

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

**STATEMENT OF BASIS**

**Chalmette Refining, L.L.C. – Wastewater Treatment Plant (WWTP)  
Chalmette, St. Bernard Parish, Louisiana  
Agency Interest Number: 1376  
Activity Number: PER19960006  
Draft Permit 2822-V0**

**I. *APPLICANT:***

**Company:**

Chalmette Refining, L.L.C.  
Post Office Box 1007  
Chalmette, Louisiana 70044

**Facility:**

Chalmette Refining, L.L.C – Chalmette Refinery, WWTP  
500 W. St. Bernard Highway, Chalmette, St. Bernard Parish, Louisiana  
Approximate UTM coordinates are 792.12 kilometers East and 3341.95 kilometers North, Zone 15

**Responsible Official:**

Mr. J.A. Stroink, Refinery Manager

**II. *FACILITY AND CURRENT PERMIT STATUS***

Chalmette Refinery, L.L.C. (CRLLC) operates an oil refinery in Chalmette, Louisiana, in St. Bernard Parish. St. Bernard Parish is currently designated as attainment for all regulated air pollutants. The Utilities Plant are a major source subject to the Part 70 operating permit program because it is part of a stationary source that has the potential to emit over the major source emissions levels for criteria pollutants. In addition, this stationary source has the potential to emit 25 or more tons per year of aggregate TAPs.

The Chalmette Refinery is bordered by the Mississippi River to the south, Calciner Industries, Inc. and old Kaiser Aluminum Company to the west, St. Bernard Highway with light commercial and residential areas to the north and Palmisano Street with light commercial and residential areas to the east. Chalmette Refinery is a joint venture between ExxonMobil Corporation and Petroleos de Venezuela (PDV), the Venezuelan national oil company. The refinery is an integrated crude operation (high conversion) which includes crude distillation, catalytic reforming, fluid catalytic cracking (FCC), hydrocracking, HF alkylation, delayed coking, and aromatics processing units. The refinery's product capabilities include gasoline, diesel, benzene/toluene/xylene (BTX) production, distillates, and sulfur recovery as well as by-products such as petroleum coke and LPG.

The WWTP equipment is used to handle, treat, and discharge process waste and waters and process area stormwater, as well handle and discharge non-process area stormwater.

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The process units that exist at the Chalmette Refinery site include Oil Movements and Loading; Utilities Plant; Waste Water Treatment Plant; No. 1 Crude / Coker; No. 2 Crude / Coker; Cat Feed Hydrotreater / Pretreater No. 1 / Reformer No. 1/ Gasoline Hydrotreater Unit; Sulfur Recovery Unit / HDS / AMU / SWS / WGS / BRU; Flare No.1 & Flare No. 2; Hydrocracker Unit / Pretreater No. 3 / Reformer No. 3 / LEP; Fluidized Catalytic Cracking Unit / Alkylation; and Aromatics.

Timely applications for initial Part 70 Title V permits were submitted by the company, therefore, the facility continues to operate pursuant to 40 CFR 70.7 provided in the Part 70 Title V Program.

This Part 70 operating permit is for the No. 2 Crude/Coker Units which operates under Permit Numbers 2500-00005-02, 2226 (M-3), and 2822.

Several state permits remain in effect for this facility until replaced by a Part 70 Permit, these include:

Permit #	Units or Sources	Date Issued
2500-00005-02	Multiple Units	11/18/1988
2226(M-3)	Multiple Units	11/27/1996
2822	WWTP (New Project)	01/29/2003

Initial/Modification Title V Part 70 permits that were issued by the department include:

Permit #	Units or Sources	Date Issued
2801-V0	GHU	09/15/2002
2500-00005-V0	Utilities Plant	11/07/2005

Initial/Renewal/Modification Title V Part 70 permits that are under review by the department include:

Permit #	Units or Sources	Date Issued
2822-V0	Wastewater Treatment Plant	Under Review
3004-V0	Oil Movements & Loading	Under Review
3011-V0	Cat. Fee Hydrotreater Etc.	Under Review

**III. PROPOSED PERMIT / PROJECT INFORMATION**

**Proposed Permit**

An initial application and Emission Inventory Questionnaire (EIQ), were submitted by

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Chalmette Refining, L.L.C on October 14, 1996 and an updated application and EIQ were submitted on August 5, 2005 for the WWTP equipment only. Additional information was provided on August 26 and November 8, 2005.

**Project description**

The facility proposes to incorporate as-built changes from the construction plan originally proposed and permitted as part of the WWTP Project under Permit No. 2822. Changes to original project design are as follows:

1. The project will commence in the third quarter of 2005;
2. the cooling tower physical design was changed to reduce the number of cells from six to five;
3. Sump No. 1 will not be modified, instead a new 6,000 gpm electric driven pump will be installed at the API separator;
4. Tank 1009 will be utilized as an equalization tank or the IAF will be operated in series;
5. New Tank D-3721 will now have an external floating roof;
6. Clearwell effluent pump capacity will be changed to 3,600 gpm from 3,300 gpm;
7. The Power Distribution Center (PDC) and the Environmental Monitoring Center (EMC) design will be altered, no effect on emissions.

Estimated emissions in tons per year are as follows:

Pollutant	Emission**
PM <sub>10</sub>	0.19
SO <sub>2</sub>	0.01
NO <sub>x</sub>	25.33
CO	11.07
VOC	252.14

\*\* Based on Interim Limits approved by LDEQ in Administrative Order dated 5/25/05

**IV. REGULATORY ANALYSIS**

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

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**National Emission Standards for Hazardous Air Pollutants: NESHAP From Benzene Waste Operations (BWON)**

Chemical manufacturing plants, coke by-product plant and petroleum refineries are potentially subject to the provisions of BWON. Oil water separators, individual drain systems, stream stripping units, and other equipment that meet the definition of a waste management unit are subject to BWON. A waste management unit is defined as a piece of equipment used in the handling, storage, treatment, or disposal of waste. A waste is any material resulting from industrial operations that is discarded or accumulated, stored, or treated prior to discarded, recycled, or discharged. BWON specifically lists the following waste streams to which this regulation do not apply: 1) Waste in the form of gases or vapors that is emitted from process fluids; 2) Waste that is contained in a segregated storm water sewer system; and 3) Any gaseous stream from a waste management unit, treatment process, or wastewater treatment system routed to a fuel gas system.

The facility generates a total annual benzene (TAB) quantity of 10 megagrams per year or greater. The facility elects to take the 6 megagrams per year option as per the requirements of 40 CFR 63.342(e) where the total uncontrolled benzene quantity for the wastes shall not be greater than 6 megagrams per year.

**National Emission Standards for Hazardous Air Pollutants: NESHAP From Synthetic Organic Chemical Manufacturing Industry**

A chemical manufacturing process unit (CMPU) that manufactured one or more SOCMIs listed in Table 1 of 40 CFR 63, Subpart F and that uses as a reactant or manufactures as a product, or co-product, one or more of the organic hazardous air pollutants listed in Table 2 of 40 CFR 63, Subpart F is potentially subject to the SOCMIs. Some of the Chemical Manufacturing Process Units (CMPUs), located elsewhere in the refinery, may generate maintenance wastewater and Group 2 process wastewater and route it to the WWTP. Therefore, the WWTP is subject to Subpart F Maintenance Wastewater requirements and Subpart G Group 2 Process Wastewater requirements.

**National Emission Standards for Hazardous Air Pollutants: NESHAP From Synthetic Organic Chemical Manufacturing Industry**

The petroleum refining process unit that contains or contacts one or more of the HAPs listed in Table 1 of Subpart CC is potentially subject to RMACT. Leaks from equipment in organic HAP service that are located in a petroleum refining process unit are subject to RMACT. Equipment in organic HAP service in the WWTP Area is subject to the RMACT. CRLLC demonstrates compliance with this rule by complying with the provisions of 40 CFR 63.648. A process wastewater stream in a petroleum refining

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process unit that contains one or more of the HAPs listed in Table 1 of Subpart CC are potentially subject to RMACT. The WWTP receives process wastewater streams and, therefore, the wastewater provisions of the RMACT are applicable to the WWTP Area.

Notably, the benzene concentration of the wastewater streams generated in the WWTP Areas is less than 10 ppmw. Therefore, the wastewater stream can be classified as a Group 2 stream. There are no controls, monitoring, recordkeeping, or reporting requirements for Group 2 wastewater streams. However, the Vacuum Trucks within the WWTP may load and transport process wastewater streams from refinery units that can be classified as Group 1 streams. Per 40 CFR 63.647(a), Group 1 wastewater streams must demonstrate compliance with RMACT by complying with NESHAP Part 61 Subpart FF, BWON.

The WWTP area contains tanks that receive maintenance wastewater and wastewater streams that are subject to the wastewater provisions of RMACT. When determining whether a tank must comply with the storage vessel provisions or the wastewater provisions of the RMACT, the function of the tank (whether the tank stores a waste or a product for use or reuse) is used as the basis of the determination. As defined in RMACT Subpart CC, a wastewater tank is not a storage vessel. Notable, the WWTP area contains Group 2 wastewater tanks. Group 2 wastewater tanks are not subject to any requirements under RMACT.

The equipment leak provisions of Subpart CC apply to all equipment that operates in organic HAP service. Equipment includes all pumps, compressors, pressure relief devices, sampling connections, open-ended valves or lines, valves, flanges and other connectors, product accumulator vessels, and control devices, or systems required by Subpart CC. However, there are no fugitive components within the WWTP Area in organic HAP service. Therefore, the WWTP Area is not subject to the equipment leak provisions of this rule.

**Prevention of Significant Deterioration Applicability**

This application is a comprehensive update to the initial Part 70 Air Permit Application and does not propose any modifications to the Utilities Plant; thus, PSD/NSR review is not required.

**Air Modeling Analysis**

No modeling was conducted as a part of this comprehensive update to the initial Part 70 Air Permit Application.

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**Comprehensive Toxic Air Pollutant Control Program-Chapter 51**

Toxic air pollutant emissions from fugitives must be controlled to a degree that constitutes MACT. The WWTP complies with all applicable provisions of the Louisiana Air Toxics Program.

**Maximum Achievable Control Technology (MACT) requirements**

The Louisiana Air Toxics Program (LA MACT) requires a major source emitting any Class I or II pollutant at a rate that exceeds the minimum emission rate for that pollutant to demonstrate compliance with the Maximum Achievable Control Technology (MACT) standards. Additionally, the Louisiana Air Toxics Program requires a major source emitting any Class I, II, or III toxic air pollutant greater than the minimum emission rate for that pollutant to determine its status of compliance with the applicable ambient air standard (AAS) defined for the pollutant.

The requirements of the LA MACT apply to the storage tanks and to the WWTP as a whole. Chalmette Refining demonstrates compliance with the LA MACT requirements by complying with the most stringent applicable federal or state air toxics regulations.

**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 Section VIII of the draft Part 70 permit.

**Insignificant Activities**

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to Section IX of the draft Part 70 permit.

**V. *PERMIT SHIELDS***

A permit shield was not requested.

**VI. *PERIODIC MONITORING***

The Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the Facility Specific Requirements Section of the proposed permit.

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**VII. *APPLICABILITY AND EXEMPTIONS OF SELECTED SUBJECT ITEMS***  
See Permit.

**VIII. *STREAMLINED REQUIREMENTS***  
This permit does not include any streamlined requirements.

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**IX. 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.

**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<sub>x</sub>)** - Compounds whose molecules consists of nitrogen and oxygen.

**Organic Compound** - Any compound of carbon and another element. Examples: Methane (CH<sub>4</sub>), Ethane (C<sub>2</sub>H<sub>6</sub>), Carbon Disulfide (CS<sub>2</sub>)

**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).

**PM<sub>10</sub>**- 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

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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.

**RMACT** – Refinery Maximum Achievable Control Technology

**Sulfur Dioxide (SO<sub>2</sub>)** – An oxide of sulfur.

**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.

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The regulatory basis for the Statement of Basis is found in 40 Code of Federal Regulations (CFR) § 70.7 Permit issuance, renewals, reopenings, and revisions, subsection (a), paragraph (5) and the Louisiana Administrative Code (LAC), Title 33, Part III. AIR. Specifically §531. Public Notice and Affected State Notice, subsection A, paragraph 4. LAC 33:III.531.A.4 states:

*“The permitting authority shall provide a statement that sets forth the legal and factual basis for the proposed permit conditions of any permit issued to a Part 70 source, including references to the applicable statutory or regulatory provisions. The permitting authority shall send this statement to any person who requests it and to EPA.”*