

South Coast Air Quality Management District

Statement of Basis

Proposed Title V Permit

(Issued for Public Notice: 8/29/08)

Facility Name:	Paramount Petroleum Corporation
Facility ID:	800183
SIC Code:	2911
Facility Address:	14700 Downey Avenue Paramount, CA 90723
Application Number:	339643
Application Submittal Date:	3/23/98
AQMD Contact Person:	Thomas Lee, Air Quality Engineer
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1. Introduction and Scope of Permit

Title V is a national operating permit program for air pollution sources. Facilities subject to Title V must obtain a Title V permit and comply with specific Title V procedures to modify the permit. This permit replaces the facility's other existing permits. Title V does not necessarily include any new requirements for reducing emissions. It does, however, include new permitting, noticing, recordkeeping, and reporting requirements.

The South Coast Air Quality Management District (AQMD) implements Title V through Regulation XXX – Title V Permits, adopted by the AQMD Governing Board in order to comply with EPA's requirement that local air permitting authorities develop a Title V program. Regulation XXX was developed with the participation of the public and affected facilities through a series of public workshops, working group meetings, public hearings and other meetings. AQMD also has published a draft of the Technical Guidance Document for Title V (March 2005, Version 4.0) available on the AQMD website at <http://www.aqmd.gov/titlev/TGD.html>.

The Title V major source threshold for a particular pollutant depends on the attainment status of the pollutant in the South Coast Air Basin. The Basin is in attainment with National Ambient Air Quality Standards (NAAQS) for NO₂, SO₂, CO, and lead. The status for CO was redesignated from nonattainment to attainment in June 2007 (72 FR 26718). The status for PM-10 is currently serious nonattainment. The status for ozone is currently extreme nonattainment.

The AQMD proposes to issue an initial Title V permit for the refinery operations of Paramount Petroleum Corp., which are located at 14700-08 Downey Avenue, Paramount, CA 90723. The refinery is owned by Alon USA Energy Inc. (Alon). It is subject to Title V requirements because the company's operations at this location as an aggregate are a major source of pollution as defined in Title V and the facility is subject to certain NSPS (New Source Performance Standards).

2. Facility Description

The Paramount Refinery produces a variety of products including gasoline, jet fuel, diesel fuel, asphalt, petroleum gases, and sulfur from crude oil. Currently, the refinery has a capacity to process approximately 54,000 barrels of crude oil per day. Most of the crude oil is received at the refinery via underground pipeline. The refinery utilizes several processes to separate petroleum components in crude oil and to convert heavy components into lighter hydrocarbon compounds. These hydrocarbon compounds are used as blending components for gasoline, diesel, and other products. Some of the intermediate products (naphtha and treated/untreated gas oil) are sent to third party refineries via pipeline for further refining.

Operations at the refinery include the following major processes:

Crude and Vacuum Distillation Units

The Refinery has two crude units, each consisting of atmospheric and vacuum distillation columns. The distillation process separates the crude oil into narrow-boiling fractions. These fractions - naphtha (gasoline range), straight-run kerosene (jet range), straight-run diesel (diesel range), gas oil, and residuum - can sometimes be blended into finished products, but most often require further refining.

Naphtha Splitter and Light Naphtha Stabilizer

The Naphtha Splitter concentrates naturally occurring benzene in the light naphtha into a heavy naphtha feed to the Reformer. Light hydrocarbon compounds such as ethane, propane, and butane are removed by distillation in the Light Naphtha Stabilizer. The light hydrocarbons are then treated to remove sulfur compounds before being used as fuel in some of the process heaters.

Reformer

The Catalytic Reforming Unit (CRU) utilizes a light cracking process to convert heavy naphtha fractions to products of higher octane value. Hydrogen is a byproduct of this process.

Benzene Saturation Unit

The Benzene Saturation Unit processes the high-octane product from the Reformer (reformate) to convert all of the manufactured benzene and most of the naturally occurring benzene into cyclohexane.

Isomerization Unit

The isomerization unit converts straight-chain hydrocarbon molecules into branched-chain hydrocarbons with higher octane rating. Catalytic reforming effectively improves the octane rating of heavy gasoline components but it does so by increasing the aromatic content of the fuel. To meet CARB specifications for the aromatic content of gasoline, isomerization is utilized to produce isomerate, which is a gasoline blending stock that is extremely low in aromatics including benzene.

Hydrotreating

Petroleum products are catalytically stabilized and impurities such as sulfur, nitrogen, and oxygen are removed from products or feedstocks by reacting them with hydrogen. This refinery contains three hydrodesulfurization (HDS) units for the treatment of Naptha (No. 1 HDS), Kerosene (No. 3HDS), and Gas Oil (No. 5 HDS).

Amine Fuel Gas Treating Unit and Sulfur Recovery Unit (SRU):

Sulfur compounds in the crude oil fractions are removed at the HDS units in the form of hydrogen sulfide (H₂S) gas. H₂S rich streams from the HDS units are treated in amine contactor columns to remove the H₂S. The “rich” amine solution from these columns is regenerated to liberate the H₂S. The H₂S stream is fed to the SRU where it is converted to molten elemental sulfur.

Asphalt Processing Equipment

The refinery produces a full line of asphalt products for the construction industry. The various asphalt products are utilized primarily in the production of roofing products and paved roadways. Asphalt processing facilities at the plant include an asphalt blowing plant with four air blowing stills, an asphalt emulsion plant, and a polymer modified asphalt plant.

In addition to the above major processes, the facility operates numerous combustion units such as heaters and boilers that are utilized in many of the above processes, incinerators, stationary internal combustion engines, a refinery flare, and wastewater treatment systems. Onsite loading/unloading racks, fixed roof storage tanks, internal floating roof storage tanks, external floating roof storage tanks, and pressurized storage tanks are used in the transport and storage of the asphalt, gasoil, fuel oil, kerosene, diesel fuel, gasoline, naphtha, LPG and sulfur. Intermediate and finished products can also be transported to third party customers via underground pipeline.

3. Construction and Permitting History

The refinery has been in constant operation since the 1930's. Numerous permits to construct and permits to operate have been issued to the refinery since the formation of the Los Angeles County Air Pollution Control District in 1947. Over the past 10 years, the refinery has completed numerous projects, including the Co-generation project in 2002 and the CARB Clean

Fuel project in 2005. The current permit to operate and/or permit to construct for each permit unit located at the refinery is contained in the Title V permit.

4. Regulatory Applicability Determinations

Applicable legal requirements with which this refinery must comply have been identified in the Title V permit (for example, Sections D, E, and H of the proposed Title V permit). Device level condition H23.x denote applicability of federal regulations and source specific AQMD Rules to permitted equipment. Applicability determinations (i.e., determinations made by the District with respect to what legal requirements apply to a specific piece of equipment, process, or operation) for this facility have been completed. Federal NSPS requirements of 40 CFR Part 60 apply to certain units at the facility and the permit terms and conditions may be found in Sections D and H of the Title V permit. NESHAP requirements of 40 CFR Part 63 apply to certain units at the facility and the permit terms and conditions may be found in Sections D, H, and J of the Title V permit. Determinations of federal regulations that do not apply can be found in this section of the Statement of Basis.

This section contains a discussion of complex regulatory applicability determinations. This section also summarizes the NSPS and NESHAP applicability determinations for permitted equipment at this facility.

Federal Regulations

Standards of Performance for New Stationary Sources (NSPS) (40 CFR 60)

With the exception of certain specific equipment as further explained in Tables 4.1 to 4.3 below, the refinery is generally subject to the following NSPSs:

- 40 CFR 60 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units;
- 40 CFR 60 Subpart J – Standards of Performance for Petroleum Refineries;
- 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;
- 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;
- 40 CFR 60 Subpart Kb – Standards of Performance for Volatile Organic Storage Vessels (Including Petroleum Liquids Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced July 23, 1984;
- 40 CFR 60 Subpart UU – Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture;
- 40 CFR 60 Subpart XX – Standards of Performance for Bulk Gasoline Terminals;
- 40 CFR 60 Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries;

- 40 CFR 60 Subpart GGGa – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After November 7, 2006; and
- 40 CFR 60 Subpart QQQ – Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems.

The above regulations specify standards for applicable equipment within the refinery based on construction date or subsequent modifications that resulted in an emission increase as defined by 40 CFR 60.14(a) or reconstruction with a capital cost of the new components exceeding 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility as defined in 40 CFR 60.15(a) and (b). The applicability of the above rules is based on information contained in the permit application files or through refinery responses to information requests.

All of the equipment in the Title V Permit has been reviewed to determine whether they are subject to any of the NSPSs. Tables 4.1 to 4.3 below contain tabulated summaries of selected negative determinations regarding NSPS applicability.

Table 4.1 Combustion Sources Not Subject to NSPS Requirements

Device ID	Equipment	Regulation	Summary of Non-Applicability Determination
D373, D374, D375, D376	Boilers	40 CFR 60, Subparts Db/Dc ¹	Capacity less than the 100 MMBtu/hr applicability threshold of NSPS Subpart Db and was constructed prior to the June 9, 1989 applicability date of NSPS Subpart Dc with no subsequent modification or reconstruction.
D125, D530, D569	Process Heaters	40 CFR 60, Subpart J	Permitted to combust only commercial natural gas.
D677	Gas Turbine		
D373, D374, D375, D376	Boilers	40 CFR 60, Subpart J	Combustion devices were constructed prior to June 11, 1973, and have not been modified or reconstructed since then.
C396	Flare		
D48, D123, D124, D126, D127, D128, D129	Process Heaters		

¹ 40 CFR 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.

Table 4.2 Storage Tanks, Loading Racks and Wastewater Systems Not Subject to NSPS Requirements

Device ID	Equipment	Regulation	Summary of Non-Applicability Determination
D79 , D130, D147, D267, D329, D330, D331, D332, D378, D527, D528, D568, D685, D738, D759, D777, D778, D779, D780, D781, D782, D783	Storage Tank	40 CFR 60, Subpart K/Ka/Kb	Storage capacity below threshold for the subject NSPSs.
D150, D168, D169	Storage Tank	40 CFR 60, Subpart K/Ka/Kb	Tanks are permitted to store inorganic liquids only.
D268, D269, D271, D272, D275, D276, D278, D279, D280, D281, D282, D283, D284, D285, D286, D292, D294, D295, D296, D297, D298, D299, D300, D301, D302, D304, D305, D306, D307, D309, D311, D312, D315, D316, D318, D309, D320, D321, D322, D323, D324, D325, D326, D328, D334, D524, D579, D602	Storage Tank	40 CFR 60, Subpart K/Ka/Kb	Vapor pressure of permitted commodities is below the vapor pressure threshold of the subject NSPSs.
D358, D359, D360, D361, D362	Storage Tank	40 CFR 60, Subpart K/Ka/Kb	These tanks are pressure vessels designed to operate in excess of 30 psig without emissions to the atm. except under emergency conditions.

Device ID	Equipment	Regulation	Summary of Non-Applicability Determination
D263, D264, D270, D273, D274, D277, D287, D288, D289, D290, D291, D293, D299, D303, D327, D336, D338, D339, D340, D341, D343, D344, D345, D346, D347, D348, D351, D353, D354, D355, D356, D357	Storage Tank	40 CFR 60, Subpart K/Ka/Kb	Tanks were constructed prior to June 11, 1973, and have not been modified or reconstructed since then.
D272, D273, D274, D275, D276, D277, D279, D281, D282, D283, D284, D285, D287, D288, D289, D290, D291, D292, D293, D294, D295, D296, D297, D298, D300, D301, D302, D303, D304, D305, D306, D307, D309, D311, D312, D323, D527, D528	Storage Tank	40 CFR 60, Subpart UU	Tanks were constructed prior to November 18, 1980 and have not been modified or reconstructed since then.
D231, D233	Gasoline Loading Racks	40 CFR 60, Subpart XX	Gasoline loading racks were constructed prior to Dec 17, 1980, and have not been modified or reconstructed since then.
D254, D255, D256, D257, D258, D261, D262, D263, D264, D266	Wastewater Treatment System	40 CFR 60, Subpart QQQ	Wastewater treatment systems were constructed prior to May 4, 1987, and have not been modified or reconstructed since then.

Table 4.3 Fugitive Components Not Subject to NSPS Requirements

Device ID	Equipment	Regulation	Summary of Non-Applicability Determination
D701	Fug. Comp. (P5S1)	40 CFR 60, Subpart GGG	Components associated with material loading, unloading, and/or transportation. Not part of a process unit.
D702	Fug. Comp. (P8S1)		
D703	Fug. Comp. (P8S2)		
D694	Fug. Comp. (P8S18)		
D704	Fug. Comp. (P8S20)		
D705	Fug. Comp. (P8S21)		
D706	Fug. Comp. (P8S25)		
D695	Fug. Comp. (P8S27)		
D712	Fug. Comp. (P13S1)		
D707	Fug. Comp. (P9S1)	40 CFR 60, Subpart GGG	Components associated with wastewater treatment systems. Not part of a process unit.
D708	Fug. Comp. (P9S2)		
D709	Fug. Comp. (P10S2)	40 CFR 60, Subpart GGG	Components associated with storage tanks. Not part of a process unit.
D803	Fug. Comp. (P10S2)		
D710	Fug. Comp. (P10S3)		
D711	Fug. Comp. (P10S4)		
D657	Fug. Comp. (P6S7)	40 CFR 60, Subpart GGG	Process unit does not contain any equipment that is in VOC service.
D649	Fug. Comp. (P7S2)		
D607	Fug. Comp. (P1S1)	40 CFR 60, Subpart GGG	Process unit was constructed prior to January 4, 1983, and has not been modified or reconstructed since then.
D608	Fug. Comp. (P1S2)		
D609	Fug. Comp. (P1S4)		
D655	Fug. Comp. (P1S5)		
D656	Fug. Comp. (P1S6)		
D700	Fug. Comp. (P2S3)		
D616	Fug. Comp. (P2S4)		
D617	Fug. Comp. (P3S1)		
D618	Fug. Comp. (P6S1)		
D619	Fug. Comp. (P6S4)		
D620	Fug. Comp. (P6S5)		
D718	Fug. Comp. (P7S3)		
D621	Fug. Comp. (P13S6)		
D650	Fug. Comp. (P15S2)		
D812	Fug. Comp. (P15S1)	40 CFR 60, Subpart GGGa	Components associated with flare vapor recovery system. Not part of a process unit.

This refinery is not subject to the NSPSs listed below:

- 40 CFR 60 Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced after August 17, 1971.
This refinery does not operate any steam generators that have a permitted heat capacity greater than 250 MMBtu/hr.
- 40 CFR 60 Subpart Da - Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978. This refinery does not meet the definition of an electric utility.
- 40 CFR 60 Subpart III- Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes. This refinery does not conduct any SOCMI operations.
- 40 CFR 60 Subpart NNN - Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. The refinery does not conduct any SOCMI operations.
- 40 CFR 60 Subpart RRR - Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical. This refinery does not conduct any SOCMI operations.

National Emission Standard for Hazardous Air Pollutants (NESHAP)

As explained below, this refinery is not subject to NESHAP requirements except for reporting and recordkeeping requirements of 40 CFR 61 Subpart FF - National Emission Standard for Benzene Waste Operation. These standards have been incorporated into the Title V permit.

40 CFR 61 Subpart FF

40 CFR 61 Subpart FF-National Emission Standard for Benzene Waste Operations (Benzene Waste NESHAP) defines a major source as any chemical manufacturing plant, coke by-product recovery plant, or petroleum refinery with 10 megagram per year (Mg/yr) (11 tons/yr) or more of benzene in the waste streams. The Paramount refinery is not a major source under this regulation since their reported total annual benzene (TAB) quantity is less than 10 Mg/yr.

While the refinery is not subject to the control standards of the subpart per se, it is nonetheless subject to certain recordkeeping and reporting requirements. Facility Condition F52.1 has been tagged to the facility to indicate that the refinery is subject to the recordkeeping and reporting requirements of 40 CFR Sections 61.356 and 61.357, respectively.

40 CFR Part 63 - NESHAPs for Source Categories

A "major" source is defined as a stationary source that emits or has the potential to emit 10 tons per year of any of the 188 listed hazardous air pollutants (HAPs) or 25 tons per year of a combination of these HAPs. Area sources are defined as those sources that emit less than 10 tons annually of a single HAP or less than 25 tons or more annually of a combination of HAPs.

Paramount has determined that this facility is not a major source of HAPs and has provided an inventory of HAP emissions that supports this determination.

As an area source, the refinery is not subject to any of the major source Maximum Achievable Control Technology (MACT) Standards, including the following:

- 40 CFR 63 Subpart CC - National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries.
- 40 CFR 63 Subpart EEE - National Emission Standards for Hazardous Air Pollutants for Hazardous Waste Incinerators.
- 40 CFR 63 Subpart EEEE - National Emission Standard for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline).
- 40 CFR 63 Subpart F - National Emission Standards for Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry. The refinery does not operate any SOCOMI operations.
- 40 CFR 63 Subpart G - National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater.
- 40 CFR 63 Subpart GGGGG – National Emission Standard for Hazardous Air Pollutants for Site Remediation.
- 40 CFR 63 Subpart H - National Emission for Organic Hazardous Air Pollutants for Equipment Leaks.
- 40 CFR 63 Subpart Q - National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers.
- 40 CFR 63 Subpart R - National Emission Standards for Hazardous Air Pollutants for Gasoline Distribution Facilities.
- 40 CFR 63 Subpart UUU - National Emission Standard for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units.
- 40 CFR 63 Subpart VV - National Emission Standards for Oil-Water Separators and Organic-Water Separators.

Some NESHAPs for source categories have been developed for area sources. The following is a discussion of the applicability of area source NESHAPs.

40 CFR 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engine - For area sources, this subpart contains requirements for new or reconstructed stationary reciprocating internal combustion engines at area sources. None of the internal combustion engines at the Paramount Refinery are subject to this regulation since none of them have been constructed or reconstructed since June 12, 2006.

40 CFR 63 Subpart BBBBBB - Emissions Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities - The refinery includes two gasoline loading racks, which have a maximum permitted throughput of 13,000 barrels per day. These loading racks along with associated storage tanks are subject to

this regulation as a “bulk gasoline terminal” since they receive gasoline from a refinery via pipeline. The compliance date for existing sources is January 10, 2011.

For equipment that is subject to Subpart BBBBBB, the regulated pollutant is listed in the “Emissions and Requirements” column of sections D and H of the Title V permit. This listing references Section J of the permit, which contains the emission limits and requirements of Subpart BBBBBB. The following equipment have been identified in the permit as subject to the requirements of this rule based on engineering knowledge of the process, permit, and the rule:

Table 4.4 Equipment Subject to 40 CFR 60 Subpart BBBBBB

Process No.	System No.	Equipment
8 (Loading/Unloading Facilities)	18 (Gasoline TT Loading Rack No. 20)	Gasoline Loading Rack
8 (Loading/Unloading Facilities)	27 (Gasoline TT Loading Rack No. 21)	Gasoline Loading Rack
10 (Storage Tanks)	2 (Internal Floating Roof Storage Tanks)	Gasoline Storage Tank

Compliance Assurance Monitoring (CAM) (40 CFR 64)

This regulation requires facilities of major sources to submit CAM plans to accompany the application for renewal of their respective Title V permits or for initial Title V applications submitted after 4/20/98. Since this application is an initial Title V application submitted prior to 4/20/98, no CAM plans are required at this time.

5. Periodic Monitoring Requirements

Applicable monitoring and operational requirements for which the facility is required to comply are identified in the Title V permit (for example, Section D, F, and J and Appendix B of the proposed Title V permit).

This refinery is subject to RECLAIM monitoring, source test requirements, and other monitoring provisions that are required by federal, state or AQMD laws and regulations. Section F of the permit contains the monitoring and source test permit conditions imposed by Regulation XX. More specifically, it summarizes the monitoring and testing requirements for Major, Large and Process units at NOx and SOx RECLAIM facilities. Finally, Compliance Assurance Monitoring (CAM) requirements of 40 CFR Part 64 do not currently apply to any of the permitted emission sources at this facility.

As specified in AQMD Rule 3004(a)(4), the proposed permit includes periodic monitoring conditions for equipment that is subject to SIP-approved, federally enforceable rules, which do not require sufficient monitoring to assure compliance with emission limitations or other requirement of the rule. Permit conditions in Section D and H of the permit that fulfill Title V periodic monitoring requirements are tagged with the following: *Rule 3004(a)(4)-Periodic Monitoring, 12-12-1997*. These periodic monitoring conditions are also tagged with the underlying rule(s) for which the condition is fulfilling the monitoring requirement. In some cases, existing monitoring conditions that were installed under NSR fulfill the periodic

monitoring requirements for other rules or regulations. For these cases, the monitoring condition was tagged with Rule 3004(a)(4) and the underlying rule(s) for which the condition is fulfilling the monitoring requirement.

A draft Periodic Monitoring Guidance document was published by the AQMD in August 1997. A public consultation was held to solicit public input. The final Periodic Monitoring Guideline Document was published by the AQMD in November 1997. This guideline was used to establish the periodic monitoring requirements in the Title V permit. In addition, the AQMD used the CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Requirements in SIP (June 24, 1999) for applicable opacity limits, grain loading limits for material handling equipment, and for sulfur content of fuels. Furthermore, the AQMD used the CAPCOA/ARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP for combustion sources (July 2001). These documents are included in Appendix II.

6. Title V Permit Format

The Title V permit consists of eleven sections and two appendices. Each section is devoted to a particular function as summarized below:

Section A Facility Information

This section contains operator name, facility location and mailing address. It also lists the name of the responsible official and contact person for the facility. Lastly, this section indicates whether Regulation XXX and RECLAIM apply to the facility.

Section B RECLAIM Annual Emission Allocation

This section applies to RECLAIM facilities only and lists NO_x and SO_x allocations for the facility. This facility is subject to both the NO_x and SO_x requirements of RECLAIM.

Section C Facility Plot Plan

This section is reserved for the development of the facility plot plan in the future.

Section D Facility Description and Equipment Specific Conditions

This section describes equipment at the refinery that has been issued permits to operate. It also includes facility-wide operating conditions, emission limitations, the rules for which the emission limits and permit conditions are derived, and the periodic monitoring requirements as appropriate. The description of the process and equipment is structured in the following manner:

Process

A process is the largest grouping of equipment under the Title V permit, which includes all equipment involved in the making of final product from

raw feed. A process can end at an intermediate product if the succeeding process is significantly different.

System

A system is the combination of equipment into a unit which is a logical subsystem of a process. A system can be used to identify individual process lines, or it can separate a long process line into separate functions. The main use of this grouping will be to separate a large process into manageable groups.

Equipment

This column describes equipment contained within a system or a process. It contains information necessary to identify equipment and ensure compliance with rules and regulations such as dimensions of a tank, heat input of a heater, horsepower of an engine, etc.. This section also lists the equipment application number (A/N). The A/N is an identification number issued by the AQMD to the application submitted by the applicant for a Permit to Construct or Permit to Operate for a piece of equipment. A facility is required to submit a permit application when it plans to install a new piece of equipment, alter an existing piece of equipment, or modify a permit condition. An A/N in the Title V permit changes each time the AQMD approves a new application.

Device Identification (I.D.) Number

Each piece of equipment is assigned a unique I.D. number. When a piece of equipment is modified it retains its existing I.D. number. However, when it is removed from service, the I.D. number is retired and will not be used to identify another piece of equipment at this facility.

Connected to

This column is used to identify air pollution control equipment that is connected to a specific piece of equipment at the refinery.

RECLAIM Source Type/Monitoring Unit

This column is used to identify equipment classification pursuant to the RECLAIM program. The classification of major source, large source and process units are defined in Rule 2012. The equipment classification is assigned to NO_x and SO_x emission sources subject to RECLAIM. Each classification of equipment is subject to a specific monitoring requirement under RECLAIM.

Emissions and Requirements

This column lists emission limits applicable to each piece of equipment. It also lists the rules for which the limits were derived. If AQMD adopted a rule that has not yet been approved into the State Implementation Plan

(SIP), emission limits established by both the SIP-approved and non SIP-approved versions of the rule are included in the permit.

Conditions

This column lists specific permit conditions applicable to the facility, process, system or equipment. A facility level condition applies to the whole facility and is designated by the letter F. The process conditions apply to the entire process and are designated by the letter P. The system conditions apply to the entire system and are designated by the letter S. The equipment (device) level conditions are designated by other letters depending on the category of conditions such as monitoring, recordkeeping, etc. Each permit condition references the law or rule for which the requirements in the condition were derived. If AQMD adopted a rule that has not yet been approved into the SIP, emission limits established by both the SIP-approved and non SIP-approved versions of the rule are included in the permit. One category of the device level condition is the periodic monitoring condition.

- Section E Administrative Conditions**
This section contains general administrative permit conditions that apply to all facilities. The conditions listed in this section apply to all permitted equipment at the facility unless superseded by other conditions listed elsewhere in the facility permit.
- Section F RECLAIM Monitoring & Source Testing Requirements**

This section contains monitoring and source testing permit conditions imposed by Regulation XX. It summarizes the monitoring and testing requirements for Major, Large and Process units at RECLAIM facilities.
- Section G RECLAIM Recordkeeping & Reporting Requirements**
This section contains recordkeeping and reporting requirements specified in Regulation XX. It summarizes the recordkeeping and reporting requirements for RECLAIM sources.
- Section H Permit to Construct and Temporary Permit to Operate**
The permit format in this section is the same as described for Section D above. However, equipment listed in this section has not been issued permits to operate, but were issued a permit to construct and/or a temporary permit to operate.
- Section I Compliance Plans & Schedules**
This section lists active compliance plans specified in the SIP-approved rules.

Section J Air Toxics

This section lists permit conditions pertaining to Federal NESHAP/MACT requirements.

Section K Title V Administration

This section lists the Title V administrative conditions. They are the same for all Title V facilities, except for the list of applicable rules table at the end of the section. The table at the end of the section lists all applicable rules referenced in Sections D and H (emission limit and conditions) and any rules that are referenced to the facility. This table also indicates which rules are federally enforceable and which are only enforceable by AQMD.

Appendix A NO_x and SO_x Emitting Equipment Exempt from Written Permit Pursuant to Rule 219

This section lists classes of NO_x- and SO_x- emitting Rule 219 exempt equipment present at the facilities that are subject to RECLAIM.

Appendix B Rule Emission Limits

Some emission limits that are too complex to be listed in the Emissions and Requirements column of Sections D and H are listed in Appendix B of the Title V permit. Emission limits in this appendix are referenced by an emission type “(9)” in the “Emissions and Requirements” column of the permit.

7. Permit Features

Permit Shield

A permit shield is an optional part of a Title V permit that gives the facility an explicit protection from requirements that do not apply to the facility. A permit shield is a provision in a permit that states that compliance with the conditions of the permit shall be deemed compliance with all identified regulatory requirements. Incorporation of a permit shield into the Title V permit involves submission of applications for change of conditions for each equipment affected by the permit shield. Permit shields are addressed in AQMD Rule 3004 (c). This facility has not applied for a permit shield for any of the equipment at the refinery.

Alternate Operating Scenarios

An alternative operating scenario (AOS) is a set of provisions and conditions in a permit that allow the operator to switch back and forth between alternative modes of operation without submitting an application for a permit revision before each switch. However, each AOS must be evaluated for compliance with AQMD rules and regulations and applicable State and Federal requirements. AOS is addressed in AQMD Rule 3005 (j). This facility has not applied for an AOS for any of the equipment at the refinery.

Emissions Trading

This facility is subject to the NO_x and SO_x emissions trading requirements under Regulation XX.

Prevention of Significant Deteriorations (PSD) Permits

PSD is a federal program for permitting new and modified sources that emit air pollutants for which the AQMD is classified as in attainment with the National Ambient Air Quality Standards (NAAQS). This facility has not been issued a PSD permit by either the EPA or the AQMD.

EPA New Source Review (NSR) Permits

NSR is a federal program for permitting new and modified sources that emit air pollutants for which the AQMD is classified as in Non-attainment with NAAQS. Before SIP-approval of the AQMD NSR Rule in 1978, EPA issued NSR permits for new construction and/or equipment modifications in the AQMD. A check of the records indicates that there are no NSR permits issued by the EPA for the Paramount refinery.

8. Summary of Emissions and Health Risks

Summary of Refinery Criteria Air Pollutant and Toxic Air Contaminant Emissions

This section contains a summary of the Criteria Air Pollutant (CAP) and Toxic Air Contaminant (TAC) emissions for the refinery as reported in the refinery's Annual Emission Report (AER) for fiscal year 2006-2007.

**Table 8.1 Criteria Pollutant Emissions (tons/year)
from Annual Reported Emissions for Reporting Fiscal Year 2006 – 2007**

Pollutant	Emissions (tons/year)
NOx	108
CO	129
VOC	138
PM	126
SOx	22

**Table 8.2 Toxic Air Contaminants Emissions (TAC)
Annual Reported Emissions for Reporting Year 2006 – 2007**

The Following TACs Were Reported	Emissions (lbs/yr)
1,2,4-Trimethylbenzene	8.8
1,3-Butadiene	1.6
2-Methyl naphthalene [PAH, POM]	0.13
Acetaldehyde	1666
Acrolein	1446
Ammonia	22771
Arsenic	0.01
Benzene	3344
Cadmium	0.9
Copper	0.03
Diesel engine exhaust, particulate matter	239
Ethylbenzene	55
Formaldehyde	6831

The Following TACs Were Reported	Emissions (lbs/yr)
Hexane	1338
Hexachlorocyclohexanes	324
Hydrochloric acid	1.3
Lead (inorganic)	0.06
Manganese	0.02
Mercury	0.01
Methanol	0.03
Naphthalene	3.4
Nickel	0.7
PAHs, total, with components not reported	59
Selenium	0.02
Styrene	0.60
Toluene	1004.
Trichloroethylene	24
Xylenes	10573

Health Risk from Toxic Air Contaminants

The Paramount refinery is subject to review by the Air Toxics Information and Assessment Act (AB2588). The Final Facility Health Risk was approved in 2002 with the following risk factors.

Cancer Risk	9.61 in one million
Acute Hazard Index	0.02
Chronic Hazard Index	0.01

9. Compliance History

The Paramount refinery is subject to the terms of Hearing Board Orders entered for the following cases:

- Case No. 2914-87: Variance for District Rule 1118.
- Case No. 2914-72: Stipulated Order of Abatement.
- Case No. 2914-90: Stipulated Order of Abatement.
- Case No. 2914-91: Stipulated Order of Abatement.

The issuance of a regular Variance and/or Stipulated Order of Abatement (SOA) by the AQMD Hearing Board does not affect federal or citizen enforceability of the subject requirements.

Variance(s)

Hearing Board Case No. 2914-87: AQMD Rule 1118 was amended in November of 2005. The Paramount Refinery operates one (1) General Service Flare (C396) that is subject to Rule 1118. Subsection (g)(3) of the amended rule specifies that owners or operators with flares subject to the rule shall install and operate a flare monitoring system (FMS) by July 1, 2007 to perform monitoring and recording of the parameters specified in the second section of Table 1 of the rule. This monitoring includes gas flow, gas higher heating value (HHV), and total sulfur concentration (TSC) of the gas. Subsections (g)(3) and (j)(1)(C) contain performance specifications for the monitors. Rule 1118(j)(1)(C) also requires that the accuracy of the flow

meter be verified annually according to manufacturer specifications. Additionally, Rule 1118 contains reporting requirements that are based on these monitoring requirements.

At the time of the rule adoption, technical challenges and issues related to feasibility, reliability, maintainability, accuracy, and safety that had the potential to delay implementation of the specified monitoring systems. Due to these known issues, the AQMD Governing Board adopted a resolution directing AQMD staff to work with the Western States Petroleum Association and its refiner members to resolve outstanding issues. Pilot projects for the development of TSC and HHV analyzers were completed in March 2008. Based on a determination that the pilot analyzers demonstrated compliance with the technical requirements of Rule 1118, the AQMD approved the TSC and HHV analyzers on May 20, 2008. Under the variances issued by the Hearing Board, the refineries have until September 1, 2008, to complete the design, acquisition, and installation of the required analyzers.

On March 27, 2008, the refiners submitted to the Hearing Board a written request for continuance of the April 22-24, 2008 hearing scheduled in their variance orders for consideration of petitions for modification/extension. The Hearing Board granted this request, and also continued the previously established April 8, 2008 date for filing of such petitions. The Hearing Board established a new filing date of June 27, 2008, and scheduled the hearing on the petitions for July 15, 16, and 17, 2008.

As required by Rule 3004(a)(10)(C), condition I1.1 has been added to the affected equipment in section D and H of the permit requiring the operator to comply with all the conditions of the variance. A copy of the documents related to this regular variance is available on the internet under the AQMD's "Facility Information Detail" database (FIND, at http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac_id=800183).

Order(s) for Abatement

Hearing Board Case No. 2914-72: In August 2004, the AQMD issued four Notices of Violation to Paramount alleging violations of AQMD Rule 203(a) for four heaters and two incinerators. The heaters and incinerators were periodically exceeding the firing rates (in MMBtu/hr) specified in the equipment descriptions of Paramount's facility permit. The AQMD alleged that these equipment descriptions constitute permit conditions that are enforceable through AQMD Rules 202, 203, and 2004(f). Paramount disputed AQMD's interpretation that the firing rates in the equipment descriptions are enforceable permit conditions that limit the firing rate of the heaters and incinerators.

Under this SOA, Paramount was required to install ultra low-NO_x (ULNB) burners, which meet a NO_x concentration limit of 15 ppmv, on the following heaters: H-601, H-602, H-802, and H-805. Paramount has completed installation of these burners. Paramount is also required to install Selective Catalytic Reduction (SCR) emission control technology to reduce the NO_x emissions for heaters H-601 and H-802 (or substitute heater) to 5 ppmv or less. An enforceable schedule for the permitting and installation of each SCR is included in the SOA. Paramount has completed the installation of the SCR for H-601. In place of H-802, Paramount has elected to install SCR control technology for H-101, H-102, and H501/H502. The permit to construct the

SCR for H-101, H-102, and H501/H502 was granted to Paramount on July 25, 2008. Pursuant to the SOA, Paramount is scheduled to have this SCR in full operation by March 31, 2009.

Maximum firing rate limits for the heaters and incinerators are also specified in the SOA. The firing rate limits specified in the SOA for the heaters were applicable until the ULNBs were installed under new permits to construct, which were issued with new firing rate limits. Paramount was required to submit permit applications to change the permitted firing rate limits for the two incinerators. The incinerators are to be operated according to the firing rate limits in the SOA until the AQMD issues a permit with revised limits. Paramount has submitted permit applications for each the subject incinerators (H-402 and H-907).

As required by Rule 3004(a)(10)(C), condition I1.2 has been added to the affected equipment in section D and H of the permit requiring the operator to comply with all the conditions of the SOA. A copy of the documents related to this SOA is available on the internet under the AQMD's "Facility Information Detail" database (FIND, at http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac_id=800183).

Hearing Board Case No. 2914-90: The Paramount Refinery operates a tail gas incinerator (H-402) in the Sulfur Recovery Unit (SRU) that is used to control emissions of H₂S from the Tail Gas Unit exhaust stream as well as VOC and H₂S from various refinery process units. The SRU was constructed prior to the applicability date of 40CFR Part 60, Subpart J and is not subjected to the sulfur emissions requirements set forth in 40CFR 60.104 (a)(2). However, H-402 has undergone modifications between the mid-1970s to present to connect various miscellaneous refinery gas streams to H-402 for use as combustion fuel. This has triggered the applicability of 40CFR Part 60, Subpart J for this incinerator. The AQMD has determined that Paramount violates District Regulation IX, which incorporates by reference the NSPS set forth in 40CFR Part 60, Subpart J, whenever the concentration of H₂S in the miscellaneous refinery gas streams combusted by H-402 exceed the concentration allowed by 40CFR 60.104 (a)(1). Paramount disputed AQMD's interpretation and contends that the miscellaneous refinery gas streams are exempt from 40CFR 60 Subpart J because they are specifically excluded from the definition of a modification that would trigger 40CFR 60.104 (a)(1) by the alternative fuels exemption, 40CFR 60.14(e)(4) and the air pollution reduction exemption, 40CFR 60.14 (e)(5). In May 2008, the AQMD filed a petition for a SOA alleging that Paramount has been operating in violation of District Regulation IX.

Under this SOA, Paramount is required to re-route certain miscellaneous refinery gas streams currently venting to H-402 to the front of the SRU to comply with the requirements of 40CRF 60.104(a)(1) by March 31, 2009, provided the AQMD issues the required permits on or before November 1, 2008. Paramount has submitted applications for the necessary permits to construct on August 15, 2008.

As required by Rule 3004(a)(10)(C), condition I1.3 has been added to H-402 in Section D and H of the permit requiring the operator to comply with all the conditions of the SOA. A copy of the documents related to this SOA is available on the internet under the AQMD's "Facility Information Detail" database (FIND, at http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac_id=800183).

Hearing Board Case No. 2914-91: In May 2008, the AQMD issued a Notice of Violation to Paramount alleging violation of AQMD Rule 203(b) and 2004(f)(1) for failure to install leakless (bellow seal) valves, where required, during the CARB Phase 3 Clean Fuels Project undertaken in 2004. The District's approval of this project was contingent on permit condition that required all new valves in VOC service shall be of leakless (bellow seal) type, except those specifically exempted by District Rule 1173 or approved in writing by the District. Paramount and the AQMD have determined that 107 valves installed as part of the Clean Fuels Project should be leakless valves, but are instead conventional valves.

Under this SOA, Paramount was required to replace all of the conventional valves that should be leakless, bellow sealed or equivalent valves by no later than December 31, 2008 and submit a recalculation of fugitive emissions, as required by permit condition, to the District by March 31, 2009. Paramount has indicated the replacement of these non-compliant valves will be completed during its crude unit turnaround scheduled no later than December 31, 2008.

As required by Rule 3004(a)(10)(C), condition I1.4 has been added to the affected equipment in Section H of the permit requiring the operator to comply with all the conditions of the SOA. A copy of the documents related to this SOA is available on the internet under the AQMD's "Facility Information Detail" database (FIND, at http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac_id=800183).

Notices to Comply and Notices of Violation

As noted, the refinery has been in continuous operation since the 1930's. Since the inception of Los Angeles County Air Pollution Control District in 1947, the refinery has been subject to both self-reporting requirements and AQMD inspections. Eleven (11) Notices-to-Comply and nine (9) Notices-of-Violation have been issued to the Paramount refinery since August 1, 2005. The refinery is in compliance with these notices and, as discussed above, is on schedule to comply with the SOA's. Further information regarding the facility's compliance status is available on the internet under the AQMD's "Facility Information Detail" database (FIND, at http://www.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=800183).

Likewise, the compliance documentation for Variances and Abatement Orders is also available on the internet under the AQMD's "Facility Information Detail" database (FIND, at http://www.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=800183).

10. Compliance Certification

By virtue of the Title V permit application and issuance of this permit, the reporting frequency for compliance certification for the refinery shall be annual.

11. Appendices

In order to minimize printing, all of the following appendices are available on the AQMD website as shown below. In addition, they will be made available on CDs upon request. Please contact the AQMD contact person identified on the public notice for this facility or call Thomas

Lee at (909) 396-3138 for assistance in finding the information on the website or to obtain a copy of the CD.

- I. Technical Guidance Document For the Title V Permit Program (March 2005, Version 4.0) (<http://www.aqmd.gov/titlev/TGD.html>)
- II. Periodic Monitoring Guidance Documents
 - A. AQMD Periodic Monitoring Guidelines for Title V Facilities (November 1997) (<http://www.aqmd.gov/titlev/pdf/PeriodicMonitoringGuidelines-97.pdf>)
 - B. CAPCOA/CARB/EPA Region IX Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP (June 1999) (<http://www.arb.ca.gov/fcaa/tv/tvinfo/pmrec624.pdf>)
 - C. CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources (July 2001) (<http://www.arb.ca.gov/fcaa/tv/tvinfo/pmrecoms.pdf>)
- III. Summary Report of Notice of Violations. Further information regarding the facility's compliance status is available on the internet under the AQMD's "Facility Information Detail" database (FIND, at http://www.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=800183).
- IV. Variances and Abatement Orders. Further information regarding the facility's compliance status is available on the internet under the AQMD's "Facility Information Detail" database (FIND, at http://www.aqmd.gov/webappl/fim/prog/hbdisplay.aspx?fac_id=800183).