefore, the proposed Gulf Crossing Pipeline Co LLC - Sterlington Compressor Station is considered a major stationary source in accordance with LAC 33:III.509. Any NSR regulated pollutants emitted above the *de minimis* levels as a result of the proposed construction project will be subject to a PSD review

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Estimated emissions in tons per year are as follows:

Pollutant	Emissions
PM_{10}	6.48
SO_2	2.44
NO_X	72.65
CO	47.69
VOC *	64.79

*VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	Emission	Pollutant	Emission
Acetaldehyde	1.220	Methanol	0.357
Acrolein	0.737	Naphthalenes	0.010
Benzene	0.272	PAH	0.005
Ethyl benzene	0.038	Propylene oxide	0.020
Formaldehyde	3.931	Toluene	0.265
n-Hexane	1.417	Xylenes	0.111
		Total VOC TAPs	8.383
		Other VOCs	56.407

Increases in NO_X and VOC from the proposed construction of this new facility in consideration of the nearby contiguous facility are significant and trigger review under the PSD program in accordance with LAC 33:III.509.

IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

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Applicability and Exemptions of Selected Subject Items

ID No.	Requirement	Note
UNF 1	Compliance Assurance Monitoring (CAM) [40 CFR 64]	DOES NOT APPLY. Emission sources are not equipped with add-on controls or would trigger MACT if uncontrolled.
Facility-wide	General Provision [40 CFR 63 Subpart A] National Emission Standards of Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities [40 CFR 63 Subpart HHH]	DOES NOT APPLY. Facility is an area source of hazardous air pollutants. If increases in emissions above current permit limits occur such that major source thresholds are exceeded, the permittee shall submit a permit modification to propose changes to maintain area source status or propose compliance with 40 CFR 63 Subparts A and HHH.
	Chemical Accident Prevention Provision [40 CFR 68] Chemical Accident Prevention and Minimization of Consequences [LAC 33:III.Chapter 59]	DOES NOT APPLY. Per LAC 33:III.5907, facility does not produce, process, handle, or store any substance listed in paragraph 68.130 or Tables 59.0 and 59.1 of Chapter 59 in an amount greater than the threshold quantity.
	Odor Regulations [LAC 33:III.Chapter 29]	DOES NOT APPLY. Per LAC 33:III.2901.B, facility is not a source of odorous substances emitted into the ambient air.
	Crude Oil and Condensate [LAC 33:III.2104]	DOES NOT APPLY. Per LAC 33:III.2104.A, potential flash emissions are less than 100 tpy of VOC
EQTs 1, 2, 3, &4 Turbines & Engines	Emission Standards for Sulfur Dioxide [LAC 33:III.Chapter 15]	DOES NOT APPLY. Per LAC 33:III.1502.A.3, neither unit emits or has the potential to emit SO_2 equal to or above 5 tpy.

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EQT 4 Emergency Engine	NSPS Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	DOES NOT APPLY. Engine was manufactured prior to January 1, 2009.
	NESHAP Subpart ZZZZ - National Emission Standards of Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	DOES NOT APPLY. Engine is a new source located at an area source of HAPs but is not subject to NSPS requirements. [40 CFR 63.6590(c)]
EQT 5 Storage Tank	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984. [40 CFR 60.110b]	DOES NOT APPLY. Storage tank has a total capacity less than 19,813 gallons (75 m^3).
	Control of Emissions of Organic Compounds-Storage of Volatile Organic Compounds [LAC 33:III.2103]	DOES NOT APPLY. Per LAC 33:III.2103.G.1, storage tank is used for condensate, has a nominal storage capacity of less than 420,000 gallons, and is not subject to NSPS.
EQT 6 Loading	Control of Emissions of Organic Compounds-Volatile Organic Compounds-Loading [LAC 33:III.2107]	DOES NOT APPLY. Per LAC 33:III.2107.A, throughput is less than 20,000 gallons per day.

Prevention of Significant Deterioration/Nonattainment Review

The proposed Gulf Crossing Pipeline Co LLC - Sterlington Compressor Station is considered a major stationary source in accordance with LAC 33:III.509. Therefore, the requested permit was reviewed in accordance with PSD regulations for nitrogen oxide (NO_X) and volatile organic compound (VOC) emissions; those pollutants which will be above PSD significance levels. Emissions of LAC 33:III.Chapter 51 regulated toxic air pollutants (TAP) have been reviewed pursuant to the requirements of the Louisiana Air Quality Regulations. The selection of control technology based on the Best Available Control Technology (BACT) analysis did not include consideration of control of toxic materials.

BACT Requirements

NO_X and VOC emissions are above PSD *de minimis* levels and must undergo PSD analysis. Controls of these emissions were analyzed using a "top down" method specified by the EPA. The selection of control technology based on the Best Available Control Technology (BACT) analysis did not include consideration of toxic materials. A complete BACT analysis for this facility can be found in PSD-LA-729 to be issued concurrently with this permit. The following is determined as BACT:

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For the two Compressor Turbines: use dry-low NO_X burners, employ good combustion practices including the use of clean burning fuels such as natural gas, and limit exhaust emissions as specified in Specific Condition 1 of PSD-LA-729.

For the Compressor Engine: use an oxidation catalyst, employ good combustion practices including the use of clean burning fuels such as natural gas, and limit exhaust emissions as specified in Specific Condition 1 of PSD-LA-729.

For the Emergency Generator Engine: equipment shall operate only during emergency situations except for periodic use required for testing and maintenance of the unit, employ good combustion practices including the use of clean burning fuels such as natural gas, and limit exhaust emissions as specified in Specific Condition 1 of PSD-LA-729.

For the Condensate Storage Tank: use a submerged fill pipe, and limit VOC emissions as specified in Specific Condition 1 of PSD-LA-729.

For the Truck Loading Rack: employ the submerged loading method and dedicated service, and limit VOC emissions as specified in Specific Condition 1 of PSD-LA-729.

Air Quality Analysis

Dispersion Model(s) Used: AERMOD

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Toxic Air Pollutant Ambient Air Quality Standard or (National Ambient Air Quality Standard {NAAQS})
NO_x	Annual	0.87 $\mu g/m^3$	100 $\mu g/m^3$

Prevention of Significant Deterioration regulations require an analysis of existing air quality for those pollutants emitted in significant amounts from a proposed facility. The modeling has passed for the modeled pollutant.

No de minimis air quality level is provided for ozone. However, any net increase of 100 tons per year or more of volatile organic compounds (VOC) or nitrogen oxides subject to PSD would require the performance of an ambient impact analysis including the gathering of ambient air quality data. Net increase of VOC and NO_x from this facility is less than 100 tons per year.

AERMOD modeling indicates maximum ground level concentrations of NO_X are below the ambient significance levels and preconstruction monitoring exemption levels. Therefore, no preconstruction monitoring, increment analysis, or refined modeling is required for this pollutant.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

Not Applicable

VI. PERIODIC MONITORING

For periodic monitoring, refer to the Specific Requirements section of the proposed permit.

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H_2S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of

Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_X) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: $\geq$ 10 tons per year of any toxic air pollutant; $\geq$ 25 tons of total toxic air pollutants; and $\geq$ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10} – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO_2) – An oxide of sulfur.

Sulfuric Acid (H_2SO_4) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.
Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.