Bay Area Air Quality Management District

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Permit Evaluation
and
Statement of Basis
for
MAJOR FACILITY REVIEW PERMIT

for

Shell Martinez Refinery, Shell Oil Products US
Facility #A0011

Facility Address:
3485 Pacheco Blvd.
Martinez, CA 94553

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Martinez, CA 94553

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Title V Statement of Basis

A. Background

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Volume 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a major facility as defined by BAAQMD Regulation 2-6-212. It is a major facility because it has the "potential to emit", as defined by BAAQMD Regulation 2-6-218, more than 100 tons per year of a regulated air pollutant.

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR 70 as contained in BAAQMD Regulation 2, Rule 6. The permits must contain all applicable requirements (as defined in BAAQMD Regulation 2-6-202), monitoring requirements, recordkeeping requirements, and reporting requirements. The permit holders must submit reports of all monitoring at least every six months and compliance certifications at least every year.

In the Bay Area, state and District requirements are also applicable requirements and are included in the permit. These requirements can be federally enforceable or non-federally enforceable. All applicable requirements are contained in Sections I through VI of the permit.

Each facility in the Bay Area is assigned a facility number that consists of a letter and a 4-digit number. This facility number is also considered to be the identifier for the permit.

B. Facility Description

The Shell Martinez Refinery consists of a petroleum refinery and chemical manufacturing complex. The refinery converts approximately 140,000 barrels of crude oil per day into many finished products, including liquefied petroleum gas, automotive gasoline, jet fuel, diesel, industrial fuel oils, asphalt and petroleum coke. The Lubricants Department also processes crude oil, approximately 16,000 barrels per day, into finished lubricating oils, sodium sulfonates and asphalt. The chemical plant manufactures several different specialty chemicals.

The Shell Martinez Refinery has been in operation since 1915. The light oil processing (LOP) units were added in the mid 1970's, and the Flexicoker and associated units were added in the mid 1980's. Several new "clean fuels" units were added in 1995, including the Delayed Coker unit.

Finished products from the refinery include Liquefied Petroleum gas (LPG), which is sold as Propane and used for home heating, cooking, recreational vehicles, etc. Automotive gasoline and diesel are marketed throughout California and Nevada and used to power cars, trucks, busses, boats and farm equipment. Heavier fuel oils are used for heating, in industrial steam boilers and utilities. Asphalt is used as a road mix material throughout the western United States and Canada. Lubricating oils include

non-PCB electrical transformer oil, base stocks which are used to manufacture motor oils and extender oils which are used in rubber manufacturing processes. Sodium sulfonates are used as an emulsifying agent in detergents.

Through a variety of chemical reactions and physical changes, the Martinez Refinery manufactures finished petroleum products from crude oil. Oil Refining includes four basic processes, described below:

SEPARATION	Liquid hydrocarbons are separated into common boiling point fractions by distillation. The distillation process makes a "rough cut" of the crude oil, producing gases, light, medium and heavy boiling-range materials, and residuals. These cuts, or intermediate streams are then further processed by more sophisticated means.
CONVERSION	Cracking - This process breaks or cracks large hydrocarbon molecules into smaller ones. This is done by thermal or catalytic cracking. Reforming - This process uses high temperatures and catalysts to rearrange the chemical structure of a particular oil stream to improve its quality. Combining - This process chemically combines two or more hydrocarbon streams to produce a higher grade product. Liquefied petroleum gas streams are combined in this manner to produce gasoline.
PURIFICATION	This process converts contaminants into an easily removable or acceptable form.
BLENDING	This process mixes combinations of hydrocarbon liquids to produce a final product.

A more detailed description of petroleum refinery processes and the resulting air emissions may be found in Chapter 5 of EPA's publication AP-42, Compilation of Air Pollutant Emission Factors. This document may be found at:

http://www.epa.gov/ttn/chief/ap42/ch05/

The principal sources of air emissions from refineries are:

- Combustion units (furnaces, boilers, and cogeneration facilities)

- FCC (Fluidized Catalytic Cracking)
- Storage tanks
- Fugitive emissions from pipe fittings, pumps, and compressors
- Sulfur plants
- Wastewater treatment facilities

Combustion unit emissions are generally controlled through the use of burner technology, steam injection, or selective catalytic reduction. Emissions from the FCCU are controlled through the use of improved catalyst regeneration, CO boilers, electrostatic precipitators, hydrotreating the feed, and use of catalysts to remove impurities. Storage tank emissions are controlled through the use of add on control and or fitting loss control. Fugitive emissions have been controlled through the use of inspection and maintenance frequencies. Sulfur plants are equipped with tail gas units to reduce emissions. Wastewater treatment facilities are controlled by covering units, gasketing covers, and add on controls such as, carbon canisters.

C. Permit Content

The legal and factual basis for the permit follows. The permit sections are described in the order that they are presented in the permit.

I. Standard Conditions

This section contains administrative requirements and conditions that apply to all facilities. If the Title IV (Acid Rain) requirements for certain fossil-fuel fired electrical generating facilities or the accidental release (40 CFR § 68) programs apply, the section will contain a standard condition pertaining to these programs. Many of these conditions derive from 40 CFR § 70.6, Permit Content, which dictates certain standard conditions that must be placed in the permit. The language that the District has developed for many of these requirements has been adopted into the BAAQMD Manual of Procedures, Volume II, Part 3, Section 4, and therefore must appear in the permit.

The standard conditions also contain references to BAAQMD Regulation 1 and Regulation 2. These are the District's General Provisions and Permitting rules.

Condition I.J has been added to clarify that the capacity limits shown in Table II-A are enforceable limits.

II. Equipment

This section of the permit lists all permitted or significant sources. Each source is identified by an S and a number (e.g., S24).

Permitted sources are those sources that require a BAAQMD operating permit pursuant to BAAQMD Rule 2-1-302.

Significant sources are those sources that have a potential to emit of more than 2 tons of a "regulated air pollutant" as defined in BAAQMD Rule 2-6-222 per year or 400 pounds of a "hazardous air pollutant," as defined in BAAQMD Rule 2-6-210, per year.

All abatement (control) devices that control permitted or significant sources are listed. Each abatement device whose primary function is to reduce emissions is identified by an A and a number (e.g., A-24). If a source is also an abatement device, such as when an engine controls VOC emissions, it will be listed in this table but will have an "S" number. An abatement device that is also a source (such as a thermal oxidizer that burns fuel) will have an "A" number.

The equipment section is considered to be part of the facility description. It contains information that is necessary for applicability determinations, such as fuel types, contents or sizes of tanks, etc. This information is part of the factual basis of the permit.

Each of the permitted sources has previously been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. These permits are issued in accordance with state law and the District's regulations. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

Following are explanations of the differences in the equipment list between the time that the facility originally applied for a Title V permit and the permit proposal date.

Based upon the District's review of information contained in Martinez Refining Company's January 31, 2001 letter, the following sources were converted to exempt status because they solely handle organic liquids (lube oil) with an initial boiling point greater than 302^{o}F and meet the exemption of Regulation 2-1-123.3.2:

S#	Source Description	Comments
1405	LUBS5 Lube Blending, Packaging, Shipping	
1531	LUBS5 Loading Rack Lubricating Oil T/C (Bleacher House)	to be renamed to LUBS5 Loading Rack Lubricating Oil T/C
1532	LUBS5 Loading Rack Lubricating Oil T/C AND T/T (Compound House)	to be renamed to LUBS5 Loading Rack Lubricating Oil T/C and T/T
1535	LUBS5 Loading Rack Specialty Plant T/T	
1536	LUBS3 LR-18 Loading Rack Sulfonation T/C & T/T	
1538	LUBS5-Lubrication - SB,T/C AND T/T	

S#	Source Description	Comments	
1562	LUBS5 Agitator #13		
1563	LUBS5 Agitator #14		
1564	LUBS5 Agitator #16		
1565	LUBS5 Agitator 16 Pot		
1566	LUBS5 Agitator #17		
1567	LUBS5 Agitator #19		
1568	LUBS5 Agitator #20		
1571	LUBS5 Additive Pot Bleacher 1-4 System	to be renamed to Lubes Blending Pot 1-4 System	
1572	LUBS5 Bleacher #1	to be renamed to Lubes Blending Pot # 1	
1573	LUBS5 Bleacher #2	to be renamed to Lubes Blending Pot # 2	
1574	LUBS5 Bleacher #3	to be renamed to Lubes Blending Pot # 3	
1575	LUBS5 Bleacher #4	to be renamed to Lubes Blending Pot # 4	
10480	LUBS4 Loading/Handling Facility	to be renamed to Diala # 2 Rack	

Per Martinez Refining Company's January 31, 2001 letter, the following sources were archived, because they have been demolished or removed from the site:

S#	Source Description
492	Storage Tank 492
493	Storage Tank 493
826	Tank 826
1534	LUBS5 Loading Rack Specialty Plant T/C

The following sources were archived because they are already included in the Sulfur Plant permits at the facility:

S#	Source Description
1442	EMSR2_Sour Water Stripper No 3
1775	EMSR2_Sour Water Stripper No 4
1776	EMSR2_Sour Water Stripper No 5
4182	OPC 9-Sour Water Stripper #6
4183	OPC 9-Sour Water Stripper #7

Per Martinez Refining Company's January 31, 2001 letter, the following sources were converted to exempt status, because they store or handle liquefied gases and meet the exemption of Regulation 2-1-123.3.1:

S#	Source Description
1526	LOGI2-Loading Rack-Butane/Propane T/C
1533	LOGI2-Loading Rack-Propane T/T

Per Martinez Refining Company's June 20, 2001 email correspondence, the descriptions of the following sources were amended to reflect that they are used primarily for storing asphalt:

Current Source Description	Recommended Source Description
S21 – Storage Tank #21	S21 – Asphalt Storage Tank #21
S22 – Storage Tank #22	S22 – Asphalt Storage Tank #22
S23 – Tank 23	S23 – Asphalt Storage Tank 23
S24 – Storage Tank 24	S24 – Asphalt Storage Tank 24
S26 – Tank 26	S26 – Asphalt Storage Tank 26
S497 – Storage Tank 497	S497 – Asphalt Storage Tank 497
S552 – Storage Tank #552	S552 – Asphalt Storage Tank #552
S553 – Storage Tank #553	S553 – Asphalt Storage Tank #553
S554 – Storage Tank #554	S554 – Asphalt Storage Tank #554
S555 – Storage Tank #555	S555 – Asphalt Storage Tank #555
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S557 – Storage Tank 557	S557 – Asphalt Storage Tank 557
S558 – Storage Tank #558	S558 – Asphalt Storage Tank #558
S559 – Storage Tank 559	S559 – Asphalt Storage Tank 559
S560 – Storage Tank 560	S560 – Asphalt Storage Tank 560
S561 – Storage Tank #561	S561 – Asphalt Storage Tank #561
S571 – Storage Tank 571	S571 – Asphalt Storage Tank 571
S572 – Storage Tank 572	S572 – Asphalt Storage Tank 572
S573 – Storage Tank 573	S573 – Asphalt Storage Tank 573
S815 – Storage Tank 815	S815 – Asphalt Storage Tank 815
S867– Storage Tank 867	S867– Asphalt Storage Tank 867
S868– Storage Tank 868	S868– Asphalt Storage Tank 868
S876– Storage Tank 876	S876– Asphalt Storage Tank 876
S961– Storage Tank 961	S961– Asphalt Storage Tank 961
S985– Storage Tank 985	S985– Asphalt Storage Tank 985
S1017– Storage Tank 1017	S1017– Asphalt Storage Tank 1017
S1018– Storage Tank 1018	S1018– Asphalt Storage Tank 1018
S1041– Storage Tank 1041	S1041– Asphalt Storage Tank 1041
S1042– Storage Tank 1042	S1042– Asphalt Storage Tank 1042
S1043– Storage Tank 1043	S1043– Asphalt Storage Tank 1043
S1044– Storage Tank 1044	S1044– Asphalt Storage Tank 1044
S1048 – Storage Tank 1048	S1048 – Asphalt Storage Tank 1048
S1160 – Storage Tank 1160	S1160 – Asphalt Storage Tank 1160

Per Martinez Refining Company's January 31, 2001 letter, the following tanks that had incorrectly identified capacities in our District databank (DB) were corrected to reflect the correct capacities in their Title V permit:

S-#	Description	Existing Capacity in DB	Correct Capacity for DB
3	Tank 3	2335830.1 Gallon	2335830 Gallon
4	Tank 4	2303490 Gallon	2335830 Gallon
13	Storage Tank 13	2310000 Gallon	2335830 Gallon
14	Tank 14	2335830.1 Gallon	2335830 Gallon
19	Tank 19	2335830.1 Gallon	2335830 Gallon
20	Tank 20	2335830.1 Gallon	2335830 Gallon
23	Tank 23	2335830.1 Gallon	2335830 Gallon
26	Tank 26	2335830.1 Gallon	1050000 Gallon
129	Tank 129	630000 Gallon	634477 Gallon
178	Tank 178	19740 Gallon	21000 Gallon
179	Tank 179	19740 Gallon	21000 Gallon
224	Tank 224	21294 Gallon	23100 Gallon
257	Tank 257	2335830.1 Gallon	2335830 Gallon
364	Tank 364	19740 Gallon	21000 Gallon
365	Tank 365	19740 Gallon	21000 Gallon
483	Tank 483	3380159.9 Gallon	3380160 Gallon
484	Tank 484	3380159.9 Gallon	3380160 Gallon
522	Tank 522	25074 Gallon	25200 Gallon
530	Tank 530	3452231.9 Gallon	3452232 Gallon
532	Tank 532	3452189.9 Gallon	3452190 Gallon
540	Tank 540	3435179.9 Gallon	3435180 Gallon
541	Tank 541	3435179.9 Gallon	3435180 Gallon
544	Tank 544	4818029.8 Gallon	4923576 Gallon
545	Tank 545	4923576.2 Gallon	4923576 Gallon
563	Tank 563	79716 Gallon	84000 Gallon
610	Tank 610	5615399.9 Gallon	5615400 Gallon
611	Tank 611	5615399.9 Gallon	5615400 Gallon
612	Tank 612	5615399.9 Gallon	5615400 Gallon
613	Tank 613	5615399.9 Gallon	5615400 Gallon
815	Storage Tank #815	869400 Gallon	863058 Gallon
816	Tank 816	5615399.9 Gallon	3459283 Gallon
864	Tank 864	45360 Gallon	45682 Gallon
867	Storage Tank 867	93660 Gallon	93156 Gallon
868	Storage Tank 868	93660 Gallon	93156 Gallon
876	Storage Tank 876	121380 Gallon	121296 Gallon
967	Tank 967	3399647.9 Gallon	3399648 Gallon
985	Storage Tank 985	824880 Gallon	841512 Gallon
1017	Storage Tank 1017	211680 Gallon	210210 Gallon
1018	Storage Tank 1018	211680 Gallon	210210 Gallon

S-#	Description	Existing Capacity in DB	Correct Capacity for DB
1031	Tank 1031	2268000 Gallon	2274720 Gallon
1063	Tank 1063	210000 Gallon	211493 Gallon
1070	Tank 1070	2335830.1 Gallon	2335830 Gallon
1072	Tank 1072	6300000 Gallon	6344775 Gallon
1076	Tank 1076	4032000 Gallon	4060656 Gallon
1077	Tank #1411	420000 Gallon	497242 Gallon
1114	Spent Acid Tank #1114	1230 Barrel	51660 Gallon
1115	Spent Acid Tank #1115	1230 Barrel	51660 Gallon
1116	Tank 1116 H2S04 99.5 %	1230 Barrel	51660 Gallon
1117	EMSR5 Skim Tank 1117	4200 Gallon	4512 Gallon
1129	Storage Tank 1129	6300000 Gallon	6344775 Gallon
1130	Storage Tank 1130	6300000 Gallon	6344775 Gallon
1131	Storage Tank 1131	6300000 Gallon	6344775 Gallon
1136	Tank 1136	3780 Gallon	3760 Gallon
1137	Tank 1137	3780 Gallon	3760 Gallon
1139	Tank 1139	3360000 Gallon	3399648 Gallon
1140	Tank 1140	4200000 Gallon	4219511 Gallon
1146	Tank 1146	210000 Gallon	210976 Gallon
1147	Tank 1147	210000 Gallon	210976 Gallon
1159	Tank 1159	2268000 Gallon	2274720 Gallon
1160	Storage Tank 1160	2349899.9 Gallon	2349900 Gallon
1161	Tank 1161	11279099.6 Gallon	11279601 Gallon
1191	Crude oil storage tank T-1256	15540000 Gallon	15572899 Gallon
1192	Crude oil storage tank T-1257	15540000 Gallon	15572899 Gallon
1235	CHEM Storage Tank 739-T	33978 Gallon	32130 Gallon
1236	Chem Storage Tank 740-T	34000 Gallon	32130 Gallon
1751	Naphtha Tank T-1330	6127799.8 Gallon	6344775 Gallon
1752	Naphtha Tank T-1331	6123600.1 Gallon	6344775 Gallon
1753	Gasoline Tank T-1332	8807400.4 Gallon	9136477 Gallon
1754	Gasoline Tank T-1333	8824201.2 Gallon	9136477 Gallon
1755	Gasoline Tank N T-1334	3922800 Gallon	4314447 Gallon
1756	Gasoline Tank 1335	3922800 Gallon	4314447 Gallon
1757	Storage Tank 1336	3922800 Gallon	4060656 Gallon
1758	Storage Tank 1337	3922800 Gallon	4060656 Gallon
2012	DH-4 Perc Storage System V-12378	3000 Gallon	3217 Gallon
2013	Tank 12467	5880000 Gallon	6299393 Gallon
2014	Final ETP Holding Pond, 5C and 5D	3500000 Gallon	8000000 Gallon
2445	Tank 12445	7560000 Gallon	8590994 Gallon
2446	Tank 12446	7560000 Gallon	8590994 Gallon
4307	MDEA Make-up Tank	42000 Gallon	6200 Gallon
4311	ISOM-Perchloroethylene	2100 Gallon	1785 Gallon

S-#	Description	Existing Capacity in DB	Correct Capacity for DB
	Vessel (V-12555)		
4319	Tank-15096, Recovered Oil	1050000 Gallon	1054878 Gallon
4322	Tank-14571, Sour Water (OPCEN)	4914000 Gallon	710896 Gallon
4329	Tank-13260, Pentane	3150000 Gallon	2146308 Gallon
4330	Tank-13261, Pentane	3150000 Gallon	2146308 Gallon
4334	Tank-13276, Alkylate	4200000 Gallon	4231613 Gallon
4349	Tank-13262, Pentane	3150000 Gallon	2146308 Gallon
4350	Tank-13187, Process Wastewater	1050000 Gallon	1096377 Gallon
4356	Tank-13188, Process Wastewater	1050000 Gallon	1096377 Gallon
5125	SR-2000 Standby Proto Vessel V-15117	2000 Gallon	217 Gallon
12490	LOGI3 Wastewater Floating Roof Tank 12519	6,180,000 Gallon	7402238 Gallon
12491	LOGI3 Wastewater Floating Roof Tank 12520	6,180,000 Gallon	7402238 Gallon

Per Martinez Refining Company's December 9, 2001 letter, the following sources were converted to exempt status, because they meet the requirements of specific permit exemptions:

Source #	Source Description	Permit Exemption	Source Details
S1406	Naphthenic Acid Treating	2-1-123.3.3 [exempts storage of petroleum oils with a flashpoint of 130 ^{o}F or higher when stored at least 36 ^{o}F or higher below flashpoint]	According to MSDS, napthenic acid has a flashpoint greater than 200 ^{o}F and the storage tank operates at ambient temperatures.
S1576	Lime Storage Bin	2-1-115.1.2 [exempts particulate handling < 5000 TPY]	Handling of lime throughput < 86 TPY
S1577	Lime Storage Bin	2-1-115.1.2 [exempts particulate handling < 5000 TPY]	Handling of lime throughput < 86 TPY
S1778	Lime Storage Bin	2-1-115.1.2 [exempts	Handling of lime throughput < 86 TPY

Source #	Source Description	Permit Exemption	Source Details
		particulate handling < 5000 TPY]	
S1600	Miscellaneous Carpenter Shop	2-1-121.1 [exempts woodworking & metalworking operations]	Only woodworking and metalworking occurs at this source
S1601	Miscellaneous Maintenance Shop	2-1-121.1 [exempts woodworking & metalworking operations]	Only woodworking and metalworking occurs at this source
S1606	Motor Drying Oven	2-1-103	This is an electric oven, which is used to dry off water from motors after high pressure cleaning by water.
S5122	PAC Storage Silo	2-1-115.1.2 [exempts particulate handling < 5000 TPY]	Handling of lime throughput < 481.8 TPY

Per Martinez Refining Company's December 9, 2001 letter, the following sources were archived, because they are already permitted as parts of other sources:

Source #	Source Description	Source Details
S1437	DEA Regenerator 1	This source is already included as part of the sulfur plant which is also permitted.
S1438	DEA Regenerator 2	This source is already included as part of the sulfur plant which is also permitted.
S1439	Caustic Regeneration Unit	This source is already included as part of the sulfur plant which is also permitted.
S1605	Miscellaneous Paint Drying Oven	This drying oven should be included with S1804 Paint Spray Booth description.

III. Generally Applicable Requirements

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District permit. If a generally applicable requirement applies specifically to a source that is permitted or significant, the standard will also appear in Section IV and the monitoring for that requirement will appear in Sections IV and VII of the permit. Parts of this section apply to all facilities (e.g., particulate, architectural coating, odorous substance, and sandblasting standards). In addition, standards that apply to insignificant or unpermitted

sources at a facility (e.g., refrigeration units that use more than 50 pounds of an ozone-depleting compound), are placed in this section.

Unpermitted sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Title V permit if they are considered a significant source pursuant to the definition in BAAQMD Rule 2-6-239.

IV. Source-Specific Applicable Requirements

This section of the permit lists the applicable requirements that apply to permitted or significant sources. These applicable requirements are contained in tables that pertain to one or more sources that have the same requirements. The order of the requirements is:

- District Rules
- SIP Rules (if any) listed following the corresponding District Rules. SIP rules are District rules that have been approved by EPA into the California State Implementation Plan. SIP rules are "federally enforceable" and a "Y" (yes) indication will appear in the "Federally Enforceable" column. If the SIP rule is the current District rule, separate citation of the SIP rule is not necessary and the "Federally Enforceable" column will have a "Y" for "yes". If the SIP rule is not the current District rule, the SIP rule or the necessary portions of the SIP rule are cited separately after the District rule. The SIP portions will be federally enforceable; the non-SIP versions will not be federally enforceable, unless EPA has approved them through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions. The text of Federal permit conditions, if any, is found in Section VI of the permit.

Section IV of the permit contains citations to all of the applicable requirements. The text of the requirements is found in the regulations, which are readily available on the District's or EPA's websites, or in the permit conditions, which are found in Section VI of the permit. All monitoring requirements are cited in Section IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of monitoring is included in Section C.VII of this permit evaluation/statement of basis.

Complex Applicability Determinations

<u>Regulation 8, Rule 2, Miscellaneous Operations</u>

The District has determined that the definition of "miscellaneous operation" in Regulation 8-2-201 excludes sources that are in a source category regulated by another rule in Regulation 8, even if they are exempt from the other rule. This is because such sources limited by the terms of the exemption. Thus, for example, a hydrocarbon storage tank that stores liquids with a vapor pressure less than 0.5 psia is exempt form Regulation 8, Rule 5, Storage of Organic Liquids
(8-5-117), and is not subject to Regulation 8, Rule 2, Miscellaneous Operations.

The policy justification for this determination is that the Board considered appropriate controls for the source category when it adopted the rule governing that category. Part of the consideration includes determination of sources and activities that are not subject to controls.

Tank Clusters Scheme

The facility has hundreds of storage tanks with different characteristics (fixed roof, external floating roof, internal floating roof), storing different materials (varying vapor pressures, toxicity), with different initial dates of operation, and subject to different regulatory requirements (NESHAPS, NSPS). To minimize the size of the Title V permit application and to increase the permit's usefulness as a compliance assurance tool, this proposed Title V permit has clustered the tanks in groups to reflect similar applicable requirements. These clusters are referenced in the Title V permit headings for the storage tanks.

V. Schedule of Compliance

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10 which provides that a major facility review permit shall contain the following information and provisions:

"409.10 A schedule of compliance containing the following elements:

- 10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;
- 10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and
- 10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted."

Because the District has not determined that the facility is out of compliance with an applicable requirement, the schedule of compliance for this permit only contains elements 2-6-409.10.1 and 2-6-409.10.2.

The BAAQMD Compliance and Enforcement Division has conducted a review of compliance over the past year and has determined that the facility's compliance in 2001 was marginal. This determination is based upon the number of pressure release events occurring at the facility, as well as a series of events in October, 2001 that led to significant community impacts. Nevertheless, the facility is currently in compliance with applicable requirements, and the schedule of compliance contained in the proposed permit reflects this fact.

The compliance report is contained in Appendix A of this permit evaluation and statement of basis. Note that Regulation 7, "Odorous Substances," does not apply until the facility has received complaints from 10 or more complainants within a 90-day period.

VI. Permit Conditions

During the Title V permit development, the District has reviewed the existing permit conditions, deleted the obsolete conditions, and as appropriate, revised the conditions for clarity and enforceability. Some conditions have been deleted because they reiterate an applicable requirement that is now contained in Section IV, Source-Specific Applicable Requirements. Each permit condition is identified with a unique numerical identifier, up to five digits.

Where necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting has been added to the permit.

All changes to existing permit conditions are clearly shown in "strike-out/underline" format in the proposed permit. When the permit is issued, all 'strike-out" language would be deleted; all "underline" language would be retained, subject to consideration of comments received.

The existing permit conditions are generally derived from previously issued District Authorities to Construct (A/C) or Permits to Operate (P/O). It is also possible for permit conditions to be imposed or revised as part of the annual review of the facility by the District pursuant to California Health and Safety Code (H&SC) § 42301(e), through a variance pursuant to H&SC § 42350 et seq., an order of abatement pursuant to H&SC § 42450 et seq., or as an administrative revision initiated by District staff. After issuance of the Title V permit, permit conditions will be revised using the procedures in Regulation 2, Rule 6, Major Facility Review.

The District has reviewed and, where appropriate, revised or added new annual and daily throughput limits on sources so as to help ensure compliance with District rules addressing preconstruction review. The applicability of preconstruction review depends on whether there is a "modified source" as defined in District Rule 2-1-234. Whether there is a modified source depends in part on whether there has been an "increase" in "emission level." 2-1-234 defines what will be considered an emissions level increase, and takes a somewhat different approach depending on whether a source has previously permitted by the District.

Sources that were modified or constructed since the District began issuing new source review permits will have permits that contain throughput limits, and these limits are reflected in the Title V permit. These limits have previously undergone District review, and are considered to be the legally binding "emission level" for purposes of 2-234.1 and 2-1-234.2. By contrast, for older sources that have never been through preconstruction review (commonly referred to as "grandfathered" sources), an "increase" in "emission level" is addressed in 2-1-234.3. A grandfathered source is not subject to preconstruction review unless its emission level increases above the highest of: 1) the design capacity of the source, 2) the capacity listed in a permit to operate, or 3) the highest capacity demonstrated prior to March 2000. However, if the throughput capacity of a grandfathered source is limited by upstream or downstream equipment (i.e., is "bottlenecked"), then the relaxing of that limitation ("debottlenecking") is considered a modification.

The District has written throughput limits into the Title V permit for grandfathered sources. As discussed above, these limits are written for the purpose of determining whether an increase in emission

levels has occurred. The purpose of these limits is to facilitate implementation of preconstruction review program. If these limits are exceeded, the facility would be expected to report the exceedence, and the District would treat the reported exceedence as presumptively establishing the occurrence of a modification. The facility would then be expected to apply for a preconstruction permit addressing the modification and the District would consider whether an enforcement action was appropriate.

It is important to note the presumptive nature of throughput limits for grandfathered sources that are created in the Title V permit. These limits are generally based upon the District's review of information provided by the facility regarding the design capacity or highest documented capacity of the grandfathered source. To verify whether these limits reflect the true design, documented, or "bottlenecked" capacity (pursuant to 2-10234.1) of each source is beyond the resource abilities of the District in this Title V process. Moreover, the District cannot be completely confident that the facility has had time or resources necessary to provide the most accurate information available in this regard. Creating throughput limits in the Title V permit for grandfathered sources is not required by either Part 70 or the District's Major Facility Review rules. Despite the lack of such a requirement, and despite the resource and information challenges presented in the Title V process, the District believes that writing presumptive limits for grandfathered sources into the Title V permit will provide a measure of predictability regarding the future applicability of the preconstruction review program, and that this increased predictability is universally beneficial.

It follows from the presumptive nature of these throughput limits for grandfathered sources that exceedence of these limits is not per se a violation of the permit. *Failure to report an exceedence would be a permit violation.* However, if an exceedence occurs, the facility would have an opportunity to demonstrate that the throughput limit in fact did not reflect the appropriate limit for purposes of 2-1-234.3. If the facility can demonstrate this, no enforcement action would follow, and the permit would be revised at the next opportunity. It also follows that compliance with these limits is not a "safe harbor" for the facility. If evidence clearly shows that a grandfathered source has undergone a "modification" as defined in 2-1-234.3, the District would consider that a preconstruction review-triggering event, notwithstanding compliance with the throughput limit in the Title V permit. In other words, the protection afforded the facility by complying with the throughput limit in the Title V permit is only as strong as the information on which it was based. There is no Title V "permit shield" associated with throughput limits for grandfathered sources.

Conditions that are obsolete or that have no regulatory basis have been deleted from this permit.

Conditions have also been deleted due to the following:

- Redundancy in record-keeping requirements.
- Redundancy in other conditions, regulations and rules.
- The condition has been superseded by other regulations and rules.
- The equipment has been taken out of service or is exempt.
- The event has already occurred (i.e. initial or start-up source tests).

The regulatory basis has been referenced following each condition. The regulatory basis may be a rule or regulation. The District is also using the following codes for regulatory basis:

- BACT: This code is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology in Regulation 2-2-301.
- Cumulative Increase: This code is used for a condition imposed by the APCO which limits a source's operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This code is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- PSD: This code is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit pursuant to Regulation 2, Rule 2.
- TRMP: This code is used for a condition imposed by the APCO to ensure compliance with limits that arise from the District's Toxic Risk Management Policy.

Abatement device operating parameter monitoring has been added for each abatement device.

Additional monitoring has been added, where appropriate, to assure compliance with the applicable requirements.

The following table illustrates the hourly or daily and annual limits with a brief explanation of the basis for the throughput limit. Short-term throughput limits (hourly or daily) are indicators of the equipment's physical capacity. Long-term throughput limits are indicators of the equipment's capacity to operate in a sustained manner. An increase in capacity may indicate that a source has been modified, triggering the District's preconstruction review process. In general, tanks have annual limits and other sources have hourly or daily limits. Tanks are not subject to daily throughput limits because the tank's capacity is more appropriately characterized by volume than throughput. As explained above, throughput limits are being added to the permit for pre-1979 "grandfathered" sources so as to facilitate the implementation of Regulation 2-1-234.3.

No hourly or annual limits are proposed for those "grandfathered" sources which were identified to be safety devices, product blending, wastewater service, and minor miscellaneous sources. The safety devices are flares, which are used to in the event of a facility upset to abate any emissions resulting from that unintended upset. No throughput limits are proposed to limit the operation of safety devices. No throughput limits are proposed for the product blending and wastewater service sources, which are limited by upstream sources. No throughput limits are proposed for minor miscellaneous sources, because their emissions are not significant and limiting their throughput is unnecessary.

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
3	Tank 3		S3+S4+S967+S1076 $\leq$ 130,971 bbl/day x 365	Regulation 2-1-234.3
4	Tank 4		S3+S4+S967+S1076 $\leq$	Regulation 2-1-234.3

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
			130,971 bbl/day x 365	
13	Storage Tank 13		36,000 bbl/day x 365	Regulation 2-1-234.3
14	Tank 14		143,657 bbl/day x 365	Regulation 2-1-234.3
19	Tank 19		S19 + S1139 < 7.3 MMbbl/yr	Condition # 18646
20	Tank 20		13,131 bbl/day x 365	Regulation 2-1-234.3
21	Asphalt Storage Tank 21		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
22	Asphalt Storage Tank 22		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
23	Asphalt Storage Tank 23		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
24	Asphalt Storage Tank 24		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
26	Asphalt Storage Tank 26		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
34	Tank 34			Wastewater Service, which is already limited by upstream sources
63	Tank 63			Wastewater Service, which is already limited by upstream sources

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
129	Tank 129		S129+S816+S1031+S1046+S1051+S1134+S1159+S1753+S1754+S1755+S1756 < 508,114 bbl/day x 365	Regulation 2-1-234.3
257	Tank 257		10,526 bbl/day x 365	Regulation 2-1-234.3
355	Tank 355		S355+S459+S565+S867+S868+S876+S961+S1017+S1018 +S1075 < 12,000 bbl/day x 365	Regulation 2-1-234.3
396	Tank 396		S396+S397 < 7700 bbl/day x 365	Regulation 2-1-234.3
397	Tank 397		S396+S397 < 7700 bbl/day x 3650 gal/yr	Regulation 2-1-234.3
432	Storage Tank 432		S432+S1041<15,428 bbl/day x 365	Regulation 2-1-234.3
459	Storage Tank 459		S355+S459+S565+S867+S868+S876+S961+S1017+S1018 +S1075 < 12,000 bbl/day x 365	Regulation 2-1-234.3
483	Tank 483		S483+S484+S530 + S532+S545 < 217,097 bbl/day x 365	Regulation 2-1-234.3
484	Tank 484		S483+S484+S530 + S532+S545 < 217,097 bbl/day x 365	Regulation 2-1-234.3
497	Asphalt Storage Tank 497		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 $\leq$ 42,000 bbl/day x 365	Regulation 2-1-234.3
530	Tank 530		S483+S484+S530 + S532+S545 < 217,097 bbl/day x 365	Regulation 2-1-234.3
532	Tank 532		S483+S484+S530 + S532+S545 < 217,097 bbl/day x 365	Regulation 2-1-234.3
540	Tank 540		8,095,238 bbl/yr	Condition # 11951 [340 MMgal/yr]
541	Tank 541		248,743 bbl/day x 365	Regulation 2-1-234.3
544	Tank 544		234,446 bbl/day x 365	Regulation 2-1-234.3

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
545	Tank 545		S483+S484+S530 + S532+S545 < 217,097 bbl/day x 365	Regulation 2-1-234.3
548	Tank 548		S548+S549+S1006+S1235+S1236 < 5,412 bbl/day x 365	Regulation 2-1-234.3
549	Tank 549		10,000 bbl/yr	Condition # 6111 [420 Mgal/yr]
552	Asphalt Storage Tank 552		S552+S553+S554+S555+S556+S557+S558+S559 +S567 + S568< 10,650 bbl/day x 365	Regulation 2-1-234.3
553	Asphalt Storage Tank 553		S552+S553+S554+S555+S556+S557+S558+S559 +S567 + S568< 10,650 bbl/day x 365	Regulation 2-1-234.3
554	Asphalt Storage Tank 554		S552+S553+S554+S555+S556+S557+S558+S559 +S567 + S568< 10,650 bbl/day x 365	Regulation 2-1-234.3
555	Asphalt Storage Tank 555		S552+S553+S554+S555+S556+S557+S558+S559 +S567 + S568< 10,650 bbl/day x 365	Regulation 2-1-234.3
556	Asphalt Storage Tank 556		S552+S553+S554+S555+S556+S557+S558+S559 +S567 + S568< 10,650 bbl/day x 365	Regulation 2-1-234.3
557	Asphalt Storage Tank 557		S552+S553+S554+S555+S556+S557+S558+S559 +S567 + S568< 10,650 bbl/day x 365	Regulation 2-1-234.3
558	Asphalt Storage Tank 558		S552+S553+S554+S555+S556+S557+S558+S559 < 10,650 bbl/day x 365	Regulation 2-1-234.3
559	Asphalt Storage Tank 559		S552+S553+S554+S555+S556+S557+S558+S559 +S567 + S568< 10,650 bbl/day x 365	Regulation 2-1-234.3
560	Asphalt Storage Tank 560		S21+S22+S23+S24+S26+S497+S560+S561+S5	Regulation 2-1-234.3

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
			72+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	
561	Asphalt Storage Tank 561		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
563	Tank 563		1,200 bbl/day	Regulation 2-1-234.3
565	Storage Tank 565		S355+S459+S565+S867+S868+S876+S961+S1017+S1018 +S1075 < 12,000 bbl/day x 365	Regulation 2-1-234.3
567	Storage Tank 567		S552+S553+S554+S555+S556+S557+S558+S559 +S567 + S568< 10,650 bbl/day x 365	Regulation 2-1-234.3
568	Storage Tank 568		S552+S553+S554+S555+S556+S557+S558+S559 +S567 + S568< 10,650 bbl/day x 365	Regulation 2-1-234.3
571	Asphalt Storage Tank 571		24,000 bbl/day	Regulation 2-1-234.3
572	Asphalt Storage Tank 572		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
573	Asphalt Storage Tank 573		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
598	Storage Tank 598		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
610	Tank 610		S610+S1133 < 48,000 bbl/day x 365	Regulation 2-1-234.3
611	Tank 611		82,217 bbl/day x 365	Regulation 2-1-234.3
612	Tank 612		S612+S613 < 210,686 bbl/day x 365	Regulation 2-1-234.3
613	Tank 613		S612+S613 < 210,686 bbl/day x 365	Regulation 2-1-234.3
815	Asphalt Storage Tank 815		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
816	Tank 816		S129+S816+S1031+S1046+S1051+S1134+S1159+S1753+S1754+S1755+S1756 < 508,114 bbl/day x 365	Regulation 2-1-234.3
856	Tank 856		10,800 bbl/day x 365	Regulation 2-1-234.3
858	Tank 858		2,044,000 bbl/yr	Condition No. 4977 [85,848 Mgal/yr]
860	Storage Tank 860		S860+S861+S1004 < 546 bbl/day x 365	Regulation 2-1-234.3
861	Storage Tank 861		S860+S861+S1004 < 546 bbl/day x 365	Regulation 2-1-234.3
864	Tank 864		9,600 bbl/day	Regulation 2-1-234.3
867	Asphalt Storage Tank 867		S355+S459+S565+S867+S868+S876+S961+S1017+S1018 +S1075 < 12,000 bbl/day x 365	Regulation 2-1-234.3
868	Asphalt Storage Tank 868		S355+S459+S565+S867+S868+S876+S961+S1017+S1018 +S1075 < 12,000 bbl/day x 365	Regulation 2-1-234.3
876	Asphalt Storage Tank 876		S355+S459+S565+S867+S868+S876+S961+S1017+S1018 +S1075 < 12,000 bbl/day x 365	Regulation 2-1-234.3
961	Storage Tank 961		S355+S459+S565+S867+S868+S876+S961+S1017+S1018 +S1075 < 12,000 bbl/day x 365	Regulation 2-1-234.3

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
967	Tank 967		S3+S4+S967+S1076 ≤ 130,971 bbl/day x 365	Regulation 2-1-234.3
985	Storage Tank 985		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
992	Tank 992		7,714 bbl/day x 365	Regulation 2-1-234.3
1004	Storage Tank 1004		S860+S861+S1004 < 546 bbl/day x 365	Regulation 2-1-234.3
1006	Tank 1006		S548+S549+S1006+S1235+S1236 < 5,412 bbl/day x 365	Regulation 2-1-234.3
1017	Asphalt Storage Tank 1017		10,000 bbl/yr	Condition # 12190
1018	Asphalt Storage Tank 1018		S355+S459+S565+S867+S868+S876+S961+S1017+S1018 +S1075 < 12,000 bbl/day x 365	Regulation 2-1-234.3
1023	Tank 1023		S-1023 + S-1050 ≤ 3,066,000 bbl/yr	Condition # 7133 [128,772 Mgal/yr]
1031	Tank 1031		S129+S816+S1031+S1046+S1051+S1134+S1159+S1753+S1754+S1755+S1756 < 508,114 bbl/day x 365	Regulation 2-1-234.3
1041	Asphalt Storage Tank 1041		S432 + S1041 < 15,428 bbl/day x 365	Regulation 2-1-234.3
1043	Asphalt Storage Tank 1043		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
1044	Asphalt Storage Tank 1044		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
1045	Storage Tank #1045		S21+S22+S23+S24+S2	Regulation 2-1-234.3

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
			6+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	
1046	Tank 1046		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
1048	Asphalt Storage Tank 1048		22,000 bbl/day x 365	Regulation 2-1-234.3
1050	Tank 1050		S-1023 + S-1050 ≤ 3,066,000 bbl/yr	Condition # 7133 [128,772 Mgal/yr]
1051	Tank 1051		S129+S816+S1031+S1046+S1051+S1134+S1159+S1753+S1754+S1755 +S1756 < 508,114 bbl/day x 365	Regulation 2-1-234.3
1063	Tank 1063			Wastewater Service, which is already limited by upstream sources
1067	Tank 1067			Wastewater Service, which is already limited by upstream sources
1070	Tank 1070		1,143 bbl/day	Regulation 2-1-234.3
1072	Tank 1072		18,200,000 bbl/yr	Condition # 7382
1075	Storage Tank 1075		S355+S459+S565+S867 +S868+S876+S961+S1017+S1018 +S1075 < 12,000 bbl/day x 365	Regulation 2-1-234.3
1076	Tank 1076		S3+S4+S967+S1076 ≤ 130,971 bbl/day x 365	Regulation 2-1-234.3
1077	Tank #1411		S1077+S4319 < 8,229 bbl/day x 365	Regulation 2-1-234.3
1114	Spent Acid Tank #1114		S-1114 + S-1115 < 365000 bbl/yr	Condition # 7215
1115	Spent Acid Tank #1115		S-1114 + S-1115 < 365000 bbl/yr	Condition # 7215
1116	Tank 1116 H2S04 99.5 %			Minor Miscellaneous Unit

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
1117	EMSR5 Skim Tank 1117		10,000 bbl/yr	Condition # 12190
1129	Storage Tank 1129		120,000 bbl/day x 365	Regulation 2-1-234.3
1130	Storage Tank 1130		S1130+S1131 < 47,314 bbl/day x365	Regulation 2-1-234.3
1131	Storage Tank 1131		S1130+S1131 < 47,314 bbl/day x 365	Regulation 2-1-234.3
1133	Tank 1133		S610+S1133 < 48,000 bbl/day x 365	Regulation 2-1-234.3
1134	Tank 1134		S129+S816+S1031+S1046+S1051+S1134+S1159+S1753+S1754+S1755+S1756 < 508,114 bbl/day x 365	Regulation 2-1-234.3
1139	Tank 1139		S19 + S1139 < 7.3 MMbbl/yr	Condition # 18646
1140	Tank 1140		27,840 bbl/day x365	Regulation 2-1-234.3
1146	Tank 1146		S1146+S1147 < 14,640 bbl/day x 365	Regulation 2-1-234.3
1147	Tank 1147		S1146+S1147 < 14,640 bbl/ day x 365	Regulation 2-1-234.3
1159	Tank 1159		S129+S816+S1031+S1046+S1051+S1134+S1159+S1753+S1754+S1755+S1756 < 508,114 bbl/day x 365	Regulation 2-1-234.3
1160	Asphalt Storage Tank 1160		S21+S22+S23+S24+S26+S497+S560+S561+S572+S573+S598+S815+S985+S1043+S1044+S1045+S1046 + S1160 ≤ 42,000 bbl/day x 365	Regulation 2-1-234.3
1161	Tank 1161		240,000 bbl/day x 365	Regulation 2-1-234.3
1186	Tank 1186			Minor Miscellaneous Sources
1191	Crude oil storage tank T-1256		S1191+S1192 < 168,000 bbl/day x 365	Regulation 2-1-234.3
1192	Crude oil storage tank T-1257		S1191+S1192 < 168,000 bbl/day x 365	Regulation 2-1-234.3
1235	CHEM Storage Tank 739-T		S548+S549+S1006+S1235+S1236 < 5,412 bbl/day x 365	Regulation 2-1-234.3
1236	Chem Storage Tank 740-T		S548+S549+S1006+S12	Regulation 2-1-234.3

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
			35+S1236 < 5,412 bbl/day x 365	
1408	LUBS4 Asphalt Blending AND Shipping	24,000 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
1409	LUBS3 Sulfonation Plant	2,805 bbl/day	803,000 bbl/yr	Regulation 2-1-234.3
1411	LUBS2 Atmospheric Distillation	18,801 bbl/day	6,643,000 bbl/yr	Regulation 2-1-234.3
1412	LUBS2 Vacuum Distillation			Secondary Downstream Unit, which is limited by upstream source
1415	LUBS6 Solvent Extraction Plant #3	6,700 bbl/day	1,752,000 bb/yr	Regulation 2-1-234.3
1416	LUBS1-Lube Hydrotreater #1 (LHT-1)	6,500 bbl/day	1,934,500 bbl/yr	Regulation 2-1-234.3
1417	OPC2_Distillate Saturation Unit	26,000 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
1420	DH1_CRUDE Unit	160,000 bbl/day	52,925,000 bbl/yr	Regulation 2-1-234.3
1421	DH2_Vacuum Flasher Unit			Secondary Downstream Unit, which is limited by upstream source
1422	DH8_Fuel Oil Blender			Product Blending, which is limited by upstream sources.
1423	DH3_Gas Oil Straightrun HydroTreater		28,000 bbl/day x 365	Regulation 2-1-234.3
1424	DH3_Naphtha Straightrun HydroTreater	28,500 bbl/day	9,490,000 bbl/yr	Regulation 2-1-234.3
1425	DH4_Catalytic Reformer Unit	32,000 bbl/day	11,315,000 bbl/yr	Regulation 2-1-234.3
1426	FCC Unit	79,500 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
1427	CP2_Catalytic Gas Plant			Secondary Downstream Unit, which is limited by upstream source
1428	CP2_Catalytic Feed HydroTreater	60,000 bbl/day	19,856,000 bbl/day	Regulation 2-1-234.3
1429	CP2_Catalytic Gasoline HydroTreater	27,500 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
1430	CP3_Unsaturated Plant	14,000 bbl/day alkylate produced	365 x Daily Limit	Regulation 2-1-234.3
1431	EMSR4_Sulfur Plant 1	S1431+S1432 < 331 Equivalent Long Tons/Day	365 x Daily Limit	Regulation 2-1-234.3

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
1432	EMSR4_Sulfur Plant 2	S1431+S1432 < 331 Equivalent Long Tons/Day	365 x Daily Limit	Regulation 2-1-234.3
1433	CP2_Light CC Gasoline Treater			Secondary Downstream Unit, which is limited by upstream source
1434	CP2_Unsaturated C3/C4 Treater			Secondary Downstream Unit, which is limited by upstream source
1435	CP4_Fuel Gas Treater #1			Secondary Downstream Unit, which is limited by upstream source
1436	CP4_Fuel Gas Treater #2			Secondary Downstream Unit, which is limited by upstream source
1445	DH7_Hydrogen Plant	75,000,000 scf/day H2	24,710,500,000 scf/yr H2	Regulation 2-1-234.3
1446	DH5_Saturates Gas Plant			Secondary Downstream Unit, which is limited by upstream source
1447	DH5_Saturates Dry Gas Treater			Secondary Downstream Unit, which is limited by upstream source
1448	DH5_Saturates Gas Plant C3/C4 Treater			Secondary Downstream Unit, which is limited by upstream source
1449	DH6_Hydrocracker	46,000 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
1462	LOGI2-Distillate Blender (Jet & Diesel Fuel) (South Gate Area)			Product Blending, which is limited by upstream sources.
1463	LOGI2-Gasoline Blender (Logistics Control Center)			Product Blending, which is limited by upstream sources.
1464	LOGI-Thin Fuel Blender (Wharf)			Product Blending, which is limited by upstream sources.
1465	LOGI2-Light Oil Products Gross Oil Separator	204 Mgal/hr [3400 gal/min]	8,760 x Hourly Limit	Condition # 5077
1466	LOGI3-WWTMT_Settling Ponds for Waste Water – Pond 8			Wastewater Service, which is already limited by upstream sources
1467	LOGI3-WWTMT			Wastewater Service,

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
	BioTreater (for Waste Water)			which is already limited by upstream sources
1468	LOGI3-WWTMT- Settling Ponds for WasteWater – Pond 6			Wastewater Service, which is already limited by upstream sources No Data
1469	LOGI3-API Separator W/Inlet Box and Screen	360 Mgal/hr [6000 gal/min]	8,760 x Hourly Limit	Condition # 5077
1470	LOGI2-LPG Loading Flare			Safety Device
1471	EMSR6_LOP Auxiliary Flare			Safety Device
1472	EMSR6_LOP Main Flare			Safety Device
1476	LUBS2 F-24 ATM Feed	2040 MMBTU/day	365 x Daily Limit	Condition # 16688
1477	LUBS2 F-25 Vac Feed	1152 MMBTU/day	365 x Daily Limit	Condition # 16688
1478	LUBS7 F-26 Furfural Raff	312 MMBTU/day	365 x Daily Limit	Condition # 16688
1479	LUBS7 F-27 Furfural Extr	720 MMBTU/day	365 x Daily Limit	Condition # 16688
1480	LUBS4 F-69 Asphalt Circulation Heater	792 MMBTU/day	365 x Daily Limit	Condition # 16688
1481	OPC2_F-30R DSU Reboil	480 MMBTU/day	365 x Daily Limit	Condition # 16688
1482	OPC2_F-30C DSU Charge	576 MMBTU/day	365 x Daily Limit	Condition # 16688
1483	LUBS4 F-32 Asphalt Circulation Heater	480 MMBTU/day	365 x Daily Limit	Condition # 16688
1484	LUBS1 F-34 LHT	792 MMBTU/day	365 x Daily Limit	Condition # 16688
1486	DH1_Crude, F-40	8976 MMBTU/day	365 x Daily Limit	Condition # 16688
1487	DH1_VFU, F-41B	3600 MMBTU/day	365 x Daily Limit	Condition # 16688
1488	DH1_VFU, F-41A	3600 MMBTU/day	365 x Daily Limit	Condition # 16688
1490	DH3_F-43 Gosrh	792 MMBTU/day	365 x Daily Limit	Condition # 16688
1491	DH3_F-44 NSRH	1248 MMBTU/day	365 x Daily Limit	Condition # 16688
1492	DH3_F-45 Prim Col Reboil	2496 MMBTU/day	365 x Daily Limit	Condition # 16688
1493	DH3_F-46 Stab Reboil	1320 MMBTU/day	365 x Daily Limit	Condition # 16688
1494	F-47 Secondary Column Reboiler Heater	1104 MMBTU/day	365 x Daily Limit	Condition # 16688
1495	DH4_F-49 Cat Reformer	4560 MMBTU/day	365 x Daily Limit	Condition # 16688

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
1496	DH4_F-50 Cat Reformer	5400 MMBTU/day	365 x Daily Limit	Condition # 16688
1497	DH4_F-51 Cat Reformer	2544 MMBTU/day	365 x Daily Limit	Condition # 16688
1498	DH4_F-52 Cat Ref Reboil	936 MMBTU/day	365 x Daily Limit	Condition # 16688
1499	DH4_F-53 Cat Ref Regen	744 MMBTU/day	365 x Daily Limit	Condition # 16688
1500	DH5_F-55 SGP Heat Medium Map #39	4008 MMBTU/day	365 x Daily Limit	Condition # 16688
1502	DH6_F-57 HCU First Stage Feed Map #36	1464 MMBTU/day	365 x Daily Limit	Condition # 16688
1503	DH6_F-58 HCU Second Stage Feed Map #30	1548 MMBTU/day	365 x Daily Limit	Condition # 16688
1504	DH6_F-59 HCU Second Stage Reboil Map #32	4224 MMBTU/day	365 x Daily Limit	Condition # 16688
1505	DH7_F-60 Steam Methane Reformer	13200 MMBTU/day	365 x Daily Limit	Condition # 16688
1506	CP2_F-61 CGP Feed	744 MMBTU/day	365 x Daily Limit	Condition # 16688
1507	EMSR1-CO Boiler No 1			Condition # 16688
1508	CFH Feed F-63	4440 MMBTU/day	365 x Daily Limit	Condition # 16688
1509	EMSR1-CO Boiler #2	5568 MMBTU/day	365 x Daily Limit	Cumulative Increase
1510	CP1_F-66 CCU Feed	4800 MMBTU/day	365 x Daily Limit	Condition # 16688
1511	CP1_F-67 CCU LGO Reboil	1440 MMBTU/day	365 x Daily Limit	Condition # 16688
1512	EMSR1-CO Boiler No 3	5568 MMBTU/day	365 x Daily Limit	Cumulative Increase
1514	EMSR1 Boiler #4	9816 MMBTU/day	365 x Daily Limit	Condition # 16688
1515	DH6--F-71, HCU First Stage Reboil	2640 MMBTU/day	365 x Daily Limit	Condition # 16688
1523	LUBS4 Loading Rack Asphalt Inside T/T	20,160 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
1524	LUBS4 Loading Rack Asphalt Outside T/T AND T/C	25,160 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
1525	LUBS4 Loading Rack Asphalt Paving T/T	20,160 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
1539	LUBS3 LR-25 Loading Rack Acid Sludge and Sulfonation T/T	1,600 bbl/day	365 x Daily Limit	Regulation 2-1-234.3

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
1540	LUBS3 LR-26 Oleum Unloading	840 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
1598	MISC GDF		940 Mgal/yr	Condition # 14098
1650	MISC_Sand Hopper			Minor Miscellaneous Unit
1750	Spent Acid Tank T-1218			Minor Miscellaneous Unit
1751	Naphtha Tank T-1330		S1751+S1752 < 45,953 bbl/day x 365	Regulation 2-1-234.3
1752	Naphtha Tank T-1331		S1751+S1752 < 45,953 bbl/day x 365	Regulation 2-1-234.3
1753	Gasoline Tank T-1332		S129+S816+S1031+S1046+S1051+S1134+S1159+S1753+S1754+S1755+S1756 < 508,114 bbl/day x 365	Regulation 2-1-234.3
1754	Gasoline Tank T-1333		S129+S816+S1031+S1046+S1051+S1134+S1159+S1753+S1754+S1755+S1756 < 508,114 bbl/day x 365	Regulation 2-1-234.3
1755	Gasoline Tank N T-1334		S129+S816+S1031+S1046+S1051+S1134+S1159+S1753+S1754+S1755+S1756 < 508,114 bbl/day x 365	Regulation 2-1-234.3
1756	Gasoline Tank 1335		S129+S816+S1031+S1046+S1051+S1134+S1159+S1753+S1754+S1755+S1756 < 508,114 bbl/day x 365	Regulation 2-1-234.3
1757	Storage Tank 1336		S-1757+S1758+ S4334 $\leq$ 125,829 bbl/day x 365	Regulation 2-1-234.3
1758	Storage Tank 1337		S-1757+S1758+ S4334 $\leq$ 125,829 bbl/day x 365	Regulation 2-1-234.3
1759	OPC1_Flexicoker	48,300 bbl/day	16,245,500 bbl/yr	Regulation 2-1-234.3
1760	OPC1_F-102 Steam Super Heater	3336 MMBTU/day	365 x Daily Limit	Condition # 16688
1761	OPC4_F-104 Steam Methane Reformer	11424 MMBTU/day	365 x Daily Limit	Condition # 16688
1762	F-128 CAT Reformer Interheater	4800 MMBTU/day	365 x Daily Limit	Condition # 16688

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
1763	DH1_Crude Unit Feed Heater F-126	5280 MMBTU/day	365 x Daily Limit	Condition # 16688
1764	OPC3_Dimersol Plant	3,200 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
1765	OPC5_Sulfur Recovery Plant #3	73 equivalent long ton/day	365 x Daily Limit	Regulation 2-1-234.3
1767	OPC1-Coke Silo V-1019			Secondary Downstream Unit, which is limited by upstream source
1768	OPC1-Coke Silo V-1020			Secondary Downstream Unit, which is limited by upstream source
1769	OPC1-Dry Fines Silo V-1021			Secondary Downstream Unit, which is limited by upstream source
1770	OPC3_C3/C4 Splitter			Secondary Downstream Unit, which is limited by upstream source
1771	OPC1_FXG Flare			Safety Device
1772	OPC7_HC Flare			Safety Device
1774	OPC4_Hydrogen Plant #2	43,500,000 scf/day	14,600,000,000 scf/yr	Regulation 2-1-234.3
1779	OPC8-CPI Oil/Water Separator	180 Mga/hr [3000 gal/min]	8,760 x Hourly Limit	Condition # 5077
1800	EMSR1_Boiler # 5	5376 MMBTU/day	365 x Daily Limit	Condition # 16688
1802	Odorant Storage Tank V-1533			Minor Miscellaneous Unit
1803	OPC8-Coke Recovery Facilities			Secondary Downstream Unit, which is limited by upstream source
1804	Paint Spray Booth and Facility Coating		cleanup solvent $\leq$ 40 gal/yr; coating $\leq$ 150 gal/yr	Condition # 4303
1805	Storage Tank (#12038)		563,000 bbl/yr	Condition # 4298
1900	MISC_Machine Shop Parts Cleaner		S-1900 + S-1903 $\leq$ 192 gal/yr solvent	Permit Application No. 31948 Evaluation Report
1902	MISC_Seal Room Parts Cleaner		50 gals/yr	Regulation 2-1-234.3
1903	MISC_Paint Shop Solvent Tub No 1		S-1900 + S-1903 $\leq$ 192 gal/yr solvent	Permit Application No. 31948 Evaluation Report
2000	OPC1-Corrosion Inhibitor	Corrosion	365 x Daily Limit	Condition # 4364

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
	Injection	Inhibitor Injection < 90 gal/day		
2001	LOGI-Marine Loading Berth #1	31,929 bbl/hr	8,760 x Hourly Limit	Regulation 2-1-234.3
2002	LOGI-Marine Loading Berth #2	31,929 bbl/hr	8,760 x Hourly Limit	Regulation 2-1-234.3
2003	LOGI-Marine Loading Berth #3	31,929 bbl/hr	8,760 x Hourly Limit	Regulation 2-1-234.3
2004	LOG1-Marine Loading Berth #4	31,929 bbl/hr	8,760 x Hourly Limit	Regulation 2-1-234.3
2007	DNF Unit			Wastewater Service, which is already limited by upstream sources
2008	DNF Unit			Wastewater Service, which is already limited by upstream sources
2009	LUBS3-Wastewater Separator Lubes Dubbs Box	864,000 gal/day	365 x Daily Limit	Condition # 5007 [600 gal/min]
2010	LOGI2-Wastewater Junction Boxes			Wastewater Service, which is already limited by upstream sources
2011	LOGI2-Wastewater Collection Sumps (4)			Wastewater Service, which is already limited by upstream sources
2012	DH-4 Perc Storage System V-12378		Perc $\leq$ 18 Mgal/yr	Condition # 6110
2013	Tank 12467		14,000,000 bbl/yr	Condition # 6503
2014	Final ETP Holding Pond, 5C and 5D			Wastewater Service, which is already limited by upstream sources
2445	Tank 12445		S-2445 + S-2446 $\leq$ 73 MMbbl/yr	Condition # 6707
2446	Tank 12446		S-2445 + S-2446 $\leq$ 73 MMbbl/yr	Condition # 6707
3000	CCR-2	168 MMBTU/day	365 x Daily Limit	Permit Application Capacity [7 MMBTU/hr]
4001	DCU-Delayed Coking Unit	65,000 bbl/day	365 x Daily Limit	Permit Application Capacity
4002	DCU-Furnace #13425-A	2520 MMBTU/day	365 x Daily Limit	Condition # 16688

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
4003	DCU-Furnace #13425-B	2520 MMBTU/day	365 x Daily Limit	Condition # 16688
4005	DCU-Coke Handling Facility			Secondary Downstream Unit, which is limited by upstream source
4020	DHT-Distillate Hydrotreater	60,000 bbl/day	365 x Daily Limit	Permit Application Capacity
4021	DHT-Recycle Gas Heater (F-13909)	1176 MMBTU/day	365 x Daily Limit	Condition # 16688
4031	HGHT-Reboiler Heater (F-14012)	1176 MMBTU/day	365 x Daily Limit	Condition # 16688
4050	Light Gasoline Treating (CGDP)			Secondary Downstream Unit, which is limited by upstream source
4080	ISOM-Isomerization Unit	15,100 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
4140	HGHT-Heavy Cracked Gasoline Hydrotreater	19,200 bbl/day	365 x Daily Limit	Permit Application Capacity
4141	HGHT-Feed Heater (F-14011)	768 MMBTU/day	365 x Daily Limit	Condition # 16688
4160	Hydrogen Plant - 3	90,000,000 scf/day	365 x Daily Limit	Permit Application Capacity
4161	Hydrogen Plant 3 - SMR Furnace	21840 MMBTU/day	365 x Daily Limit	Condition # 16688
4170	(LHT-2)-Lube Hydrotreater #2	7,200 bbl/day	365 x Daily Limit	Permit Application Capacity
4171	(LHT-2)-Feed Heater, F-13000	504 MMBTU/day	365 x Daily Limit	Condition # 16688
4180	OPC 9-Sulfur Recovery Unit #4	140 equivalent long tons/day	365 x Daily Limit	Regulation 2-1-234.3
4190	Boiler 6 Gas Turbine #1	13152 BTU/day	365 x Daily Limit	Regulation 2-1-234.3
4191	Boiler 6 Supplemental Steam Generator # 1	6192 BTU/day	365 x Daily Limit	Regulation 2-1-234.3
4192	Boiler 6 Gas Turbine #2	13152 BTU/day	365 x Daily Limit	Regulation 2-1-234.3
4193	Boiler 6 Supplemental Steam Generator	6192 BTU/day	365 x Daily Limit	Regulation 2-1-234.3
4201	Delayed Coking Dept. Flare			Safety Device
4210	Cooling Water Tower (CWT-13278)			Minor Miscellaneous Unit
4211	ISOM-Maintenance Drop-Out Vessel (V-13222)			Minor Miscellaneous Unit
4212	DCU-Maintenance Drop-			Minor Miscellaneous

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
	Out Vessel (V-13441)			Unit
4307	MDEA Make-up Tank			Minor Miscellaneous Unit
4309	DEA Tank #1			Minor Miscellaneous Unit
4310	Tank-13285, Sour Water			Minor Miscellaneous Unit
4311	ISOM-Perchloroethylene Vessel (V-12555)			Secondary Downstream Unit, which is limited by upstream source
4319	Tank-15096, Recovered Oil	S1077+S4319 < 8,229 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
4322	Tank-14571, Sour Water (OPCEN)			Secondary Downstream Unit, which is limited by upstream source
4329	Tank-13260, Pentane	S4329+S4330+S4349 < 124,971 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
4330	Tank-13261, Pentane	S4329+S4330+S4349 < 124,971 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
4334	Tank-13276, Alkylate		S-1757+S1758+ S4334 $\leq$ 125,829 bbl/day x 365	Regulation 2-1-234.3
4338	Pentane Loading Facility	33,600 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
4347	OPC 9-Sulfur Pit		140 LT Sulfur/day	Regulation 2-1-234.3
4349	Tank-13262, Pentane	S4329+S4330+S4349 < 124,971 bbl/day	365 x Daily Limit	Regulation 2-1-234.3
4350	Tank-13187, Process Wastewater			Wastewater Service, which is already limited by upstream sources
4356	Tank-13188, Process Wastewater			Wastewater Service, which is already limited by upstream sources
5112	SU-2000 Main Proto Vessel V-15112 w/Nitrogen Blanket			Minor Miscellaneous Unit
5113	RU 2000 Main Proto Vessel-15113 w/Nitrogen Blanket			Minor Miscellaneous Unit
5114	SR-2000 Proto Vessel V-15114 w/Nitrogen Blanket			Minor Miscellaneous Unit

S-#	Description	Hourly or Daily Limit	Annual Limit	Basis
5115	Dissolved Nitrogen Flotation Unit			Wastewater Service, which is already limited by upstream sources
5116	Dissolved Nitrogen Flotation Unit			Wastewater Service, which is already limited by upstream sources
5117	Aeration Tank			Wastewater Service, which is already limited by upstream sources
5118	Bioclarifier, SPM-14135			Wastewater Service, which is already limited by upstream sources
5119	Bioclarifier, SPM-14137			Wastewater Service, which is already limited by upstream sources
5121	DNF Float Tank, spm-14111			Wastewater Service, which is already limited by upstream sources
5125	SR-2000 Standby Proto Vessel V-15117			Minor Miscellaneous Unit
12490	LOGI3 Wastewater Floating Roof Tank 12519			Wastewater Service, which is already limited by upstream sources
12491	LOGI3 Wastewater Floating Roof Tank 12520			Wastewater Service, which is already limited by upstream sources

Additional permit conditions have been added for S1426 FCC (fluid catalytic cracker) Unit. The exhaust must be vented to boilers S1507, S1509, and/or S1512, unless allowed by Condition #18407 (basis: Regulation 2-6-409.2). The water seal of the FCC unit dump stack must be maintained such that a water seal exists. Breakthrough of the seal off the FCC Unit dump stack is a violation of Regulation 6-301. A continuous level monitor with continuous strip recorder shall be installed on each water seal compartment of the FCC Unit dump stack to measure time and breakthrough pressure. Records for the strip recorder shall be maintained for a period of at least 5 years from the date of entry and shall be made available to the APCO upon request (basis: Regulation 6-301).

Refinery processes are usually operated in steady state (constant flow and temperature conditions). The process controls react to fluctuations in conditions by adjusting flow rates and fuel use to bring the process back to the desired conditions. Excess emissions are more likely to occur when operating conditions are being changed from one set of values to another. They are most likely to occur when the change is greatest: during startup and shutdown.

The District has imposed a permit condition on all of the refineries, pursuant to the authority granted by BAAQMD Rule 2-1-403, requiring the facility to notify the District no less than three calendar days in advance of any startup or shutdown. This will enable District staff to observe the activity, and respond if appropriate.

VII. Applicable Limits and Compliance Monitoring Requirements

This section of the permit is a summary of numerical limits and related monitoring requirements that apply to each source. The summary includes a citation for each monitoring requirement, frequency, and type. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

The tables below contain only the limits for which there is no monitoring or inadequate monitoring in the applicable requirements. The District has examined the monitoring for other limits and has determined that monitoring is adequate to provide a reasonable assurance of compliance. Calculations for potential to emit will be provided when no monitoring is proposed due to the size of a source. In all other cases, the column will have "N/A", meaning "Not applicable".

Monitoring decisions are typically the result of a balancing of several different factors including: 1) the likelihood of a violation given the characteristics of normal operation, 2) degree of variability in the operation and in the control device, if there is one, 3) the potential severity of impact of an undetected violation, 4) the technical feasibility and probative value of indicator monitoring, 5) the economic feasibility of indicator monitoring, and 6) whether there is some other factor, such as a different regulatory restriction applicable to the same operation, that also provides some assurance of compliance with the limit in question.

These factors are the same as those historically applied by the District in developing monitoring for applicable requirements**.** It follows that, although Title V calls for a re-examination of all monitoring**,** there is a presumption that these factors have been appropriately balanced and incorporated in the District's prior rule development and/or permit issuance. It is possible that, where a rule or permit requirement has historically had no monitoring associated with it, no monitoring may still be appropriate in the Title V permit if, for instance, there is little likelihood of a violation**.** Compliance behavior and associated costs of compliance are determined in part by the frequency and nature of associated monitoring requirements. As a result, the District will generally revise the nature or frequency of monitoring only when it can support a conclusion that existing monitoring is inadequate**.**

A summary of all monitoring is contained in Section VII, Applicable Limits and Compliance Monitoring Requirements, of the permit. The summary includes a citation for each monitoring requirement, frequency, and type. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

NOx Sources			
S#	**Federally Enforceable Limit Citation**	**Federally Enforceable Limit**	**Monitoring**
S4021, S4171	BAAQMD Condition # 12271 Part 40 and 41	NOx emissions shall not exceed 25 ppmv dry at 3% O2, 3-hour average (for natural gas furnaces) and 20 ppmv dry at 3% O2, 3-hour average (for forced draft furnaces)	Source Test Annually for S-4171and Semi-Annually for S-4021, Per Condition # 12271, Part 104

NOx Discussion:

Every source at the refinery that is subject to a NOx limit is also subject to NOx monitoring. These monitoring requirements come either from Regulation 9-10, existing permit conditions, or both. For more detailed information on this matter, see Table VII. Sources that are subject to this rule are found in the tables in Section VII Applicable Limits and Compliance Monitoring Requirements of the permit.

BAAQMD Regulation 9, Rule 10 "Inorganic Gaseous Pollutants: NOx and CO from Boilers, Steam Generators and Process heaters in Petroleum Refineries"

Regulation 9-10-502 requires continuous emission monitoring systems (CEMS) or "equivalent" verification systems to demonstrate compliance with Regulation 9, Rule 10. A BAAQMD Policy Memorandum, dated June 23, 2000, outlines in detail emission monitoring requirements for petroleum refinery heaters, furnaces, and boilers that are subject to the rule. Exact monitoring requirements for NOx are dependent upon emission control devices in use, firing rate, and source test results. The District Policy is contained in Appendix B. Sources that are subject to this rule are found in the tables in Section VII, Applicable Limits and Compliance Monitoring Requirements, of the permit.

Monitoring for the sources listed in the NOx Sources Table (above) have additional monitoring requirements than those solely required by Regulation 9, Rule 10. The source testing interval proposed for the heaters are consistent with that of the BAAQMD Policy Memorandum, dated June 23, 2000.

Source S4021 already has semiannual monitoring for NOx because it is subject to Regulation 9, Rule 10. The same Regulation 9-10 monitoring requirements can be used to monitor for compliance with this additional emission limit. For source S4171, the District has determined that annual testing will assure compliance by verifying that the system continues to operate as designed. Monitoring frequency was the result of balancing the likelihood of a violation given the characteristics of normal operation and degree of variability in the operation.

CO Sources			
S#	**Federally Enforceable Limit Citation**	**Federally Enforceable Limit**	**Monitoring**
S4002, S4003, S4031, S4141	BAAQMD Condition # 12271 Part 36	CO emissions shall not exceed 50 ppmv dry at 3% O2, 8-hour average	Source Test Semi-Annually, per Condition # 12271, Part 105. (Note 1)
S4021, S4171	BAAQMD Condition # 12271 Part 42	CO emissions shall not exceed 50 ppmv dry at 3% O2, 8-hour average	Source Test Annually for S4171 and Semi-Annually for S4171, per Condition # 12271, Part 106 (Note 1)
S4161	BAAQMD Condition # 12271 Part 30	CO emissions shall not exceed 50 ppmv dry at 3% O2, 8-hour average	Source Test Semi-Annually, per Condition # 12271, Part 107 (Note 1)
S4190, S4191, S4192, S4193	BAAQMD Condition # 12271 Part 25	CO emissions shall not exceed 50 ppmv dry at 3% O2, 8-hour average	Source Test Annually, per Condition # 12271, Part 108 (Note 2)
S4190, S4191, S4192, S4193	BAAQMD Condition # 12271 Part 25a	Cogeneration Plant CO emissions shall not exceed 6.5 ppmv dry at 15% O2, 8-hour average or 90% reduction on a mass basis	Source Test Annually, per Condition # 12271, Part 108 (Note 2)
S4180	BAAQMD Condition # 12271 Part 70	CO emissions from SCOT thermal oxidizer shall not exceed 100 ppmv dry at 0% O2, 8-hour average	Source Test Annually, per Condition # 12271, Part 109 (Note 2)

CO Discussion:

Every source at the refinery that is subject to a CO limit is also subject to CO monitoring. These monitoring requirements come either from Regulation 9-10, existing permit conditions, or both. For more detailed information on this matter, see Table VII. Sources that are subject to this rule are found in the tables in Section VII Applicable Limits and Compliance Monitoring Requirements of the permit.

BAAQMD Regulation 9, Rule 10 "Inorganic Gaseous Pollutants: NOx and CO from Boilers, Steam Generators and Process heaters in Petroleum Refineries"

Regulation 9-10-502 requires continuous emission monitoring systems (CEMS) or "equivalent" verification systems to demonstrate compliance with Regulation 9, Rule 10. A BAAQMD Policy Memorandum, dated June 23, 2000, outlines emission monitoring requirements for petroleum refinery

heaters, furnaces, and boilers that are subject to the rule in detail. Exact monitoring requirements for CO are dependent upon emission control devices in use, firing rate, and source test results. The District Policy is contained in Appendix B. Sources that are subject to this rule are found in the tables in Section VII Applicable Limits and Compliance Monitoring Requirements of the permit.

Monitoring for the sources listed in the CO Sources Table (above) have additional monitoring requirements than those solely required by Regulation 9, Rule 10.

Note 1: These sources already have semiannual monitoring for CO because they are subject to Regulation 9, Rule 10. The same monitoring requirements can be used to monitor for compliance with these additional emission limits.

Note 2: The District has determined that annual testing will assure compliance by verifying that the system continues to operate as designed. Monitoring frequency for those listed (above) were the result of balancing the likelihood of a violation given the characteristics of normal operation and degree of variability in the operation.

SO_2 SOURCES			
S#	**Federally Enforceable Limit Citation**	**Federally Enforceable Limit**	**Monitoring**
S1431-S1432 S1765 S4180 Sulfur Plants	BAAQMD Regulation 9-1-313.2	operation of a sulfur removal and recovery system that removes and recovers: 95% of H2S from refinery fuel gas, 95% of H2S and ammonia from process water streams (sulfur recovery is required when a facility removes 16.5 ton/day or more of elemental sulfur)	Source Test Annually, per Condition # 18618, Part 9 (Note 1)
S1431-S1432 S1765 S4180 Sulfur Plants	BAAQMD 6-330	0.08 grain/dscf exhaust concentration of SO_3 or H_2SO_4, or both, expressed as 100% H_2SO_4	Source Test Annually, per Condition # 18618, Part 9 (Note 2)
All combustion sources	BAAQMD 9-1-302	300 ppm (dry) SO2 in any combustion exhaust stream	None. (Note 3)
S1476 S1477 S1486 S1488 S1492 S1493 S1495-S1498 S1500 S1504 S1507 S1508 S1509-S1512 S1514 S1763 S4002 S4003 S4190-S4193	BAAQMD 9-1-304	Sulfur content of liquid fuel limited to 0.5% by weight	Low-Sulfur Fuel Certification by Supplier for each lot (Note 4)

SO2 Discussion:

Note 1: Sulfur plants (S1431-S1432) will require annual source testing to demonstrate compliance with 9-1-313.2. This H2S and ammonia removal standard is more of a design standard than a performance standard. The entire removal system is designed to achieve the required removal. The District has determined that annual testing will assure compliance by verifying that the system continues to operate as designed. In addition, other monitored parameters (e.g., sulfur plant SO2 emissions and refinery fuel gas sulfur content, which are

continuously montitored) will alert the operator if the system is not functioning properly.

The likelihood of undetected non-compliance is low. The tests required to demonstrate compliance are cumbersome, expensive, and dangerous (because of the nature of the sources). Direct measurement is not feasible. As a result, compliance must be demonstrated by source test. The cost of more frequent tests is not justified by the incremental improvement in compliance assurance.

Note 2: Sulfur plants (S1431-S1432) will require annual source testing to demonstrate compliance with 6-330. More frequent monitoring is not required, because the system will exceed the standard only under upset conditions. The monitors and alarms that alert the operator to abnormal conditions are adequate to ensure that upsets are detected and corrected. The cost of more frequent tests is not justified by the incremental improvement in compliance assurance.

Note 3: All facility combustion sources are subject to the SO2 emission limitations in District Regulation 9, Rule 1 (ground-level concentration and emission point concentration). Area monitoring to demonstrate compliance with the ground level SO2 concentration requirements of Regulation 9-1-301 has been required by the APCO (per BAAQMD Regulation 9-1-501). No monitoring is required for BAAQMD regulation 9-1-302 because it only applies when the ground level monitors (GLMs) are not operating, which is infrequent.

Note 4: Per CAPCOA/ARB/EPA Agreement, certification by fuel supplier for each fuel delivery. California Diesel Fuel shall not exceed a sulfur content of 0.05 %, by weight. Certification may be provided once for each purchase lot, if records are also kept of the purchase lot number of each delivery.

PM Sources

S#	Federally Enforceable Limit Citation	Federally Enforceable Limit	Monitoring
S21-S24, S26, S459, S460, S497, S552-S561, S565, S567, S571-S573, S598, S815, S867, S868, S876, S961, S985, S1017, S1018, S1041, S1043-S1045, S1048, S1160, S1408, S1431, S1432, S1523-1525, S1539 (Asphalt Storage and Loading)	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	No monitoring (Note 5)

PM Sources

S#	Federally Enforceable Limit Citation	Federally Enforceable Limit	Monitoring
S1116 H2SO4 storage tank	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	No monitoring (Note 5)
S1431, S1432 S1765, S4180 Sulfur Plants	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	Annual Source Test (Note 6)
S1470-S1472, S1478-S1481, S1483, S1484, S1490, S1494, S1499, S1505, S1506, S1515, S1762, S1760, S1761, S1771, S1772, S3000, S4031, S4141, S4201	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	None (Note 1)
S1476, S1477, S1486, S1488, S1492, S1493, S1495- S1497, S1498, S1500, S1504, S1508, S1510, S1511, S1514, S1763, S4002, S4003, S4190-S4193	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	Visual Inspection (Note 2)
S1650, S1767-S1769	BAAQMD 6-301	Ringelmann No. 1 for no more than 3 minutes/hour	Quarterly Visible emissions inspection, per Condition 18618, Parts 5 and 7
S1803	BAAQMD 6-301	Ringelmann No. 1 for no more than 3 minutes/hour	Quarterly visible emissions inspection, per Condition 4041, Parts 11 and 12
S1804	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	No monitoring (Note 5)

PM Sources

S#	Federally Enforceable Limit Citation	Federally Enforceable Limit	Monitoring
S1470-S1472, S1771, S1772, S4201, A101-A103 Flares	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	Visible emissions monitoring per Condition 18618, parts 12 and 13 (Note 3)
S1476-S1484, S1486-S1488, S1491-S1493, S1495-S1498, S1500, S1504, S1506, S1508, S1510, S1511, S1760, S1763, S1490, S1494, S1499, S1502-S1505, S1515, S1761, S1762, S1800, S4002, S4003, S4021, S4031, S4141, S4161, S4171	BAAQMD 6-304	Ringelmann 2 for more than 3 minutes in any hour during tube cleaning	Visible emissions inspection during tube cleaning, per Condition 18618, Part 6 and 7 (Note 4)
S1116	BAAQMD 6-310	0.15 grain per dscf	No monitoring (Note 5)
S1426	BAAQMD 6-310	0.15 grain per dscf	Annual source test per Condition 18618, Part 10
S1426	BAAQMD 6-311	$4.10\ P^{0.67}$ lb/hr particulate, where P is process weight rate in ton/hr	Annual source test per Condition 18618, Part 10
S1431, S1432, S1765, S4180	BAAQMD 6-310	0.15 grain per dscf	Annual source test (Note 6)
S1431, S1432, S1765, S4180	BAAQMD 6-311	$4.10\ P^{0.67}$ lb/hr particulate, where P is process weight rate in ton/hr	Annual source test (Note 6)

PM Sources

S#	Federally Enforceable Limit Citation	Federally Enforceable Limit	Monitoring
S1470-S1472, S1478-S1481, S1483, S1484, S1490, S1494, S1499, S1505, S1506, S1515, S1760-S1762, S1771, S1772, S1800, S3000, S4031, S4141, S4201	BAAQMD 6-310.3	0.15 grains/dscf @ 6% oxygen	No monitoring (Note 1)
S1476, S1477, S1486, S1488, S1492, S1493, S1495-S1498, S1500, S1504, S1507-S1512, S1514, S1763, S4002, S4003, S4190-S4193	BAAQMD 6-310.3	0.15 grains/dscf @ 6% oxygen	Visual inspection (note 2)
S1507, S1509, S1512	BAAQMD 6-310.3	0.15 grains/dscf @ 6% oxygen	Source Test Annually, per Condition # 18618, Part 10
S1650, S1767-S1769	BAAQMD 6-310	0.15 grains/dscf @ 6% oxygen	Per CAPCOA/ARB/EPA Agreement, quarterly monitoring for visible emissions, per Condition # 18618 Parts 5 and 7
S1650, S1767-S1769	BAAQMD 6-311	$4.10\ P^{0.67}$ lb/hr particulate, where P is process weight rate in ton/hr	Per CAPCOA/ARB/EPA Agreement, quarterly monitoring for visible emissions, per Condition # 18618 Parts 5 and 7
S1803	BAAQMD 6-310.3	0.15 grains/dscf @ 6% oxygen	Per CAPCOA/ARB/EPA Agreement, quarterly monitoring for visible emissions, per Condition # 4041 Parts 10 and 11

PM Sources

S#	Federally Enforceable Limit Citation	Federally Enforceable Limit	Monitoring
S1803	BAAQMD 6-311	4.10 $P^{0.67}$ lb/hr particulate, where P is process weight rate in ton/hr	Per CAPCOA/ARB/EPA Agreement, quarterly monitoring for visible emissions, per Condition # 4041 Parts 10 and 11
S1804	BAAQMD 6-310.3	0.15 grains/dscf @ 6% oxygen	No monitoring because particulate matter emissions estimated to be negligible from the spray booth.

PM Discussion:

Note 1: Gaseous Fuels: BAAQMD Regulation 6-301 limits visible emissions to no darker than 1.0 on the Ringelmann Chart (except for periods or aggregate periods less than 3 minutes in any hour). Visible emissions are normally not associated with combustion of gaseous fuels, such as natural gas. No monitoring is required for sources that burn gaseous fuels exclusively, per the EPA's June 24, 1999 agreement with CAPCOA and ARB titled "Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP".

Note 2: Liquid Fuels: Per CAPCOA/ARB/EPA Agreement, adequate monitoring for combustion of liquid fuels is a visible emissions inspection after every 1 million gallons diesel combusted, to be counted cumulatively over a 5 year period. If a visible emissions inspection documents opacity, a method 9 evaluation shall be completed within 3 working days, or during the next scheduled operating period if the unit ceases firing on diesel fuel within the 3 working day time frame. This frequency was selected by balancing the likelihood of undetected significant non-compliance with the expense of more frequent inspections. The cost of more frequent monitoring is not justified for sources with liquid fuel usage that is infrequent or small. The cost of conducting method 9 evaluations is not justified unless a less formal inspection indicates that the source is emitting smoke.

Note 3: A visual inspection of flares is required as soon as possible after a release begins. Hourly observation of the flare during operation will ensure that improper flare operation is detected and corrected.

Note 4: Tube cleaning is periodically performed on furnaces that burn liquid fuels, to remove built-up soot from the outside of furnace tubes. If improperly performed, it can result in visible emissions. Hourly observation of the stack during tube cleaning will ensure that improper tube cleaning performance is detected and corrected.

Note 6: The District has determined that emissions from this source are negligible. No monitoring is required.

Note 7: The sulfur plant is subject to an annual source test to determine compliance with 6-330. The facility design ensures compliance in the absence of an upset. A plant upset will be detected by the operator using the plant controls and monitors.

POC Sources

S#	Federally Enforceable Limit Citation	Federally Enforceable Limit	Monitoring
S1803	BAAQMD Condition # 4041 Part 8	RVP of oil content of coke-oil mixture in temporary storage shall not exceed 0.5 psig.	Sampling and Analysis, Per Condition #4041, Part 13
S4190, S4192, S4191, S4913	BAAQMD Condition # 12271 Part 25b	Cogeneration Plant VOC emissions shall not exceed 0.013 lb/MMBTU	Source Test Annually, per Condition # 12271, Part 114
S4201	BAAQMD Condition # 12271 Part 61	Flare shall have a VOC destruction efficiency of at least 98.5% by weight	No monitoring - See discussion below
S4211, S4214	BAAQMD Condition # 12271 Part 52	Vented to FGR or an incinerator with at least 98.5% destruction efficiency	No monitoring - See discussion below

POC Discussion:

Martinez Refining Company's vapor recovery system collects vapors at approximately 100% efficiency, which end up being part of their fuel gas system. Fuel gas (collected vapors) is burned in refinery boilers/furnaces. Because of the collected tank vapors are mixed with the fuel gas system and later burned in the refinery boilers/furnaces, destruction efficiency cannot be demonstrated. However, combustion process within these boilers/furnaces is estimated to burn better than 99.5% of the fuel that the boilers/furnaces receive:

From AP-42, Table 1.4-2 (7/98): Total Organic Carbon (TOC) = 11 lbs/10^6 scf of natural gas.
Assuming natural gas is 100% methane, for $1x10^6$ scf natural gas fuel,
($1x10^6$ scf methane) x (lb-mole/387 scf methane) x (16 lb methane/lb-mole methane) = 41,3213.7 lbs of methane
Destruction Efficiency = 11 lbs POC/413213 lbs methane = 0.000266 = 99.97% combustion of fuel

An example of the high efficiency of these boiler/furnaces was found for a similar Hot Oil Heater and Flare system at Huntway Refinery. A District source test of Huntway Refinery's Hot Oil Heater/Flare system demonstrated a destruction efficiency of 99.97%.

H2S Sources

S#	Federally Enforceable Limit Citation	Federally Enforceable Limit	Potential to Emit: tpy	Monitoring
S1431, S1432, S1765, S4180	BAAQMD 9-1-313.2	operation of a sulfur removal and recovery system that removes and recovers: 95% of H2S from refinery fuel gas, 95% of H2S and ammonia from process water streams		Source Test Annually, per Condition # 18618, Part 11
S4180	BAAQMD Condition # 12271 Part 72	Loading of elemental sulfur or sulfuric acid shall be controlled by scrubber with overall capture/removal efficiency of at least 95% by weight and H2S emissions from the scrubber shall not exceed 5 ppm		Source Test Annually, per Condition # 12271, Part 1110

H2S Discussion:

Sulfur plants will require annual source testing to demonstrate compliance with BAAQMD Regulation 9-1-313.2. This H2S and ammonia removal standard is more of a design standard than a performance standard. The entire removal system is designed to achieve the required removal. The District has determined that annual testing will assure compliance by verifying that the system continues to operate as designed. In addition, other monitored parameters (e.g., sulfur plant SO2 emissions and refinery fuel gas sulfur content, which are continuously montitored) will alert the operator if the system is not functioning properly.

The likelihood of undetected non-compliance is low. The tests required to demonstrate compliance are cumbersome, expensive, and dangerous (because of the nature of the sources). Direct measurement is not feasible. As a result, compliance must be demonstrated by source test. The cost of more frequent tests is not justified by the incremental improvement in compliance assurance.

NH3

S#	Federally Enforceable Limit Citation	Federally Enforceable Limit	Potential to Emit: tpy	Monitoring
S1431, S1432, S1765, S4180	BAAQMD 9-1-313.2	operation of a sulfur removal and recovery system that removes and recovers: 95% of H2S from refinery fuel gas, 95% of H2S and ammonia from process water streams		Source Test Annually, per Condition # 18618, Part 11
S4002, S4003, S4031, S4141	BAAQMD Condition # 12271 Part 37	NH3 emissions shall not exceed 20 ppmv dry at 15% O2		Source Test Annually, per Condition # 12271, Part 111
S4161	BAAQMD Condition # 12271 Part 31	Cogeneration Plant NH3 emissions shall not exceed 20 ppmv dry at 15% O2		Source Test Annually, per Condition # 12271, Part 112
S4190, S4191, S4192, S4193	BAAQMD Condition # 12271 Part 26	Cogeneration Plant NH3 emissions shall not exceed 20 ppmv dry at 15% O2		Source Test Annually, per Condition # 12271, Part 113

NH3 Discussion:

Sulfur plants will require annual source testing to demonstrate compliance with BAAQMD Regulation 9-1-313.2. This H2S and ammonia removal standard is more of a design standard than a performance standard. The entire removal system is designed to achieve the required removal. The District has determined that annual testing will assure compliance by verifying that the system continues to operate as designed. In addition, other monitored parameters (e.g., sulfur plant SO2 emissions and refinery fuel gas sulfur content, which are continuously montitored) will alert the operator if the system is not functioning properly.

The likelihood of undetected non-compliance is low. The tests required to demonstrate compliance are cumbersome, expensive, and dangerous (because of the nature of the sources). Direct measurement is not feasible. As a result, compliance must be demonstrated by source test. The cost of more frequent tests is not justified by the incremental improvement in compliance assurance.

Throughputs

S#	Federally Enforceable Limit Citation	Federally Enforceable Limit	Potential to Emit: tpy	Monitoring
S1476, S1477, S1479-S1481, S1483, S1484, S1486-S1488, S1490-S1500, S1502-S1506, S1508, S1510, S1511, S1515, S1760-S1763, S1800, S4002, S4003, S4021, S4031, S4141, S4161, S4171	BAAQMD Condition # 16688 Part 1	Maximum Firing Rate	N/A	Records
S3, S4, S13, S14, S19-S24, S26, S129, S224, S257, S355, S396, S397, S432, S459, S483, S484, S497, S522, S530, S532, S540, S541, S544, S545, S548, S549, S552-S561, S563, S565, S567, S568, S571-S573, S598, S610-S613, S815, S816, S847, S849, S856, S858, S860, S861, S864, S867, S868, S876, S961, S967, S985, S992, S1004, S1006, S1017, S1018, S1023, S1031, S1041, S1043-S1046, S1048, S1050, S1051, S1070, S1072, S1075-S1077, S1114-S1117, S1129-S1131, S1133, S1134, S1139, S1140, S1146, S1147, S1159-S1161, S1186, S1191, S1192, S1235, S1236, S1408, S1409, S1411, S1415-S1417, S1420, S1423-S1426, S1428-S1432, S1445, S1449, S1465, S1468, S1469, S1476-S1481, S1483, S1484, S1486-S1488, S1490-S1500, S1502-S1512, S1514, S1515, S1523-S1525, S1539, S1540, S1598, S1751-S1765, S1774, S1779, S1800, S1802, S1804, S1805, S1900, S1902, S1903, S2000-S2004, S2009, S2012, S2013, S2445, S2446, S3000, S4001-S4003, S4020, S4021, S4030, S4031, S4080, S4140, S4141, S4160, S4161, S4170, S4171, S4180, S4190-S4193, S4201, S4210, S4319, S4329, S4330, S4334, S4338, S4347, S4349	BAAQMD Condition # 18618 Part 1	Throughput limits	N/A	Records

Recordkeeping is standard monitoring for throughput limits.

Refinery processes are usually operated in steady state (constant flow and temperature conditions). The process controls react to fluctuations in conditions by adjusting flow rates and fuel use to bring the process back to the desired conditions. Excess emissions are more likely to occur when operating conditions are being changed from one set of values to another. They are most likely to occur when the change is greatest: during startup and shutdown.

The District has proposed a permit condition for all of the refineries, pursuant to the authority granted by BAAQMD Regulation 2-1-403, requiring the facility to notify the District no less than three calendar

days in advance of any scheduled startup or shutdown or as soon as feasible for any unscheduled startup or shutdown . This will enable District staff to observe the activity, and respond if appropriate.

VIII. Test Methods

This section of the permit lists test methods that are associated with standards in District or other rules. It is included only for reference. In most cases, the test methods in the rules are source test methods that can be used to determine compliance but are not required on an ongoing basis. They are not applicable requirements.

If a rule or permit condition requires ongoing testing, the requirement will also appear in Section VI of the permit.

IX. Permit Shield:

The District rules allow two types of permit shields. The permit shield types are defined as follows: (1) A provision in a major facility review permit that identifies and justifies specific federally enforceable regulations and standards which the APCO has confirmed are not applicable to a source or group of sources, or (2) A provision in a major facility review permit that identifies and justifies specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting which are subsumed because other applicable requirements for monitoring, recordkeeping, and reporting in the permit will assure compliance with all emission limits.

The second type of permit shield is allowed by EPA's White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program. The District uses the second type of permit shield for all streamlining of monitoring, recordkeeping, and reporting requirements in Title V permits. The District's program does not allow other types of streamlining in Title V permits.

Compliance with the applicable requirement contained in the permit automatically results in compliance with any subsumed (= less stringent) requirement.

This facility has the first and second types of permit shield.

Following is the detail of the permit shields that were requested by the applicant.

The following permit shields are allowed:

Non-applicable Requirements

Pursuant to District Regulations 2-6-233 and 2-6-409.12, the federally enforceable regulations and/or standards cited in the following table[s] do not apply to the source or group of sources identified at the top of the table[s]. Enforcement actions and litigation may not be initiated against the source or group of sources covered by this shield based on the regulatory and/or statutory provisions cited, as long as the reasons listed below remain valid for the source or group of sources covered by this shield.

Table IX A - 1
Permit Shield for Non-applicable Requirements
S1431 – EMSR4_SULFUR PLANT 1
S1432 – EMSR4_SULFUR PLANT 2
S1765 –OPC5_SULFUR RECOVERY PLANT #3
S4180 – OPC 9 – SULFUR RECOVERY UNIT #4

Citation	Title or Description (Reason not applicable)
BAAQMD 9-1-304	Inorganic Gaseous Pollutants – Sulfur Dioxide, Fuel Burning (Liquid and Solid Fuel) (Exempt from standard per Regulation 9-1-304.1)
BAAQMD 9-1-303	Inorganic Gaseous Pollutants – Sulfur Dioxide, Emissions from Ships (Not applicable because no ships)

Table IX A - 2
Permit Shield for Non-applicable Requirements
S1470 – LOG12 – LPG LOADING FLARE
S1471 – EMSR6 LOP AUXILIARY FLARE
S1472 – EMSR6 LOP MAIN FLARE
S4161 – HYDROGEN PLANT 3 FURNACE
S4201 – DELAYED COKING DEPT. FLARE
A101 – FLARE FOR VRS #2
A102 – FLARE FOR VRS #3
A103 – FLARE FOR VRS # 1

Citation	Title or Description (Reason not applicable)
40 CFR 60 Subpart J 60.105	Standards of Performance for Petroleum Refineries for Monitoring of Emissions and Operations (Not applicable because sources use alternative monitoring in accordance with 60.13(i).

Table IX A - 3
Permit Shield for Non-applicable Requirements
S1470 - LOGI2-LPG Loading Flare, S1471 - EMSR6 LOP Auxiliary Flare, S1472 - EMSR6 LOP Main Flare, S1476 - LUBS2 F-24 ATM FEED, S1477 - LUBS2 F-25 VAC FEED, S1478 - LUBS7 F-26 FURFURAL RAFF, S1479 - LUBS7 F-27 FURFURAL EXTR, S1480 - LUBS4 F-69 ASPHALT CIRCULATION HEATER, S1481 - OPC2 F-30R DSU REBOIL, S1483 - LUBS4 F-32 ASPHALT CIRCULATION HEATER, S1484 – LUBS1 F-34 LHT, S1486 - DH1 CRUDE, F-40, S1487 - DH1 VFU, F-41B, S1488 - DH1 VFU, F-41A, S1490 - DH3 F-43 GOSRH, S1491 - DH3 F-44 NSRH, S1492 - DH3 F-45 PRIM COL REBOIL, S1493 - DH3 F-46 STAB REBOIL, S1494 - F-47 SECONDARY COLUMN REBOILER HEATER, S1495 - DH4 F-49 CAT REFORMER, S1496 - DH4 F-50 CAT REFORMER, S1497 - DH4 F-51 CAT REFORMER, S1498 - DH4 F-52 CAT REF REBOIL, S1499 - DH4 F-53 CAT REF REGEN, S1500 - DH5 F-55 SGP HEAT MEDIUM MAP #39, S1502 - DH6 F-57 HCU FIRST STAGE FEED MAP #36, S1503 – DH6 F-58 HCU SECOND STAGE FEED MAP #30, S1504 - DH6 F-59 HCU SECOND STAGE REBOIL MAP #32, S1505 - DH7 F-60 STEAM METHANE REFORMER, S1506 - CP2 F-61 CGP FEED, S1507 - EMSR1-CO BOILER NO 1, S1508 - CFH FEED F-63, S1509 - EMSR1-CO BOILER #2
S1510 - CP1 F-66 CCU FEED, S1511 - CP1 F-67 CCU LGO REBOIL, S1512 - EMSR1-CO BOILER NO 3, S1514 - EMSR1 BOILER #4, S1515 - DH6--F-71, HCU FIRST STAGE REBOIL, S1761 - OPC4 F-104 STEAM METHANE REFORMER, S1763 - DH1 CRUDE UNIT FEED HEATER F-126, S1771 - OPC1 FXG Flare, S1772 - OPC7 HC Flare, S1800 - EMSR1 BOILER # 5, S4002 - DELAYED COKER UNIT - FURNACE NO. 1, S4003 - DELAYED COKER UNIT - FURNACE NO. 2, S4031 - CRACKED GASOLINE BOTTOMING REBOILER HEATER, S4141 - HGHT HEATER, S4201 - DELAYED COKING DEPT. FLARE, S4021 - DHT RECYCLE GAS HEATER, S4161 – HYDROGEN PLANT – 3 SMR FURNACE, S4171 - LUBE HYDROTREATER (LHT-2) FEED HEATER, S4190 –BOILER 6 GAS TURBINE #1, S4192 –BOILER 6 GAS TURBINE #2

Citation	Title or Description (Reason not applicable)
40 CFR 60, Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (only S4191 and S4193 are subject to Subpart Db)

Table IX A - 4
Permit Shield for Non-applicable Requirements
S1501 – EMSR4_SULFUR PLT. NO. 1 INCINERATOR, F-56
S1517 - EMSR4_SULFUR PLT. NO. 2 INCINERATOR, F-77
S3000 – CCR2

Citation	Title or Description (Reason not applicable)
40 CFR 60, Subpart J	Standards of Performance for Petroleum Refineries (sources only combust natural gas)

Table IX A - 5
Permit Shield for Non-applicable Requirements
S1759 – OPC1_FLEXICOKER
S4001 – DCU-DELAYED COKING UNIT

Citation	Title or Description (Reason not applicable)
BAAQMD 1-520.6	General Provisions and Definitions, Continuous Emission Monitoring for SO2 and opacity from fluid cokers (Not applicable because sources are not fluid cokers)
BAAQMD 1-522	General Provisions and Definitions, Continuous Emission Monitoring and Recordkeeping Procedures (Not applicable because sources are not fluid cokers)
BAAQMD 9-1-310	Inorganic Gaseous Pollutants – Sulfur Dioxide, Emission Limitations for Fluid Catalytic Cracking Units, Fluid Cokers, and Coke Calcining Kilns (Not applicable because facility has no fluid catalytic cracking units, fluid cokers, and coke calcining kilns)

Table IX A – 6
Permit Shield for Non-applicable Requirements
S2001, 2002, 2003 AND 2004
MARINE LOADING BERTHS # 1, 2, 3 AND 4

Citation	Title or Description (Reason not applicable)
BAAQMD Regulation 8, Rule 46	Organic Compounds – Marine Tank Vessel to Marine Tank Vessel Loading (Marine tank vessel to marine tank vessel loading is not performed)

Table IX A - 7
Permit Shield for Non-applicable Requirements
S4191 – BOILER 6 SUPPLEMENTAL STEAM GENERATOR #1
S4193 – BOILER 6 SUPPLEMENTAL STEAM GENERATOR #2

Citation	Title or Description (Reason not applicable)
BAAQMD Regulation 9, Rule 9	Inorganic Gaseous Pollutants – Nitrogen Oxides from Stationary Gas Turbines (Not applicable because steam generators are not gas turbines)

Table IX A - 8
Permit Shield for Non-applicable Requirements
SECONDARY WASTEWATER TREATMENT PROCESSES AND STORMWATER SEWER SYSTEMS EXEMPT PER REGULATION 8-8-114

Citation	Title or Description (Reason not applicable)
BAAQMD 8-8-301	Organic Compounds - Wastewater (Oil-Water) Separators, Wastewater Separators Greater than 760 Liters per Day and Smaller than 18.9 Liters per Second (Exempt per Regulation 8-8-114)
BAAQMD 8-8-302	Organic Compounds - Wastewater (Oil-Water) Separators, Wastewater Separators Larger than or Equal to 18.9 Liters per Second (Exempt per Regulation 8-8-114)
BAAQMD 8-8-306	Organic Compounds - Wastewater (Oil-Water) Separators, Oil-Water Separator Effluent Channel, Pond, Trench, or Basin (Exempt per Regulation 8-8-114)
BAAQMD 8-8-308	Organic Compounds - Wastewater (Oil-Water) Separators, Junction Boxes (Exempt per Regulation 8-8-114)

Table IX A - 9
Permit Shield for Non-applicable Requirements
PROCESS DRAINS

Citation	Title or Description (Reason not applicable)
BAAQMD Regulation 8, Rule 8	Organic Compounds - Wastewater (Oil-Water) Separators (No requirements exist for Process Drains)

Table IX A - 10
Permit Shield for Non-applicable Requirements
FACILITY

Citation	Title or Description (Reason not applicable)
BAAQMD 9-1-302	Inorganic Gaseous Pollutants – Sulfur Dioxide, General Emission Limitation (Exempt from standard per Regulation 9-1-110)
BAAQMD 9-1-303	Inorganic Gaseous Pollutants – Sulfur Dioxide, Emissions from Ships (Not applicable because no ships)
BAAQMD 9-1-309	Inorganic Gaseous Pollutants – Sulfur Dioxide, Emissions from Sulfuric Acid Plants (Not applicable because the facility has no sulfuric acid plants)
BAAQMD Regulation 11, Rule 7	Hazardous Pollutants –Benzene (refinery does not operate any equipment in "benzene service")
BAAQMD Regulation 11, Rule 11	Hazardous Pollutants – National Emission Standards for Benzene Emissions from Coke By-Product Recovery Plants and Benzene Storage Vessels (refinery does not store or transfer benzene)
40 CFR 60 Subpart D	Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced after August 17, 1971 (refinery does not operate any steam generators that are subject to this subpart)
40 CFR 60 Subpart Da	Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978 (refinery does not operate any steam generating units that are subject to this subpart)
40 CFR 60 Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (refinery does not operate any steam generators that are subject to this subpart)
40 CFR 60 Subpart XX	Standards of Performance for Bulk Gasoline Terminals (refinery does not own or operate a bulk gasoline terminal)
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 (refinery does not operate any SOCMI operations)

Table IX A - 10
Permit Shield for Non-applicable Requirements
FACILITY

Citation	Title or Description (Reason not applicable)
40 CFR 60 Subpart NNN	Standards of Performance for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations (refinery does not operate any SOCMI operations)
40 CFR 60 Subpart RRR	Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical (refinery does not operate any SOCMI operations)
40 CFR 61 Subpart J	National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene (refinery does not operate any equipment in "benzene service")
40 CFR 61 Subpart V	Subpart V - National Emission Standard for Equipment Leaks (Fugitive Emission Sources) (refinery does not operate any equipment in "benzene service")
40 CFR 61 Subpart Y	National Emission Standards for Benzene Emissions from Benzene Storage Vessels (refinery does not store or transfer benzene)
40 CFR 61 Subpart BB	National Emission Standards for Benzene Emissions from Benzene Transfer Operations (refinery does not store or transfer benzene)
40 CFR 63 Subpart F	National Emission Standards for Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (refinery does not operate any SOCMI 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 (refinery does not operate any SOCMI operations)
40 CFR 63 Subpart H	National Emission for Organic Hazardous Air Pollutants for Equipment Leaks (refinery does not operate any SOCMI operations)
40 CFR 63 Subpart Q	National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers (refinery does not use chromium based water treatment chemicals)
40 CFR 63 Subpart R	National Emission Standards for Hazardous Air Pollutants for Gasoline Distribution Facilities (refinery does not own or operate a bulk gasoline terminal or pipeline breakout station)
40 CFR 63 Subpart EEE	National Emission Standards for Hazardous Air Pollutants for Hazardous Waste Incinerators (refinery does not own or operate a hazardous waste incinerator, cement kiln, or aggregate kiln)

Subsumed Requirements

Pursuant to District Regulations 2-6-233.2 and 2-6-409.12, as of the date this permit is issued, the federally enforceable monitoring, recordkeeping, and reporting requirements cited in the following table for the source or group of sources identified at the top of the table[s] are subsumed by the monitoring, recordkeeping, and reporting for more stringent requirements or by a "hybrid" monitoring scheme. The District has determined that compliance with the requirements listed below and elsewhere in this permit will provide a reasonable assurance of compliance with the substantive requirements of the subsumed monitoring requirements. Once the permit shield is in place, the

facility cannot be found liable for failure to perform monitoring based on an allegation that it should have performed routine monitoring other than that in this permit for the requirements in the permit.

Table IX B – 1
Permit Shield for Subsumed Requirements
S129 - TANK 129, S540 - TANK 540, S541 - TANK 541, S544 - TANK 544, S545 - TANK 545, S816 - TANK 816, S992 - TANK 992, S1031 - TANK 1031, S1046 - TANK 1046, S1051 - TANK 1051, S1063 - TANK 1063, S1067 - TANK 1067, S1072 - TANK 1072, S1076 - TANK 1076, S1129 - STORAGE TANK 1129, S1146 - TANK 1146, S1147 - TANK 1147, S1161 - TANK 1161, S1159 - TANK 1159, S1755 - GASOLINE TANK T-1334, S1756 - GASOLINE TANK T-1335

Subsumed Requirement Citation	Title or Description	Streamlined Requirements	Title or Description
BAAQMD Regulation 8, Rule 5	**Organic Compounds – Storage of Organic Liquids**		
8-5-501	**Records:** Subsumed into the Refinery MACT recordkeeping requirements.	**Section 63.654**	Notification of Compliance Status report

Table IX B – 2
Permit Shield for Subsumed Requirements
S858 - TANK 858, S1023 - TANK 1023, S1050 TANK 1050, S2445 - TANK 12445, S2446 - TANK 12446, S4322 - TANK 14571, SOUR WATER (OPCEN)

Subsumed Requirement Citation	Title or Description	Streamlined Requirements	Title or Description
BAAQMD Regulation 8, Rule 5	**Organic Compounds – Storage of Organic Liquids**		
8-5-501	**Records:** Subsumed into the Refinery MACT recordkeeping requirements.	**Section 63.654**	Notification of Compliance Status report

Table IX B – 2
Permit Shield for Subsumed Requirements
S858 - TANK 858, S1023 - TANK 1023, S1050 TANK 1050, S2445 - TANK 12445, S2446 - TANK 12446, S4322 - TANK 14571, SOUR WATER (OPCEN)

Subsumed Requirement Citation	Title or Description	Streamlined Requirements	Title or Description
40 CFR Part 60 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**		
60.115b(b)	**Reporting and Recordkeeping for EFRTs.** Subsumed into the Refinery MACT requirements.	**Section 63.654**	Notification of Compliance Status report
60.116b (a)-(c)	**Additional Recordkeeping.** Subsumed into the Refinery MACT requirements.	**Section 63.654**	Notification of Compliance Status report

Table IX B – 3
Permit Shield for Subsumed Requirements
S1006 - TANK 1006, S1077 - TANK #1411, S1130 - STORAGE TANK 1130, S1131 -STORAGE TANK 1131, S1191 - CRUDE OIL STORAGE TANK T-1256, S1192 - CRUDE OIL STORAGE TANK T-1257, S2013 - TANK 12467, S4310 - TANK-13285 SOUR WATER, S12490 - LOGI3 WASTEWATER FLOATING ROOF TANK 12519, S12491 - LOGI3 WASTEWATER FLOATING ROOF TANK 12520

Subsumed Requirement Citation	Title or Description	Streamlined Requirements	Title or Description
BAAQMD Reg 8 Rule 5	**Organic Compounds – Storage of Organic Liquids**		
8-5-501	**Records:** Subsumed into the Refinery MACT recordkeeping requirements.	**Section 63.654**	Notification of Compliance Status report
40 CFR Part 60 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**		
60.115b(b)	**Reporting and Recordkeeping for EFRTs.** Subsumed into the Refinery MACT requirements.	**Section 63.654**	Notification of Compliance Status report
60.116b (a)-(c)	**Additional Recordkeeping.** Subsumed into the Refinery MACT requirements.	**Section 63.654**	Notification of Compliance Status report

D. Alternate Operating Scenarios:

No alternative operating scenario has been requested for this facitlity.

E. Compliance Status:

The Compliance and Enforcement Division has prepared an Annual Compliance Report for 2001. This report is a summary of District enforcement activities at the Martinez refinery during the Calendar Year 2001. A copy of the report is attached as Appendix A.

The information contained in the compliance report has been evaluated during the preparation of the Statement of Basis for the proposed Major Facility Review Permit. The main purpose of this evaluation is to identify ongoing or recurring problems that should be subject to a schedule of compliance. Although no such problems have been identified, the District considers the facility's compliance in 2001 to be marginal. This determination is based upon the number of pressure release events occurring at the facility, as well as a series of events in October, 2001 that led to significant community impacts.

A second purpose of this evaluation is to identify activities that require additional monitoring to assure compliance. No such activities have been identified. As stated in the compliance report, the marginal status of compliance is based on the occurrence of two significant pressure release events. Events such as these, though serious, are by their nature difficult to predict, and therefore not easily susceptible to routine monitoring. The District is presently treating these events as an enforcement matter, and in that context will consider whether changes to facility processes are warranted and should be included in any resolution of an enforcement action. However, this process is still ongoing.

24 notices of violation (NOVs) were issued during 2001. 1 of the 24 involved a discrete incident or breakdown, which was promptly corrected.

The others may be summarized as follows:

Late reporting of inoperative monitors: 4 NOVs
Leaking pressure release valves: 4 NOVs
Excess emissions due to process upsets: 7 NOVs (6 incidents)
Excess emissions during startups/shutdowns (including FCC incidents): 9 NOVs (4 incidents)

Refinery processes are usually operated in steady state (constant flow and temperature conditions). The process controls react to fluctuations in conditions by adjusting flow rates and fuel use to bring the process back to the desired conditions. Excess emissions are more likely to occur when operating conditions are being changed from one set of values to another. They are most likely to occur when the change is greatest: during startup and shutdown. Shell's compliance record for 2001 exemplifies this phenomenon.

The District has proposed a permit condition for all of the refineries, pursuant to the authority granted by BAAQMD Rule 2-1-403, requiring the facility to notify the District no less than three calendar days in advance of any scheduled startup or shutdown or as soon as feasible for any unscheduled startup or shutdown. This will enable District staff to observe the activity, and respond if appropriate.

All affected sources are now in compliance.

As part of the permit application, the owner certified that all equipment was operating in compliance on September 27, 1996.

F. Differences between the Application and the Proposed Permit:

The Title V permit application was originally submitted on July 22, 1996. Revisions made to the application 16467 are discussed in Section III of the Statement of Basis.

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APPENDIX A

BAAQMD COMPLIANCE REPORT

APPENDIX B

BAAQMD Policy Memorandum: NOx, CO, and O2 Monitoring Compliance with Regulation 9, Rule 10

APPENDIX C
GLOSSARY

ACT
Federal Clean Air Act

APCO
Air Pollution Control Officer: Head of Bay Area Air Quality Management District

ARB
Air Resources Board

BAAQMD
Bay Area Air Quality Management District

BACT
Best Available Control Technology

Basis
The underlying authority which allows the District to impose requirements.

CAA
The federal Clean Air Act

CAAQS
California Ambient Air Quality Standards

CAPCOA
California Air Pollution Control Officers Association

CEQA
California Environmental Quality Act

CFR
The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

CO
Carbon Monoxide

CCR-2
Canadian Chemical Reclaimer heater.

Cumulative Increase
The sum of permitted emissions from each new or modified source since a specified date pursuant to BAAQMD Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 2-1-403, Permit Conditions (as approved by EPA on 6/23/95). Used to determine whether threshold-based requirements are triggered.

District

The Bay Area Air Quality Management District

dscf
Dry Standard Cubic Feet

DNF
Dissolved Nitrogen Flotation.

EPA
The federal Environmental Protection Agency.

ETP
Effluent Treatment Plant.

Excluded
Not subject to any District regulations.

Federally Enforceable, FE
All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPs), Part 63 (MACT), and Part 72 (Permits Regulation, Acid Rain), including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

FCC
Fluid Catalytic Cracker

FP
Filterable Particulate as measured by BAAQMD Method ST-15, Particulate.

Furfural Raff/Furfural Extr
These sources are heaters that contain furnaces within them. The heater is the overall unit and the combustion box is the furnace.

GDF
Gasoline Dispensing Facility

HAP
Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by 40 CFR Part 63.

H2SO4
Sulfuric Acid

ISOM
Isomerization plant.

Long ton

2200 pounds

Major Facility
A facility with potential emissions of: (1) at least 100 tons per year of regulated air pollutants, (2) at least 10 tons per year of any single hazardous air pollutant, and/or (3) at least 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as determined by the EPA administrator.

MDEA
Methyl Diethanolamine

MFR
Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Federal Clean Air Act and implemented by District Regulation 2, Rule 6.

MOP
The District's Manual of Procedures.

MSDS
Material Safety Data Sheet

NAAQS
National Ambient Air Quality Standards

NESHAPS
National Emission Standards for Hazardous Air Pollutants. See in 40 CFR Parts 61 and 63.

NMHC
Non-methane Hydrocarbons (Same as NMOC)

NMOC
Non-methane Organic Compounds (Same as NMHC)

NOx
Oxides of nitrogen.

NSPS
Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Federal Clean Air Act, and implemented by 40 CFR Part 60 and District Regulation 10.

NSR
New Source Review. A federal program for pre-construction review and permitting of new and modified sources of pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the Federal Clean Air Act and implemented by 40 CFR Parts 51 and 52 and District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

Offset Requirement

A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of POC, NOx, PM10, and SO2.

Phase II Acid Rain Facility
A facility that generates electricity for sale through fossil-fuel combustion and is not exempted by 40 CFR 72 from Titles IV and V of the Clean Air Act.

POC
Precursor Organic Compounds

PM
Particulate Matter

PM10
Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

PSD
Prevention of Significant Deterioration. A federal program for permitting new and modified sources of those air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

SIP
State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act.

SO2
Sulfur dioxide

THC
Total Hydrocarbons (NMHC + Methane)

Title V
Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

TOC
Total Organic Compounds (NMOC + Methane, Same as THC)

TPH
Total Petroleum Hydrocarbons

TRMP
Toxic Risk Management Plan

TSP

Total Suspended Particulate

VOC
Volatile Organic Compounds

Units of Measure:

bbl	=	barrel
bhp	=	brake-horsepower
btu	=	British Thermal Unit
cfm	=	cubic feet per minute
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inches
max	=	maximum
m^2	=	square meter
m	=	thousand
min	=	minute
mm	=	million
MMbtu	=	million btu
MMcf	=	million cubic feet
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
scfm	=	standard cubic feet per minute
yr	=	year