

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

STATEMENT OF BASIS

Petroplex International LLC
Petroplex International Tank Farm (Greenfield Site)
Vacherie, St. James Parish, Louisiana
Agency Interest Number: 159541
Activity Number: PER20080001
Proposed Permit Number: 2560-00292-00

I. APPLICANT

Company:

Petroplex International LLC
842 Main St
Baton Rouge, Louisiana 70802

Facility:

Petroplex International Tank Farm (Greenfield Site)
1407 Hwy 18
Vacherie Parish, Louisiana
The facility is located at approximately 3323.270 km North and 721.592 km East.

II. FACILITY AND CURRENT PERMIT STATUS

Petroplex International LLC proposes the construction of a new marine and land terminal facility in St. James Parish, Louisiana.

The facility's infrastructure will include the following:

- Steam generating equipment used to heat viscous material in tanks and piping to sustain flow;
- A wastewater treatment system for the treatment of tank draw-downs and other onsite generated wastewater streams; and
- A diesel powered internal combustion engine for backup power and pump capacity.

Petroplex International LLC - Petroplex International Tank Farm (Greenfield Site) requests a synthetic minor source permit.

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application and Emission Inventory Questionnaire (EIQ) dated July 23, 2008 were received requesting a permit. Additional information dated October 1, 2008, November 10, 2008, December 5, 2008, and January 26, 2009 was also received.

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Project

Petroplex International LLC proposes the construction of a new marine and land terminal facility in St. James Parish, Louisiana. The facility will supply a stable stock of petroleum commodities to serve local and regional refiners and distributors. The Petroplex Tank Farm will receive liquid commodities by barge, ship, rail, pipeline, and tanker trucks. Commodities will be stored in above ground storage tanks until further distribution commences. Blending of fuel stocks may be performed in some storage tanks or inline through recirculation pumps and inline mixers. The primary commodities anticipated to be stored and distributed at the facility include gasoline, light crude oil, heavy crude oil, ethanol, light petroleum distillates, mid petroleum distillates, heavy residual oils, vegetable oil, and bio-diesel. Commodities may be offloaded from the facility via barge, ship, rail, pipeline, and tanker trucks.

The facility's infrastructure will include the following:

- Steam generating equipment used to heat viscous material in tanks and piping to sustain flow;
- A wastewater treatment system for the treatment of tank draw-downs and other onsite generated wastewater streams; and
- A diesel powered internal combustion engine for backup power and pump capacity.

All normally operating pumps will be electric powered. The facility will utilize a vapor recovery system to reclaim loading vapors. A thermal oxidizer will control emissions of vapors not recovered by the vapor recovery unit. Emissions from the storage of volatile commodities will be reduced by the use of domed external floating roof tanks.

A facility-wide Transfer and Storage CAP, T/S CAP, is being created to increase the operational flexibility at the Petroplex Tank Farm. This CAP includes all storage tanks, loading operations, and the thermal oxidizer (loading control device).

Proposed Permit

Petroplex requests an initial synthetic minor source permit for the Petroplex International Tank Farm. The facility has not been constructed. The proposed permit number is Permit No. 2560-00282-00.

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Permitted Air Emissions

Estimated emissions from this facility, in tons per year, are as follows:

Pollutant	Emissions
PM ₁₀	7.30
SO ₂	0.99
NO _x	55.52
CO	76.86
VOC	93.83
Total TAPs	8.80

VOC LAC 33: III. Chapter 51 Toxic Air Pollutants (TAP)	Emissions
Benzene	1.67
Biphenyl	0.04
Cresol	0.01
Cumene	0.05
Ethylbenzene	0.13
n-Hexane	4.10
Naphthalene	0.04
Polynuclear Aromatic Hydrocarbons	0.02
Toluene	1.13
2,2,4 Trimethylpentane	0.05
Xylene	1.03
VOC TAP Total	8.27

Non-VOC LAC 33: III. Chapter 51 Toxic Air Pollutants (TAP)	Emissions
Hydrogen Sulfide	0.53
Non-VOC TAP Total	0.53

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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.

Applicability and Exemptions of Selected Subject Items

ID No.	Requirement	Note
Facility Wide	40 CFR 63 Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants	DOES NOT APPLY. The facility is not a gasoline dispensing facility (GDF) as defined in 40 CFR 63.11132.
	40 CFR 68 – Chemical Accident Prevention Provision	DOES NOT APPLY. Facility does not store regulated substance above threshold quantity. Propane storage onsite is used for fuel and is therefore exempt. [40 CFR 68.126]
	40 CFR 70 – State Operating Permit Programs	DOES NOT APPLY. Facility emissions do not exceed major source thresholds. [40 CFR 70.3]
	LAC 33:III.509 – Prevention of Significant Deterioration	DOES NOT APPLY. Facility emissions are below the 250 TPY threshold for major sources. [LAC 33:III.509.A.1]
	LAC 33:III Chapter 51 – Comprehensive Toxic Air Pollutant Emission Control Program	DOES NOT APPLY. Facility emissions of toxic air pollutants (TAP) are below the major source threshold as defined in LAC 33:III.5103. [LAC 33:III.5101.A]
	LAC 33:III Chapter 59 – Chemical Accident Prevention and Minimization of Consequences	DOES NOT APPLY. Facility does not produce, process, handle, or store substances listed in 40 CFR 68.130, Table 59.0 of LAC 33:III.5901 or Table 59.1 of LAC 33:III.5913 in quantities greater than the threshold quantities listed in those respective places. [LAC 33:III.5907.A]

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ID No.	Requirement	Note
EQT 10-25;36-43;47-49;54-63	40 CFR 60 Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	DOES NOT APPLY. Construction of the tanks shall commence after May 19, 1978. [LAC CFR 60.110.C.2]
	40 CFR 60 Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	DOES NOT APPLY. Construction of tanks shall commence after July 23, 1984. [LAC 60.110a]
	40 CFR 60 Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	DOES NOT APPLY. Tank capacities shall be greater than 151 m ³ (39,891 gallons) and volatile organic liquid (VOL) vapor pressure of material stored is less than 3.5 kPa (0.5 psia). [40 CFR.60.110b]
	LAC 33:III.2103 – Storage of Volatile Organic Compounds	DOES NOT APPLY. Tanks shall not store a volatile organic compound (VOC) with a vapor pressure greater than 1.5 psia. [LAC 33:III.2103.B]
EQT 01-09; 26-35; 44-46; 50-53	40 CFR 60 Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	DOES NOT APPLY. Construction of the tanks shall commence after May 19, 1978. [LAC CFR 60.110.C.2]
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ID No.	Requirement	Note
GRP 01; EQT 65 & 70	LAC 33:III Chapter 15 – Emission Standards for Sulfur Dioxide	DOES NOT APPLY. Sources do not emit or have the potential to emit 5 tons per year or more of sulfur dioxide into the atmosphere. [LAC 33:III.1502.A.3]
ARE 01	LAC 33:III.2153 – Limiting VOC Emissions from Industrial Wastewater	DOES NOT APPLY. Source is not at a facility that meets the definition of an affected source category because it is located in St. James Parish. [LAC 33:III.2153.A]

Prevention of Significant Deterioration/Nonattainment Review

The facility is not a defined major source under the PSD program.

Streamlined Equipment Leak Monitoring Program

There is no streamlined equipment leak monitoring program at the facility.

MACT Requirements

This facility is a minor source of LAC 33:III.Chapter 51 Toxic Air Pollutants (TAPs). Therefore, the facility is not subject to the requirements of MACT.

Air Quality Analysis

Emissions associated with the proposed facility were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS.

Dispersion Model(s) Used: ISCST3

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Toxic Air Pollutant Ambient Air Quality Standard
Benzene	Annual	0.282 $\mu\text{g}/\text{m}^3$	12.00 $\mu\text{g}/\text{m}^3$
PAH	Annual	0.00232 $\mu\text{g}/\text{m}^3$	0.06 $\mu\text{g}/\text{m}^3$
H ₂ S	8-hr	5.82 $\mu\text{g}/\text{m}^3$	330 $\mu\text{g}/\text{m}^3$

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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

There is no permit shield.

VI. PERIODIC MONITORING

Source ID	Citation(s)	Monitoring Requirement
CRG 01 EFRTs	40 CFR 60.113b.b.1.(i)	Seal gap area and width shall be monitored by measurement at the regulation's specified frequency. Petroplex shall use the procedures in 40 CFR 60.113b(b)(2) to determine the gap areas and maximum gap widths between the primary seals and the walls of the storage vessels during the hydrostatic testing of the vessels or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.
	40 CFR 60.113b.b.1.(ii)	Seal gap area and width shall be monitored by measurement at the regulation's specified frequency. Using the procedures in 40 CFR 60.113b(b)(2), the gap areas and maximum gap widths between the secondary seal and the wall of the storage vessel shall be determined within 60 days of the initial fill with VOL and at least once per year thereafter.
	40 CFR 60.113b.b.6	Tank roof and seals shall be monitored by visual inspection/determination at the regulation's specified frequency. The external floating roof, the primary seal, the secondary seal, and fittings shall be inspected each time the storage vessels are emptied and degassed.

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Source ID	Citation(s)	Monitoring Requirement
	LAC 33:III.2103.D.2.e	Seal gap area and width of the primary seals shall be monitored by measurement once every five years at any tank level, provided the roof is off its legs.
		Secondary seals or closure mechanisms monitored by visual inspection/determination semiannually.
		Seal gap area and width of the secondary seals shall be monitored by measurement annually at any tank level, provided the roof is off its legs.
EQT 65 08-TOX	40 CFR 60.502.j	Presence of a leak shall be monitored by technically sound method monthly. The thermal oxidizer shall be monitored for total organic compounds liquid or vapor leaks.
EQT 71 08-TTL	40 CFR 60.502.j	Presence of a leak shall be monitored by technically sound method monthly. The tank truck loading shall be monitored for total organic compounds liquid or vapor leaks.
	LAC 33:III.2107.C	Total VOC shall be monitored by visual, audible, and/or olfactory means during loading or unloading to detect leaks.
EQT 72 08-RCL	LAC 33:III.2107.C	Total VOC shall be monitored by visual, audible, and/or olfactory means during loading or unloading to detect leaks.
FUG 03 Fugitives	40 CFR 63.11089.a	Presence of a leak shall be monitored by visual, audible, and/or olfactory means monthly. All equipment in gasoline service shall be monitored as defined in 40 CFR 63.11100.
GRP 01 BCAP	LAC 33:III.507.H.1.a	Combined firing rate of the boilers shall be monitored by a technically sound method hourly.
		The calculated limit of the Boiler CAP emissions shall be monitored by calculations monthly.
GRP 02 T/S CAP	LAC 33:III.507.H.1.a	True vapor pressure of all volatile organic liquids stored and loaded at the facility shall be monitored.
CRG 02 FRTs	LAC 33:III.507.H.1.a	Vapor pressure of the fixed roof tanks shall be monitored by a technically sound method once per batch during operation.

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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 (H₂S) – 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 (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

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: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 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).

PM₁₀ – 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.

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Sulfur Dioxide (SO₂) – An oxide of sulfur.

Sulfuric Acid (H₂SO₄) – 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.