

Bay Area Air Quality Management District

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Final
Permit Evaluation
and
Statement of Basis
for
MAJOR FACILITY REVIEW PERMIT

for
Valero Benicia Asphalt Plant
Facility #B3193

Facility Address:
3001 Park Road
Benicia, CA 90748-1257

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June 2003

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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 is associated with Facility B2626, Valero Refining, which has the “potential to emit,” as defined by BAAQMD Regulation 2-6-218, of 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 Part 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.

A draft permit and a permit evaluation/statement of basis for this facility were published for public comment on the District’s website on June 6, 2002. A public notice of the public comment period and announcement for a public hearing was published on June 10, 2003. The public hearing was held on July 10, 2003. The public notice stated that the public comment period ended on August 9, 2003. The public comment was later extended for 30 days to September 8, 2003.

Comments were received from the facility and an environmental group. The environmental group’s comment and the responses to comments are available on the District’s website. The facility’s comments have not been placed on the website because the comments are in the form of a underline/strikeout version of the permit. It is available through a public records request. The response to the facility’s comments is sufficiently detailed to make any changes to the permit comprehensible. No changes were made to the permit in response to the environmental group’s comment. The permit was amended in response to the facility’s comments.

This statement of basis was amended to include any changes to the permit that were made in response to the facility’s comments.

B. Facility Description

The Valero Benicia Asphalt Plant is a small-scale petroleum refinery that primarily produces asphalt from crude oil. The by-products-naphtha, kerosene, and gas oil-are transferred to the adjacent Valero fuel refinery or sold to other companies for the production of other petroleum products.

The processes used at the facility are: distillation, vacuum distillation, blending, organic liquid storage, asphalt storage, organic liquid loading, and asphalt loading.

A 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>

This document contains descriptions of tank and their emissions and combustion units and their emissions.

The principal sources of air emissions from this refinery are:

- Combustion units (furnaces, boilers, and incinerators)
- Storage tanks
- Fugitive emissions from pipe fittings, pumps, and compressors
- Wastewater treatment facilities

Combustion unit emissions are generally controlled through the use of burner technology, ~~steam injection, or selective catalytic reduction~~. 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. Wastewater treatment facilities are controlled by covering units, gasketing covers, and add on controls, such as carbon canisters. Caustic scrubbers control the H₂S in the refinery gas from the crude distillation.

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. All changes to the permit that have occurred after the permit was published for public comment are clearly shown in strikeout/underline format. The changes are either corrections or responses to comments.

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.

[Changes to the permit after public notice:
Various dates and an address were corrected in this section.](#)

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 or S-24).

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.

This facility has no sources that are significant but do not require District permits pursuant to BAAQMD Rule 2-1-302.

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:

The names of A4 and A31 have been changed from "flare" to "thermal oxidizer." These control devices are not flares and are not subject to flare requirements.

S26, Skimmed Oil Tank, is actually two tanks. One is controlled by a carbon absorber, the other by an incinerator. The source has been split into two sources. The new source is S67, Recovered Oil Tank.

The facility has lost an exemption for a 215-hp diesel fire pump. This source will be added as S68, Emergency Diesel-powered Firewater Pump.

S65, Asphalt Tank, was added in 2001 pursuant to Application #237.

The following sources and abatement devices were permitted pursuant to Application #17687:

- S13, Fixed Roof Storage Tank
- S59, Fixed Roof Storage Tank
- A21, Carbon Canister
- A22, Carbon Canister
- A23, Carbon Canister
- A24, Carbon Canister

The following sources were permitted pursuant to Application #17825:

- S31, Rail Car Loading Rack
- S37, Fixed Roof Tank
- S38, Fixed Roof Storage Tank

S3, Fixed Roof Storage Tank, was permitted pursuant to Application #18555.

The following sources and abatement devices were permitted pursuant to Application #19005:

- S61, Asphalt Storage Tank
- S62, Asphalt Storage Tank

S63, Asphalt Storage Tank, was permitted pursuant to Application #19093.

Changes to the permit after public notice:

S69, Asphalt Additive Loading Bin, and S70, Asphalt Additive Mixing Tank, were permitted pursuant to Application #6310. These were existing sources without permits. These sources have very low emissions, about 1 lb PM10/yr and 6 lb POC/yr total.

Applications 7123 and 7194 were approved for an increase in heat input at S19, Vacuum Heater, and other minor changes. The evaluations for these applications are in Appendix C.

Various corrections have been made to the equipment list. These are name changes, minor corrections to capacity, deletions and additions of abatement devices, corrections to applicable requirements, and addition of two small sources, S69 and S70, as noted above.

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 significant sources pursuant to the definition in BAAQMD Rule 2-6-239.

Changes to the permit after public notice:

Various dates were updated or corrected in this section. SIP changes were made. 40 CFR 61, Subpart M, Asbestos NESHAPS was added to Section III of the permit.

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

The facility (Valero Asphalt) is subject to certain requirements because it is owned by Valero Refining Company. The facility is also contiguous to the Valero Refining Company facility in Benicia. Based on the definition of facility in Regulation 2-6-206, facilities that are under the same ownership or control and that are located on contiguous property are considered to be the same facility for Federal Clean Air Act purposes.

The facility was formerly the Huntway Refining Facility. It was purchased by Valero Refining Company on June 1, 2001. Since the facilities have historically been separate facilities, Valero Asphalt will receive a separate Title V permit. However, since they are actually considered to be one facility, Valero Asphalt is subject to several requirements to which Valero Refining is subject. The areas of greatest impact are in the wastewater and in the fugitive requirements.

Fugitive Regulations:

Due to the association with Valero Refining explained above, Valero Asphalt is subject to:

40 CFR 60, Subpart VV

40 CFR 61, Subpart FF

40 CFR 63, Subpart CC

~~S66, Oil-water Separator, is not subject to QQQ, because 40 CFR 63, Subpart CC overrides 40 CFR 60, Subpart J.~~

The facility is not subject to 40 CFR 61, Subpart V because no stream contains 10% benzene and/or vinyl chloride.~~40 CFR 63, Subpart CC overrides 40 CFR 61, Subpart V in accordance with 40 CFR 63.640(p) and because the facility is not subject to 40 CFR 61, Subpart J.~~

The facility is not subject to 40 CFR 60, Subpart GGG because 40 CFR 63, Subpart CC overrides 40 CFR 60, Subpart GGG in accordance with 40 CFR 63.640(p).

The only source subject to 40 CFR 60, Subpart QQQ is S66, Oil-Water Separator, which is also subject to 40 CFR 63, Subpart CC. Subpart CC overrides 40 CFR 60, Subpart QQQ in accordance with 40 CFR 63.640(o)(1).

The facility is not subject to 40 CFR 61, Subpart J, because no stream contains 10% benzene.

The facility is not subject to 40 CFR 63, Subpart CC, Section 63.642(g) because they will use the option of controlling each stream to MACT standards in accordance with 63.642(k)(2).

S1, S2, S4, S23, Crude Storage Tanks:

The storage tanks are not subject to most of the provisions in 40 CFR 63, Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries because they are subject to 40 CFR 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.

Tanks that are subject to 40 CFR 60, Subpart Kb pursuant to 40 CFR 63.110(b) are only subject to 40 CFR 63.640(n)(8) pursuant to 40 CFR 640(n)(1).

Wastewater

The Wastewater treatment plant equipment, which is subject to 40 CFR 63, Subpart CC shall comply with the equipment leak standards set forth in 40 CFR 61, Subpart FF.

Per 40 CFR 63.640 (o)(1), the wastewater oil-water separator (S66), which is also subject to 40 CFR 60, Subpart QQQ, shall comply only with the wastewater provisions of 40 CFR 63, Subpart CC (Part 61, Subpart FF).

The facility is not subject to the ammonia portion of BAAQMD 9-1-313.2 because no ammonia is used or produced at this facility.

Regulation 8, Rule 2, Miscellaneous Operations

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 from 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.

Sources S19, S20, S21

Sources S19, S20, and S21 are combustion sources that are subject to Regulation 9, Rule 10, because they are located at a refinery and have a rated heat input that is more than 10 MMBTU/hr. Regulation 9 Rule 10 limits nitrogen oxide (NOx) and carbon monoxide (CO) emissions from boilers, steam generators and process heaters at refineries. Effective July 1, 2002, refineries became subject to the emission standard of 0.033 pounds of NOx per million BTU of heat input, averaged over all affected units each day. This NOx standard is contained in Section 9-10-301. This is the primary standard in this rule. Section 9-10-305 limits CO emissions to 400 ppmv (dry, 3% O₂). Because of the inverse relationship between NOx and CO emissions, this CO limit is included in the rule to ensure that CO emissions do not significantly increase because of NOx control efforts. Section 9-10-304 contains a separate NOx limit for CO Boilers of 150 ppm (dry, 3% O₂), or an abatement system with an efficiency of at least 50%.

Prior to the effective date of Regulation 9, Rule 10, each refinery was required to submit a Control Plan and a Monitoring Plan outlining how the refinery would comply with Regulation 9, Rule 10. The Control Plan includes: a list of all affected units, a description of the NOx control system for each affected unit, the projected NOx emission rate for each unit, and an implementation schedule for the installation of additional control equipment. The Monitoring Plan includes: a list of sources to be equipped with NOx, CO and oxygen continuous emission monitors (CEMs), a list of sources for which an equivalent verification system would be used, and a description of fuel flow meters for each source or group of sources.

Compliance with Regulation 9, Rule 10 is determined daily. The owner/operator uses a combination of CEM data, unit-specific NOx emissions factors, fuel usage and fuel heat content data to calculate the daily average NOx emissions per unit of heat input (lb NOx / million BTU). Compliance with the CO Boiler NOx concentration limit is determined directly by CEM. Compliance with the CO concentration limit is determined by either CEM or periodic source tests.

Not all sources are monitoring by CEMs. In general, emissions from large units are measured with CEMs and emissions from small units may be determined using an equivalent verification system. The District determines equivalency for this purpose on a case-by-case basis, guided by the District policy entitled “NOx, CO and O₂ Monitoring Compliance with Regulation 9, Rule 10”, signed by Bill De Boisblanc, June 23, 2000, and amended April 10, 2003. This policy states that in lieu of CEMs, the owner/operator may establish a pre-defined operating range for smaller sources, based on a series of source tests. Emissions for such sources are calculated based on source-specific emission factors and measured fuel usage. The pre-defined operating ranges are specified in permit conditions.

The owner/operator is required to retain records of data necessary to determine compliance for a period of five years, and to submit written quarterly reports to the District.

This refinery also uses Interchangeable Emission Reductions Credits (IERCs) as a means of complying with the refinery-wide average NOx limit in Section 9-10-301. The daily average NOx emission rate (lb NOx/million BTU) is determined as described above. If this emission rate exceeds the limit of 0.033 lb/million BTU, the refinery must use sufficient IERCs to offset the difference between the actual emission rate and the Regulation 9, Rule 10 limit, plus ten percent of the difference. IERCs are generated in accordance with Regulation 2, Rule 9, by early compliance or over-compliance with an emission standard. IERCs must be formally banked prior to use, and can only be used as part of an Alternative Compliance Plan (ACP) approved under Regulation 2-9. At the end of each ACP year, the refinery surrenders the IERC banking certificates sufficient to cover the IERCs that were consumed during the prior ACP period.

In the case of Valero Asphalt, Sources S19, S20, S21 are considered together with the sources that are subject to Regulation 9-10-301 at Facility B2626, Valero Refining. Valero intends to comply with Regulation 9-10-301 by using IERCs that the facility generates by over-controlling its CO Boilers. Valero applied for these IERCs in Application 3915. The evaluation for Application 3915 is attached in Appendix A. Condition 19329 concerning the IERCs has been added to the Section IV and VII tables.

The facility does not have NOx or CO CEMs for S19 due to its small size. Instead, an “equivalent verification system” pursuant to Regulation 9-10-502.1 will be used to monitor for compliance with the NOx and CO limits. Condition 20617 containing the details of the “equivalent verification system” was added to the permit.

Changes to the permit after public notice:

General

Various dates were updated or corrected in this section. Various corrections have been made to source names. Various corrections have been made regarding federal enforceability of District

regulations. In particular, only a few sections of Regulation 9, Rule 10, Nitrogen Oxides and Carbon Monoxide from Boilers, Steam Generators and Process Heaters in Petroleum Refineries, are federally enforceable.

All tank tables have been amended because Regulation 8, Rule 5 was amended on 11/27/02.

The requirement for an approved emission control system for degassing tanks in BAAQMD Regulation 8-5-328 applies to the system, not the tanks. Therefore, the requirement has been moved to the General Refinery Requirements table. The requirement for a concentration of less than 10,000 ppm in the tank after degassing has been placed in the tank tables.

The citation for liquid balancing, Regulation 8-5-328.1, has been deleted from all tank tables at the facility's request because the facility does not use this option for tank cleaning.

BAAQMD Regulation 8-5-501 was deleted from the table for any tank that is not subject to Regulation 8, Rule 5, Storage of Organic Liquids, due to low vapor pressure of the contents.

Additional details have been added for the limits for Regulation 8, Rule 5.

The citations for BAAQMD Condition 1240, part I.18a no longer mention calculations of SO₂ emissions since the requirement is not in the permit conditions. The reason is that the potential to emit for SO₂ is much lower than the refinery SO₂ cap.

Regulation 9, Rule 10

Citation of BAAQMD and SIP Regulation 9-10-303, Emission Limit For Facility (Federal Requirements), has been added for process heaters greater than 10 MMbtu/hr: S19, S20, S21.

The citation of Regulation 9-10-403, Compliance Date, Clean Fuel Extension Allowance, has been deleted because it is obsolete.

Condition 1240, part II.58b

Condition 1240, part II.58b has been added to the tables for Sources S3, S12, S13, S31, S41, S54, S59, S63, S66, and S67 because they are controlled by A31 and/or S24 and have a 98.5% control requirement.

General Refinery Table

BAAQMD Regulation 8-28-302 and SIP Regulation 8-28-302, Pressure Relief Devices at New or Modified Sources at Petroleum Refineries, have been added to the table.

The fugitive sections of Subpart FF have been deleted from the table because they are in the Components table.

Condition 1240, parts I.18a and I.18j, NMHC and NOX calculations, have been added to the table.

S9, Naphtha Storage Tank

40 CFR §§ 63.640(n)(8)(i), (ii) and (vi) were deleted from the table for S9 because they apply only to external floating roof tanks.

S13, Kerosene Tank

Regulation 8, Rule 5, Sections 503, 603, and 603.1 have been added to the table for S13 at the facility's request.

40 CFR §§ 60.112b(b) and 60.112b(b)(1) have been deleted from the table for S13 because the tank is not at 11 psia or more.

40 CFR §§ 60.116b(e)(1), 60.116b(e)(2)(i), and 60.116b(e)(2)(ii) have been deleted from the table for S13 because they do not apply to fixed roofs tanks with vapor recovery.

S19, Vacuum Heater

BAAQMD Regulation 1-107, Combination of Emissions, was added to the table because the device because it burns both natural gas and refinery fuel gas.

IERCs will be used to comply with BAAQMD Regulation 9-10-301. Therefore, BAAQMD Regulation 2, Rule 9, Interchangeable Emission Reductions Credits, and Condition 19329 have been cited in the table.

Condition 20617 containing the details of the "equivalent verification system" pursuant to Regulation 9-10-502.1 was added to the permit.

Performance Specifications 3 and 5 from 40 CFR 60, Appendix B, were deleted from Table IV-M because they apply to O₂, CO₂, and TRS monitors. The source does have an O₂ monitor, but it is not subject to the NSPS.

S20, Steam Boiler

IERCs will be used to comply with BAAQMD Regulation 9-10-301. Therefore, BAAQMD Regulation 2, Rule 9, Interchangeable Emission Reductions Credits, and Condition 19329 have been cited in the table.

S21, Steam Boiler

IERCs will be used to comply with BAAQMD Regulation 9-10-301. Therefore, BAAQMD Regulation 2, Rule 9, Interchangeable Emission Reductions Credits, and Condition 19329 have been cited in the table.

S24, Hot Oil Heater

BAAQMD Regulation 1-107, Combination of Emissions, was added to the table because the device is subject to several standards and burns fuel or off-gases from several sources.

Regulation 9-10-306.2 has been added to the table for S24, Hot Oil Heater, because the facility has chosen the annual tune-up option for compliance.

40 CFR § 60.110b(a) has been deleted from the table for S24 because it does not apply to abatement devices.

40 CFR § 60.112b(b)(1) has been deleted from the table for S24, Hot Oil Heater, because S24 does not abate any tanks with material at 11 psia or more.

40 CFR §§ 61.349 and 61.354 were added because they apply to the source. They are control device and control device monitoring requirements.

Condition 1240, I.10 was deleted from the table for S24, Hot Oil Heater, because it applies only to Sources S19, S20, and S21.

S25, S28, Effluent Water Feed Tanks

The tables for S25 and S28, Effluent Water Feed Tanks, have been combined.

S26, Wastewater Tank

40 CFR §§ 61.349(c) and 61.349(c)(1) have been added to the table because the abatement efficiency of the control device is determined by engineering calculations.

S30, Marine Loading Dock

Condition 1240, part I.14 has been deleted from the table for S30, Marine Loading Dock, because it is specifically excluded in the condition.

S32, LGO Stripper

The citation for 40 CFR § 63.645(a) has been corrected for S32, LGO Stripper.

The citation for 40 CFR § 63.645(i), Compliance determination for visible emissions, has been deleted because it is obsolete.

The citation for 40 CFR § 63.654 has been deleted because the requirement is included in the general Refinery Table.

S54, Asphalt Loading Rack

The requirements for Regulation 8, Rule 6, Organic Liquid Bulk Terminals and Bulk Plants, were corrected for S54 because the source does not handle materials with a vapor pressure higher than 0.5 psia.

S59, Gas Oil Tank

40 CFR §§ 60.112b(b) and 60.112b(b)(1) have been deleted from the table for S59 because the tank is not at 11 psia or more.

40 CFR §§ 60.116b(e)(1), (2)(i), and (2)(ii) have been deleted from the table for S59 because they do not apply to fixed roofs tanks with vapor recovery.

S63, Tanks 31

40 CFR §§ 60.112b(b) and 60.112b(b)(1) have been deleted from the table for S63 because the tank is not at 11 psia or more.

40 CFR §§ 60.116b(e)(1), (2)(i), and (2)(ii) have been deleted from the table for S63 because they do not apply to fixed roofs tanks with vapor recovery.

S67, Recovered Oil Tank

40 CFR § 61.349(a)(1)(i)(A) was deleted from the table for S67, Recovered Oil Tank, because it is in the component table.

S68, Emergency Diesel-powered Firewater Pump

The opacity standard for S68, Emergency Diesel-Powered Firewater Pump, has been corrected from Regulation 6-301 to 6-303.1.

Several permit conditions have deleted for this source because they are equivalent to applicable sections in Regulation 9, Rule 8, Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines.

S69, Asphalt Additive Loading Bin

A table has been added for S69, Asphalt Additive Loading Bin. This small source had no permits.

S70, Asphalt Additive Mixing Tank

A table has been added for S70, Asphalt Additive Mixing Tank. This small source had no permits.

Components

40 CFR § 61.349(f), Visual inspection of closed vent system and control device, has been added to the components table.

40 CFR § 63.654(d), Recordkeeping and Reporting, was added to the Components table.

A4, Thermal Oxidizer

BAAQMD Regulation 1-107, Combination of Emissions, was added to the table because the device is subject to several standards and burns fuel or off-gases from several sources.

A31, Thermal Oxidizer

BAAQMD Regulation 1-107, Combination of Emissions, was added to the table because the device is subject to several standards and burns fuel or off-gases from several sources.

40 CFR § 60.110b(a) was deleted from the table for A31, Thermal Oxidizer, because it applies to the tank, not the abatement device.

40 CFR § 60.112b(b)(1) was deleted because A31 does not abate tanks that store liquids with a vapor pressure over 11 psia.

40 CFR § 61.343(a)(1) was deleted from the table for A31, Thermal Oxidizer, because it is a requirement from the Benzene Waste NESHAPS applies to the closed vent system, not the abatement device.

40 CFR § 61.349(a)(1) was deleted from the table for A31, Thermal Oxidizer, because it applies to the closed vent system, not the abatement device.

40 CFR §§ 61.356(a), (d), (f), and (j) were deleted from the table for A31, Thermal Oxidizer, because they are general requirement that have been placed in the Refinery table.

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.”

Since 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 conducted a review of compliance over the past year. The facility had two notices of violation for the H₂S content of the refinery fuel gas. Four complaints of odors and one complaint of visible emissions were received. No complaints were confirmed. Note that Regulation 7, “Odorous Substances,” does not apply until a facility has received complaints from 10 or more complainants within a 90-day period. There are no indications of continuing non-compliance.

The BAAQMD finds that reasonable intermittent compliance can be assured at this facility for the review period. The compliance report is contained in Appendix A of this permit evaluation and statement of basis.

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 will be deleted; all “underline” language will 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.

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

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 issued 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.

Temperature monitoring has been added for each of the following abatement devices: S24, A4, and A31. Additional monitoring has been added, where appropriate, to assure compliance with the applicable requirements.

Following is the detail of other changes to permit conditions:

Condition 1240, Parts I.5 and I.6 have been amended to exclude the emergency diesel-powered firewater pump, which was previously exempt from permitting.

The quarterly inspection of seals for Tanks S1, S2, S4, and S23 in Condition 1240, Part II.13 has been made clearer. It is now clear that the inspections include all items required by Regulations 8-5-401, and 8-5-402, as well as all items required by 40 CFR 60.113b(b)(1)(i) and (ii).

The Regulation 9 citation in Condition 1240, Part I.16 has been corrected

Condition 1240, Part I.17 has been deleted because the source testing has been completed.

Condition 1240, Part II.6 has been amended to clarify that it applies to S32, LGO Stripper, as well as S18, Crude Unit.

Condition 1240, Part II.64a has been amended to make explicit that all materials loaded at S15, Loading Rack, are transferred from Tanks S13, S59, or S63. Since the permit holder will perform monitoring to demonstrate that the organic liquid in these tanks has a vapor pressure that is below 1.5 psia, the facility will not have to sample the organic liquid at S15, Loading Rack.

Condition 1240, Part III.2 has been amended to ensure compliance with the 2.9% sulfur limit although deliveries are not made by a dedicated ship.

Condition 1240, Parts III.7 and III.8 have been added to assure that the facility will not be subject to Regulation 8, Rule 44, since the facility does not have vapor recovery for marine loading.

Condition 1240, Parts II.27b and II.58a have been deleted because they are obsolete. Since the applicable requirements are now in Section IV, a separate permit condition is no longer needed.

Changes to the permit after public notice:

Changes to Condition 1240:

Part I.16:

The requirement for testing at 33 MMbtu/hr will be changed to “the highest fired duty possible for the prevailing process conditions” at the facility’s request.

Part I.18

S70, Asphalt Additive Mixing Tank, has been added to Condition 1240, part I.18c.

S67, Recovered Oil Tank, has been added to Condition 1240, part I.18e.

Part II.47

S70, Asphalt Additive Mixing Tank, has been added to the list of sources.

Part II.49

S70, Asphalt Additive Mixing Tank, has been added to the list of sources.

Part II.50

S70, Asphalt Additive Mixing Tank, has been added to the list of sources.

Part II.55

S70, Asphalt Additive Mixing Tank, has been added to the list of sources.

Part II.58

S70, Asphalt Additive Mixing Tank, has been added to the list of sources.

Part II.58b

Regulation 2-6-409.2.2 has been added as a basis for the condition.

Part II.92

The source cited in the condition has been corrected to S41.

Changes to Condition 18796:

Parts 2-6 have been removed because they are identical to Regulation 9, Rule 8, which is cited in Table IV-AJ.

Changes to Condition 20278

This condition was added for Sources S69, Asphalt Additive Loading Bin. and S70, Asphalt Additive Mixing Tank, which were permitted on 1/15/03. The condition has been modified from the original application, #6310, to clarify that the public nuisance requirement is not federally enforceable and to make corrections to the bases for the conditions.

Addition of Condition 19329

This condition has been added to govern the use of IERCs to comply with BAAQMD Regulation 9-10-301.

Addition of Condition 20617

The facility does not have NO_x or CO CEMs on S19 due to its small size. Instead, an “equivalent verification system” pursuant to Regulation 9-10-502.1 will be used to monitor for compliance with the NO_x and CO limits. Condition 20617 containing the details of the “equivalent verification system” was added to the permit.

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.

The District has reviewed all monitoring and has determined the existing monitoring is adequate with the following exceptions.

The tables below show the limits that, prior to incorporation in the Title V permit, lack periodic monitoring requirements or limits for which the existing monitoring is inadequate.

Additional monitoring, if any, imposed pursuant to Title V is shown in the last column. The basis for each decision to require additional monitoring is presented in the discussion following each table. Applicable limits not shown in the following tables have adequate monitoring, and so no additional monitoring is being proposed in the Title V permit.

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NOX Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S19, Process Heater, S20, S21, Boilers	BAAQMD 9-10-303	Refinery-wide emissions: 0.20 lbs NOx/MMBTU	None. This is a temporary interim limit which expires on 7/1/02. Semi-annual source test
S19, Process Heater, S20, S21, Boilers	SIP 9-10-303	Refinery-wide emissions: 0.20 lbs NOx/MMBTU	Semi-annual source test
Facility, S19-S21, S24, S34, A4, A31	BAAQMD Condition 1240, part I. 5 and I.14	Emissions of NOX < 40 tons per year excluding marine emissions	Calculations and records
S24, S34, A4, A31	BAAQMD Condition 1240, part I.5	Maximum heat input to all refinery combustion units < 88.6 MMBtu/hr	fuel meters and recordkeeping

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, and amended on April 10, 2003, 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.

~~No additional monitoring will be imposed for the limits that will expire before the issuance of the Title V permit.~~

Heat Input

Most of the heat input to the refinery comes from natural gas. The facility has relied on their main natural gas meter to determine the overall heat input. The requirement for a refinery fuel gas meter has been added to the permit to assure compliance with the limit.

Refinery-wide NOx limit

The refinery is subject to a facility-wide permit condition that limits emissions ~~of~~ oxides of nitrogen to ~~less than~~ 40 tons per year excluding emissions at the loading dock. Permit condition I.18 has been added to require the facility to determine compliance by calculating the emissions for each source and summarizing the calculations on a semi-annual basis. The calculations use either measured or maximum fuel rates and measured or standard emission factors. The District’s annual estimate of the actual emissions is 24 tons per year or less, so this level of monitoring is adequate.

CO Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S19, Process Heater, S20, S21, Boilers	BAAQMD 9-10-305	400 ppmv (dry, 3% O ₂)	source test every six months

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, ~~and amended on April 10, 2003~~, outlines in detail, emission monitoring requirements for petroleum refinery heaters, furnaces, and boilers that are subject to the rule. 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.

SO₂ Sources

# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
Facility, S19-S21, S24, S34, A4, A31	BAAQMD Condition 1240, part I.14	Emissions of SO ₂ < 28 tons per year excluding marine emissions	None
S30	BAAQMD Condition 1240, part III.2	2.9% S in fuel oil burned by vessels	Recordkeeping pursuant to Condition #1240, III.9
S68	BAAQMD 9-1-304	0.5% sulfur by weight	fuel oil certification
	BAAQMD Condition 18796, part 1	0.05% sulfur by weight	fuel oil certification
Facility	BAAQMD 9-1-302	General emission standard: < 300 ppm SO ₂ (applies only to gas-fired equipment when GLMs are not functioning)	Not recommended

SO₂ Discussion:

Discussion:

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.

Per CAPCOA/ARB/EPA Agreement, compliance with fuel sulfur limits in Condition 18796, Part 1, and BAAQMD Regulation 9-1-304 will be assured by 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.

No monitoring has been added to assure compliance with the facility SO₂ limits in Condition 1240, Part I.14 because the margin of compliance is high. Following are the calculations of the facility's potential to emit for SO₂:

SO₂ is created when fuels containing sulfur are burned and the sulfur combines with oxygen to produce SO₂. The facility has the following gaseous-fueled sources: S19-S21, S24, S34, A4, and A31. These sources are limited to an hourly heat input rate of 88.6 MMbtu/hr. S19 may burn refinery fuel gas that has a limit of 10 ppm H₂S on a 24-hour basis. This limit is monitored by a continuous H₂S monitor. S19 and all of the above sources also burn natural gas. The PUC specification for natural gas is 5 grains sulfur/100 cubic feet or about 160 ppm sulfur. This is the

worst-case assumption because the specification is higher than the sulfur content of the refinery fuel gas. Therefore, the potential to emit will be calculated assuming that the gaseous-fueled sources exclusively burn natural gas.

One grain is 1/7000 lb. The weight of SO₂ produced is approximately two times the amount of sulfur in the fuel. One cubic feet (cf) of gas contains approximately 1050 btu.

Using the above assumptions to calculate the SO₂ produced by the gaseous-fueled sources:

$$(88.6 \text{ MMbtu/hr}) \times (1 \text{ cf natural gas}/1050 \text{ btu}) \times (5 \text{ grains S}/100 \text{ cf natural gas}) \\ \times (1 \text{ lb S}/7000 \text{ grains S}) \times (2 \text{ lb SO}_2/1 \text{ lb S}) \times (8760 \text{ hr/yr}) \times (1 \text{ ton}/2000 \text{ lb}) = \\ 5.3 \text{ tons SO}_2/\text{yr}$$

The facility also has one diesel-powered source: S68. The source is a 215-hp emergency standby engine for a firewater pump. A permit was recently issued pursuant to Application #4202. The engine is limited to using diesel fuel with a sulfur content of 0.05%. At this sulfur limit, the SO₂ emission factor is 0.0004 lb SO₂/hp-hr. The potential to emit calculation will use the EPA’s guidance memorandum entitled “Calculating Potential to Emit (PTE) for Emergency Generators” dated September 6, 1995. Emergency generators are similar sources. The memorandum states that these sources are not likely to run, even in a worst case, more than 500 hours per year. Therefore, the potential to emit calculation will be based on 500 hours per year.

$$(500 \text{ hr/yr}) \times (215 \text{ hp}) \times (0.0004 \text{ lb SO}_2/\text{hp-hr}) \times (1 \text{ ton SO}_2/2000 \text{ lb S}_2) = 0.022 \text{ ton/yr}$$

The maximum potential to emit for SO₂ is approximately 5.3 tons/yr. Since the potential to emit is less than 20% of the limit of 28 tons/yr, no additional monitoring is necessary to ensure compliance.

Particulate Sources

# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S5-S8, S24, S31, S37, S38, S51, S52, S53, S54, S60, S61, S62, S65, S70 , A31	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	Temperature monitoring pursuant to Condition 1240, part II.58b
S5-S8, S24, S31, S37, S38, S51, S52, S53, S54, S60, S61, S62, S65, S70 , A31	BAAQMD 6-310	0.15 grains/dscf	Temperature monitoring pursuant to Condition 1240, part II.58b
S17, A4	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	Temperature monitoring pursuant to Condition 1240, part H.19

Particulate Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S17, A4	BAAQMD 6-310	0.15 grains/dscf	Temperature monitoring pursuant to Condition 1240, part H.19
S19, S20, S21, S34	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	No monitoring per CAPCOA/ARB/EPA monitoring agreement for gas fired units
S19, S20, S21, S34	BAAQMD 6-310.3	0.15 grains/dscf @ 6% oxygen	No monitoring per CAPCOA/ARB/EPA monitoring agreement for gas fired units
S68	BAAQMD 6-303.14	Ringelmann <u>4</u> 2 for more than 3 minutes in any hour	None
S68	BAAQMD 6-310	0.15 grains/dscf	None
<u>S69</u>	<u>BAAQMD</u> <u>6-301</u>	<u>Ringelmann 1 for more than 3 minutes in any hour</u>	<u>visible emissions</u>
<u>S69</u>	<u>BAAQMD</u> <u>6-310</u>	<u>0.15 grains/dscf</u>	<u>None</u>
<u>S69</u>	<u>BAAQMD</u> <u>6-311</u>	<u>4.10P^{0.67} lb/hr, where P is process weight, ton/hr</u>	<u>None</u>

PM Discussion:

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".

No additional monitoring will be imposed for S68, Emergency Diesel-Powered Firewater Pump because it is used for emergencies and reliability testing only.

Temperature monitoring has been imposed for all other sources, except S69, Asphalt Additive Loading Bin, that are subject to BAAQMD Regulation 6. This is the same monitoring that is imposed for particulates from certain processing equipment by the NSPS, 40 CFR 60, Subpart UU, Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture (8/6/82).

An annual visible emissions requirement will be imposed on S69, Asphalt Additive Loading Bin, per the EPA's June 24, 1999 agreement with CAPCOA and ARB titled "Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", since the potential to emit based on the throughput limits is less than 25 tons PM10/yr. Following is the calculation for potential to emit based on Application #6310:

The PM10 emissions are based on the emissions factors for concrete aggregate loading bins listed in AP-42, Section 13.2.4. The BAAQMD permit handbook Section 11, Chapter 2, calculated the emission factor based on AP-42 to be 0.000428 lb PM10 per ton of aggregate with 6.5 mile/yr of wind speed and 5% moisture content.

S-69 emissions = 2650 ton/yr * 0.000428 lb PM10/ton = 1.13 lb/yr PM10

Since the emissions are negligible, no source test requirement has been imposed for BAAQMD Regulations 6-310 and 6-311.

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
Facility	BAAQMD Condition 1240, part I.14	Emissions of NMHC < 49.1 tons per year excluding marine emissions	Calculations and records
S3	BAAQMD Condition 1240, part II.43	98.5% control efficiency	Temperature monitoring pursuant to Condition 1240 II.58b
S3	BAAQMD Condition 1240, part II.44	Fugitive emissions at vapor recovery system (S24 or A31) shall not exceed 100 ppmv	Fugitive emissions will be monitored in accordance with Regulation 8, Rule 18
S5	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S6	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S7	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S8	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
<u>S13</u>	<u>BAAQMD 8-5-306</u>	<u>95% control of organic vapors</u>	<u>Temperature monitoring pursuant to Condition 1240 II.58b</u>

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S13	BAAQMSIP 8-5-311.3	95% control of organic vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S13	40 CFR 60.112b(a) (3)(ii)	95% control of inlet VOC	Temperature monitoring pursuant to Condition 1240 II.58b
S13	BAAQMD Condition 1240, part II.31	Vapor pressure shall not exceed 1.5 psia	Annual sampling and testing
S13	BAAQMD Condition 1240, part II.32a	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S14	BAAQMD 8-6-301	21 g/cubic meter (0.17 lb/1000 gallons)	Temperature monitoring pursuant to Condition 1240 II.19 (Control by A4)
S14	BAAQMD Condition #1240, part II.60	98.5% destruction of vapors by weight by A4	Temperature monitoring pursuant to Condition 1240 II.19 (Control by A4)
S15	BAAQMD Condition #1240, part II.63	98.5% destruction of vapors by weight by A4	Temperature monitoring pursuant to Condition 1240 II.19 (Control by A4)
S15	BAAQMD Condition #1240, part II.64a	Vapor pressure < 1.5 psia	Annual testing of S13, S59, and S63
S16	BAAQMD Condition #1240, part II.90	Vapor pressure < 0.49 psia	None. Vapor pressure will be monitored at tanks, not at loading rack.
S16	BAAQMD Condition #1240, part II.91	25,749,000 gallons/any consecutive 12 months	Recordkeeping pursuant to Condition #1240, II.91a
S17	BAAQMD Condition #1240, part II.68	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.19
S18	BAAQMD Condition 1240, part I.14	Emissions of NMHC < 49.1 tons per year excluding marine emissions	Source test every 6 months and calculations
S18	BAAQMD Condition #1240, part I.3	98.5% destruction of vapors by weight	Source test every 6 months

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S19	BAAQMD Condition #1240, part I.3	98.5% destruction of vapors by weight	Source test every 6 months
S24	BAAQMD 8-5-306	95% control of organic vapors	Temperature monitoring
S24	BAAQMD SIP 8-5-311.3	95% control of organic vapors	Temperature monitoring
S24	BAAQMD Condition 1240, part II.43	98.5% control efficiency	Temperature monitoring
S24	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring
S24	BAAQMD Condition #1240, part II.56	98.5% destruction of vapors by weight	Temperature monitoring
S24	40 CFR 60.112b(a)(3)(ii)	95% control of inlet VOC	Temperature monitoring
S24	BAAQMD Condition 1240, part II.44	Fugitive emissions at vapor recovery system (S24 or A31) shall not exceed 100 ppmv	Fugitive emissions will be monitored in accordance with Regulation 8, Rule 18
S24	BAAQMD Condition #1240, part II.57	98.5% destruction of vapors by weight	Temperature monitoring
S24	BAAQMD Condition #1240, part II.85	98.5% destruction of vapors by weight	Temperature monitoring
S30	BAAQMD Condition 1240, part III.1	12 ships per year	Recordkeeping pursuant to Condition #1240, III.9
S30	BAAQMD Condition 1240, part III.1	Vessels less than 49 MDWT	Recordkeeping pursuant to Condition #1240, III.9
S30	BAAQMD Condition 1240, part III.6	6 barge loadings in any month; 1 barge loading in any day; barge capacity < 100,000 barrels	Recordkeeping pursuant to Condition #1240, III.9
S31	BAAQMD 8-6-301	21 g/cubic meter (0.17 lb/1000 gallons)	Temperature monitoring pursuant to Condition 1240 II.58b
S31	BAAQMD Condition #1240, part II.69	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S37	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S38	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S39	BAAQMD Condition #1240, I.14	Emissions of NMHC < 49.1 tons per year for entire refinery excluding marine emissions	No monitoring required because vapor pressure of contents is negligible, therefore emissions are negligible
S40	BAAQMD Condition #1240, I.14	Emissions of NMHC < 49.1 tons per year for entire refinery excluding marine emissions	No monitoring required because vapor pressure of contents is negligible, therefore emissions are negligible
S41	BAAQMD 8-8-307	70% combined collection and destruction efficiency	Temperature monitoring pursuant to Condition 1240 II.58b
S41	BAAQMD Condition #1240, part I.14	77,263,000 gallons/year	Recordkeeping pursuant to Condition #1240, II.92a
S51	BAAQMD Condition #1240, part II.56	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S52	BAAQMD Condition #1240, part II.56	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S53	BAAQMD Condition #1240, part II.56	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S54	BAAQMD 8-6-301	21 g/cubic meter (0.17 lb/1000 gallons)	Temperature monitoring pursuant to Condition 1240 II.58b
S54	BAAQMD Condition #1240, part II.70	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
<u>S59</u>	<u>BAAQMD 8-5-306</u>	<u>95% control of organic vapors</u>	<u>Temperature monitoring pursuant to Condition 1240 II.58b</u>

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S59	BAAQMSIP 8-5-311.3	95% control of organic vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S59	BAAQMD Condition #1240, part II.32.b	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S59	BAAQMD Condition 1240, part II.31	Vapor pressure shall not exceed 1.5 psia	Annual sampling and testing
S60	BAAQMD Condition #1240, part II.56	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S61	BAAQMD Condition #1240, part II.57	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S62	BAAQMD Condition #1240, part II.57	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S63	BAAQMD 8-5-306	95% control of organic vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S63	BAAQMSIP 8-5-311.3	95% control of organic vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S63	BAAQMD Condition #1240, part II.32.c	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S63	BAAQMD Condition 1240, part II.31	Vapor pressure shall not exceed 1.5 psia	Annual sampling and testing
S65	BAAQMD Condition #1240, part II.56	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S65	BAAQMD Condition 1240, part II.53	Fugitive emissions shall not exceed 100 ppm	Fugitive emissions will be monitored in accordance with Regulation 8, Rule 18
S66	BAAQMD 8-8-301.3	95% combined collection and destruction efficiency	Temperature monitoring pursuant to Condition 1240 II.58b

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S66	BAAQMD Condition 1240, part II.86	No detectable fugitive emissions in excess of 100 ppm, measured as total organic compounds	Fugitive emissions will be monitored in accordance with Regulation 8, Rule 18
S66	BAAQMD Condition #1240, part II.85	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
A4	BAAQMD 8-6-301	21 g/cubic meter (0.17 lb/1000 gallons)	Temperature monitoring
A4	BAAQMD Condition 1240, part II.60	98.5% control efficiency	Temperature monitoring
A4	BAAQMD Condition #1240, II.63	98.5% destruction of vapors	Temperature monitoring
A4	BAAQMD Condition #1240, part II.69	98.5% destruction of vapors by weight	Temperature monitoring
A4	BAAQMD Condition #1240, part II.68	98.5% destruction of vapors by weight	Temperature monitoring
A31	BAAQMD 8-5-306	95% control of organic vapors	Temperature monitoring pursuant to Condition 1240 II.58b
A31	BAAQMD-SIP 8-5-311.3	95% control of organic vapors	Temperature monitoring pursuant to Condition 1240 II.58b
A31	BAAQMD 8-6-301	21 g/cubic meter (0.17 lb/1000 gallons)	Temperature monitoring pursuant to Condition 1240 II.58b
A31	40 CFR 60.112b(a)(3)(ii)	95% control of inlet VOC	Temperature monitoring pursuant to Condition 1240 II.58b
A31	BAAQMD Condition 1240, part II.43	98.5% control efficiency	Temperature monitoring pursuant to Condition 1240 II.58b
A31	BAAQMD Condition #1240, II.56	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
A31	BAAQMD Condition #1240, part II.69	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
A31	BAAQMD Condition #1240, part II.70	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
A31	BAAQMD Condition 1240, part II.85	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b

POC Discussion:

VOC emissions at the Valero Benicia Asphalt Plant are controlled by the following four control devices:

- S19, Vacuum Heater
- S24, Hot Oil Heater
- A4, Loading Rack Ground Flare
- A31, Incinerator

S19 and S24 are also process heaters.

S24, A4, and A31 are required to monitor the combustion temperature continuously because the sources that they control are subject to 40 CFR 60, Subpart Kb; 40 CFR 60, Subpart UU; or 40 CFR 61, Subpart FF. Temperature is an indicator of compliance for the control of particulate, VOC, and organic HAPs.

S19 is not subject to temperature monitoring by regulation. 40 CFR 63, Subpart CC exempts control by process units from monitoring if the pollutants are vented into the flame zone of a process heater. A source test will be required every six months.

The refinery is subject to a facility-wide permit condition that limits emissions on non-methane hydrocarbons (NMHC) to less than 49.1 tons per year excluding emissions at the loading dock. Permit condition I.18 has been added to require the facility to determine compliance by calculating the emissions for each source and summarizing the calculations on a semi-annual basis.

HAP Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S18, S19	<u>40 CFR 63 Subpart CC 63.643(a) (2)</u>	Reduce HAPs by 98% or to 20 ppm @ 3% oxygen	MACT does not require additional monitoring. MACT monitoring is presumed to be sufficient.

Discussion of Other Pollutants:

H2S Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
Facility	<u>BAAQMD 9-1-313.2</u>	Removal of 95% of H2S in process water streams	None

~~Unlike larger refineries, Valero Asphalt does not introduce water into process streams because it does not have any cracking or sulfur recovery. Therefore, no additional monitoring is necessary for this requirement.~~

Changes to the permit after public notice:

General

Various corrections have been made to source names. Various corrections have been made regarding federal enforceability of District regulations. In particular, only a few sections of Regulation 9, Rule 10, Nitrogen Oxides and Carbon Monoxide from Boilers, Steam Generators and Process Heaters in Petroleum Refineries, are federally enforceable.

All tank tables have been amended because Regulation 8, Rule 5 was amended on 11/27/02.

The requirement for an approved emission control system for degassing tanks in BAAQMD Regulation 8-5-328 applies to the system, not the tanks. Therefore, the requirement has been moved to the General Refinery Requirements table. The requirement for a concentration of less than 10,000 ppm in the tank after degassing has been placed in the tank tables.

The citation for liquid balancing, Regulation 8-5-328.1, has been deleted from all tank tables at the facility's request because the facility does not use this option for tank cleaning.

BAAQMD Regulations 8-5-501 and 8-5-604 were deleted from the table for any tank that is not subject to Regulation 8, Rule 5, Storage of Organic Liquids, due to low vapor pressure of the contents.

Corrections have been made to the citations for BAAQMD Condition 1240, part I.18.

Citation of BAAQMD and SIP Regulation 9-10-303, Emission Limit For Facility (Federal Requirements), has been added for process heaters greater than 10 MMbtu/hr: S19, S20, S21.

Refinery Table

Regulation 9-1-310.3 was deleted from the monitoring requirement citation for ambient SO₂ because it applies to coke calcining kilns and the facility does not have a coke calcining kiln.

The citation for the Refinery MACT Startup, Shutdown, and Malfunction Report was corrected in the monitoring requirement citation for ambient H₂S.

The citation for BAAQMD and SIP Regulation 9-1-313.2 for H₂S in process water streams was deleted because the facility does not have water containing H₂S.

The citation for Regulation 8-5-328.2 for VOC concentration was deleted because it applies specifically to tanks. This citation will appear in the tank tables.

S1, S2, S4, S23, Crude Storage Tanks

BAAQMD Regulation 8-5-401.1 and 8-5-404.1 were not subsumed by the permit shield because the permit condition refers to these requirements.

S12, Wastewater Tank

40 CFR § 61.349(a)(1)(i)(A) was deleted from the table because it is in the component table.

40 CFR § 61.349(f), Visual inspection of closed vent system, etc., has been added to the table for this source.

S19, Process Heater

The citation for the limit in BAAQMD Regulation 9-10-301 has been amended to show that compliance with the ACP pursuant to Regulation 2, Rule 9, is considered compliance with the 9-10-301 limit.

The monitoring citation for the oxygen analyzer at S19, Process Heater, has been corrected from Regulation 9-10-502, Monitoring, to BAAQMD Condition 1240, part I.10.

The facility does not have NO_x or CO CEMs on S19 due to its small size. Instead, an “equivalent verification system” pursuant to Regulation 9-10-502.1 will be used to monitor for compliance with the NO_x and CO limits. Condition 20617 containing the details of the “equivalent verification system” was added to the permit.

BAAQMD Regulation 9-10-303 has been added to this table.

The Regulation 9, Rule 10, operating day average has been added to this table.

S20, Steam Boiler

The citation for the limit in BAAQMD Regulation 9-10-301 has been amended to show that compliance with the ACP pursuant to Regulation 2, Rule 9, is considered compliance with the 9-10-301 limit.

BAAQMD Regulation 9-10-303 has been added to this table.

The Regulation 9, Rule 10, operating day average has been added to this table.

S21, Steam Boiler

The citation for the limit in BAAQMD Regulation 9-10-301 has been amended to show that compliance with the ACP pursuant to Regulation 2, Rule 9, is considered compliance with the 9-10-301 limit.

BAAQMD Regulation 9-10-303 has been added to this table.

The Regulation 9, Rule 10, operating day average has been added to this table.

S25, S28, Effluent Water Feed Tanks

40 CFR § 61.349(f), Visual inspection of closed vent system, etc., has been added to the table for these sources.

S26, Skimmed Oil Tank

40 CFR § 61.349(f), Visual inspection of closed vent system, etc., has been added to the table for this source.

S27, Recovered Oil Tank

40 CFR § 61.349(f), Visual inspection of closed vent system, etc., has been added to the table for this source.

S41, Wemco Hydrotreater

40 CFR § 61.349(f), Visual inspection of closed vent system, etc., has been added to the table for this source.

S66, Oil Water Separator

40 CFR § 61.349(f), Visual inspection of closed vent system, etc., has been added to the table for this source.

S67, Recovered Oil Tank

40 CFR § 61.349(a)(1)(i), Operations with fugitive emissions less than 500 ppmv, has been deleted because this requirement is in the Components table.

40 CFR § 61.349(f), Visual inspection of closed vent system, etc., has been added to the table for this source.

S68, Emergency Diesel-powered Firewater Pump

The fuel sulfur limit pursuant to Condition 18796, Part 1, has been corrected to 0.05% sulfur by weight. The limit is not federally enforceable.

S69, Asphalt Additive Loading Bin

A table has been added for this source. It was not permitted at the time of the original application.

S70, Asphalt Additive Mixing Tank

A table has been added for this source. It was not permitted at the time of the original application.

Components

40 CFR § 61.349(f), Visual inspection of closed vent system and control devices, has been added to the components table.

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.

Changes to the permit after public notice:

A test method was added for Regulation 8-6-603.

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 have been granted to the facility:

1. S30, Marine Loading Dock, is not subject to BAAQMD Regulation 8, Rule 44 because it does not load organic liquid as defined by Section 8-44-204 (all gasoline, gasoline blending stocks, aviation gas and aviation fuel (JP-4 type) and crude oil). Conditions 1240 III.7 and 1240 III.8 have been added to the permit to ensure that the facility does not operate in a manner that would be subject to BAAQMD Regulation 8, Rule 44.

The following permit shields have been granted for the purpose of streamlining:

1. 40 CFR 60.482-2(c):
The requirement for pump leaks above 10,000 ppm or dripping liquid: First repair attempt before 5 days and repair before 15 days.
The requirement shall be subsumed by BAAQMD 8-18-303, which requires minimization of leak >500 ppm within 24 hours and repair within 7 days.
The BAAQMD requirement is more stringent.
2. 40 CFR 60.482-7(d):
The requirement for valve leaks above 10,000 ppm: First repair attempt before 5 days and repair before 15 days.
The requirement shall be subsumed by BAAQMD 8-18-302, which requires minimization of leak >100 ppm within 24 hours and repair within 7 days.
The BAAQMD requirement is more stringent.
3. 40 CFR 60.482-7(g):
Allows relief from 60.482.7(a) monitoring if designated as unsafe-to-monitor.
BAAQMD Regulation 8-18 does not allow this relief.
The BAAQMD requirement is more stringent.
4. 40 CFR 60.482-7(h):
Allows relief from 60.482.7(a) monitoring if designated as difficult-to-monitor.
The BAAQMD Regulation 8-18-206 definition of inaccessible is more stringent. Both 60.482.7(h) and BAAQMD 8-18-401.3 require yearly monitoring for difficult-to-monitor valves.
The BAAQMD requirement is more stringent.
5. 40 CFR 60.482-9(e):
Allows delay of repair beyond a process unit shutdown under supply circumstances.
BAAQMD Regulation 8-18-306 does not allow this relief.
The BAAQMD requirement is more stringent.
6. 40 CFR 60.484:
Alternative compliance plan only requires EPA approval. BAAQMD Regulation 8-18-308 requires public notice and EPA approval of alternative compliance plan.

The BAAQMD requirement is more stringent.

7. 40 CFR 60.113b(b)(1)(i) and (ii) for S1, S2, S4, and S23, Crude Tanks:
Requires the measurement of gaps between tank wall and primary and secondary seals at least once per 5 years and at least once per year, respectively.
BAAQMD Condition 1240 II.13 requires quarterly inspection of primary and secondary tank seals, and therefore is more stringent. The permit condition has been amended to ensure that the quarterly inspections will include all items required by Regulations 8-5-401, and 8-5-402, as well as all items required by 40 CFR 60.113b(b)(1)(i) and (ii).

~~8. BAAQMD Regulations 8-5-401.1, 8-5-402.1, 8-5-404.1, and 8-5-040.2.1 for S1, S2, S4, and S23, Crude Tanks:
Inspection of primary and “zero-gap” secondary seals at least once every 10 years (8-5-401.1 and 8-5-404.1), and at least once per year (8-5-404.2.1).
BAAQMD Condition 1240 II.13 requires quarterly inspection of primary and secondary tank seals, and therefore is more stringent. The permit condition has been amended to ensure that the quarterly inspections will include all items required by Regulations 8-5-401, and 8-5-402, as well as all items required by 40 CFR 60.113b(b)(1)(i) and (ii).~~

D. Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility.

E. Compliance Status:

A July 17, 2001 office memorandum from the Director of Compliance and Enforcement, to the Director of Permit Services, presents a review of the compliance record of Valero Benicia Asphalt Plant, Facility #A0901 (the report was prepared before the facility number was changed due to the sale of the facility). The Compliance and Enforcement Division staff has reviewed the records for Valero Asphalt for the period between June 15, 2000 through June 15, 2001. This review was initiated as part of the District evaluation of an application by Valero Asphalt for a Title V permit. During the period subject to review, activities known to the District include:

- There were two Notices of Violation issued during this review period for violation of the H₂S limit in the refinery fuel gas.
- The District received four complaints for odors and one complaint for visible emissions. No complaints were confirmed.
- The facility is not operating under a Variance or an Order of Abatement from the District Board.
- There were no monitor excesses or equipment breakdowns reported or documented by District staff.

The owner certified that all equipment was operating in compliance on April 9, 1997 with all requirements except the requirement to file a Title V permit by October 24, 1995. Subsequent analysis shows that the emissions have been below 50 tons of each regulated air pollutant from 1993 to date and therefore, the facility was not actually out of compliance.

F. Differences between the Application and the Proposed Permit:

The changes to the source list can be found in Section C.II of this statement of basis.

The Title V permit application was originally submitted on April 9, 1997. This version is the basis for constructing the proposed Title V permit. Differences between the application and the proposed permit include the following:

S4, Crude Oil Tank, was converted from a fixed roof tank to an external floating roof tank pursuant to Application #366.

The permitted heat input to S19, Process Heater, was increased from 22.4 MMbtu/hr to 33 MMbtu/hr pursuant to Application #1261.

The allowable refinery throughput was increased from 3,650,000 barrels/yr to 5,292,000 barrels/yr pursuant to Application #1819.

The allowable refinery throughput was increased from 9,000 barrels/day to 18,000 barrels/day pursuant to Application #18514.

The names of A4 and A31 have been changed from “flare” to “thermal oxidizer.” These control devices are not flares and are not subject to flare requirements.

The permitted heat input to S19, Process Heater, was increased from 33 MMbtu/hr to 40 MMbtu/hr pursuant to Application #7123.

The facility was granted an ACP pursuant to Application 3915 and Regulation 2, Rule 9, Interchangeable Emission Reduction Credits, which are discussed in detail in Section C.IV.

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APPENDIX A
BAAQMD COMPLIANCE REPORT

APPENDIX B

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

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APPENDIX C
Permit Evaluations

APPENDIX [CD](#)

GLOSSARY

ACP

Alternative Compliance Plan pursuant to BAAQMD Regulation 2, Rule 9, Interchangeable Emission Reduction Credits

ACT

Federal Clean Air Act

APCO

Air Pollution Control Officer

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

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

EPA

The federal Environmental Protection Agency.

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.

FP

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

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.

IERC

Interchangeable Emission Reduction Credit

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.

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.

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)

NO_x

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, NO_x, 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:

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
min	=	minute
mm	=	millimeter
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