

Bay Area Air Quality Management District

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Permit Evaluation and Statement of Basis for Revision 3

MAJOR FACILITY REVIEW PERMIT

for
**Valero Benicia Asphalt Plant
Facility # A0901**

Facility Address:

3001 Park Road
Benicia, CA 94510

Mailing Address:

3400 East Second Street
Benicia, CA 94510

Application Engineer: Thu Bui
Site Engineer: Thu Bui

Application: 24260

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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 Title 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, more than 10 tons per year of a hazardous air pollutant, or more than 25 tons per year of a combination of hazardous air pollutants.

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 identifier that consists of a letter and a 4-digit number. This identifier is also considered to be the identifier for the permit. The identifier for this facility is A0901.

This facility received its initial Title V permit on December 1, 2003. This application is for a permit renewal. Although the current permit expired on November 30, 2008, it continues in force until the District takes final action on the permit renewal. This Title V permit renewal has been updated to include new standard language used in all Title V permits. The proposed permit shows all changes to the permit in ~~strikeout~~/underline format.

Revision 3 would incorporate the following recent Title V revision applications into the permit:

Application Number(s) TV/NSR	Description
22610/22609	Condition 21233, source test submittal dates
22725/22724	Removal of S-19 and S-24 from Condition 21233, Condition 19329, and Reg 9-10 applicability
23458/23459	S-12 Exemption Status
24277/24278	Decommission WW Sources

The incorporation of these applications would not significantly increase emissions. There are no emission increases for any of these applications.

- TV 22610/NSR 22609 – NOx Box Condition 21233, source test submittal dates. This project does not result in an increase in emissions and no relaxation of monitoring requirements
- TV 22725/NSR 22724 – Removal of S-19 and S-24 from Condition 21233, Condition 19329, and Reg 9-10 applicability based on BACT requirements issued before 9-10 applicability date. No emission increase or relaxation of applicable monitoring requirements.
- TV 23458/NSR 23459 – S-12 Exemption Status change to add ability to store additional exempt materials. This application was superseded by a subsequent application (NSR A/N 24278) to permit S-12, TK-4606 to store untreated wastewater therefore the revisions proposed by NSR A/N 23459 were not documented in the Title V permit.
- TV 24277/NSR 24278 – Decommissioning of WW sources involved removal of S27, S41, and S66 from service and permitting S12, S26, S28, and S67 to store untreated wastewater. ERCs provided to offset emissions increases for permitted source changes.

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

Combustion unit emissions are generally controlled through the use of burner technology. 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.

There has been no significant change in emissions.

Changes to permit:

The Responsible Official was changed from Doug Comeau to John Hill.

The Facility Contact was changed from Todd Lopez to Donald Cuffel.

C. Permit Content

The legal and factual basis for the permit follows. The permit sections are described in the order presented in the permit. Generally, this statement of basis/permit evaluation addresses only the proposed revisions to the permit. Comprehensive statements of basis were prepared for the previous issues of the permit and are available on request.

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.

Changes to permit:

- Regulation effective dates were updated in Standard Condition 1.A.

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 per year of a "regulated air pollutant" (as defined in BAAQMD Rule 2-6-222) or 400 pounds per year of a "hazardous air pollutant" (as defined in BAAQMD Rule 2-6-210).

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 the abatement device table but will have an “S” number. An abatement device may also be a source (such as a thermal oxidizer that burns fuel) of secondary emissions. If the primary function of a device is to control emissions, it is considered an abatement (or “A”) device. If the primary function of a device is a non-control function, the device is considered to be a source (or “S”).

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 the permitted sources 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:

Changes to permit:

- Table IIA – Permitted Sources
 - Added S-12 per NSR A/N 24278
 - Added S-26 per NSR A/N 24278
 - Deleted S-27 per NSR A/N 24278
 - Added S-28 per NSR A/N 24278
 - Deleted S-41 per NSR A/N 24278
 - Deleted S-66 per NSR A/N 24278
 - Revised description and throughput limit for S-67 per NSR A/N 24278

- Table IIB – Abatement Devices
 - Revised source description in to include full facility equipment numbering IDs in 46xx format
 - For A1, A3, A31, S24 add S12 per NSR A/N 24278)
 - For A31 and S24 removed S27 per NSR A/N 24278
 - For A31 and S24 removed rows for Reg 8-8 per NSR A/N 24278
 - For A1, A3, A31, and S24 removed S41 and S66 per NSR A/N 24278
 - For A31 and S24 add S12, S26, S28, S67 to Reg 8-5; SIP 8-5 rows (previously for S13, S59, S63) per NSR A/N 24278
 - For A31 and S24 add S26, S28 to BAAQMD Condition 1240, Part I.14 rows per NSR A/N 24278
 - For A17, add S18 per NSR A/N 19193)

- Table IIC – Exempt Sources
 - S12, S26, S28 removed per NSR A/N 24278

- Add Tank Heater, F-4608

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” as defined in BAAQMD Rule 2-6-239.

Changes to permit:

The dates of adoption or approval of the rules and their “federal enforceability” status in Table III have also been updated.

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) are listed following the corresponding District rules. SIP rules are District rules that have been approved by EPA for inclusion in 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 portion of the SIP rule is cited separately after the District rule. The SIP portion will be federally enforceable; the non-SIP version will not be federally enforceable, unless EPA has approved it 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 or EPA 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 Application Determinations

CARB and Federal GHG Mandatory Reporting Rule – Removal

In their responses to comments that were part of the Preamble to the GHG Monitoring Rule (40 CFR 98) published in the Federal Register (56288 Federal Register / Vol. 74, No. 209 / Friday, October 30, 2009) EPA did not view the above rule as an “applicable requirement” subject to Title V and stated that the GHG monitoring rule was created under the authority of Section 114 and not Section 112 of the Clean Air Act (CAA). Because 40 CFR Part 71 clarifies that Title V permits shall list requirements of Section 112 of CAA, the 40 CFR Part 98 “Mandatory Greenhouse Gas Reporting” and California Code of Regulation, Title 17, Subchapter 10, Article 2 applicable requirements were deleted from Table IV-A (General Asphalt Plant Requirements).

Changes to permit:

Table IV-A

- Change Federal Enforceability from N to Y for Regulation 8-5-501.
- Change description to include source test requirement and exemption for Regulation 8-5-502.
- Delete 40 CFR, Part 98 Subpart A,C, Y and MM, Mandatory Greenhouse Gas Reporting requirements. A/N 24260

Table IV-B (S3)

Corrected Condition 1240.II, Part 93 (from Part 94) for typographical correction

Table IV-D (S9)

- Change Federal Enforceability from N to Y for Regulation 8-5-501 and delete SIP 8-5-501.

Table IV-E (S12, S26, S28, S67)

- Added S67 per NSR A/N 24278
- Added BAAQMD and SIP Reg 8-5 applicability for non-exempt tanks per NSR A/N 24278
- Added BAAQMD Reg 11-12 for consistency with other sources subject to NESHAPS Subpart FF
- Revised Condition 1240 per NSR A/N 24278

Table IV-F (S13, S59, S63)

- Change description to include source test requirement and exemption for Regulation 8-5-502.

Table IV-J (S19)

- Condition 1240.I.3a, added (cleanup typographical errors from incorporation of A/N 19193)

Table IV-K (S20)

- Deleted Reg 2-9 sections that no longer apply due to shutdown of B2626 S-3/S-4 CO Furnaces per NSR A/N 16937

Table IV-L (S21)

- Deleted Reg 2-9 sections that no longer apply due to shutdown of B2626 S-3/S-4 CO Furnaces per NSR A/N 16937

Table IV-M (S24)

- Change description to include source test requirement and exemption for Regulation 8-5-502.
- Deleted Reg 9-10 applicability per NSR A/N 22724
- Deleted Reg 8-8 and SIP 8-8 per NSR A/N 24278
- Revised Condition 1240.II.32s description; add S12, S26, S28, S67 and delete S41 and S66

Table IV-N

- Deleted table, S27 removed from service and S67 moved to Table IV-E per NSR A/N 24278

Table IV-O (S31)

- Renumbered to Table IV-N

Table IV-P (S34)

- Renumbered to Table IV-O

Table IV-Q (S41)

- Deleted table, S41 removed from service per NSR A/N 24278

Table IV-R (S54)

- Renumbered to Table IV-P

Table IV-S (S66)

- Table deleted, S66 removed from service per NSR A/N 24278

Table IV-T (S68)

- Renumbered to Table IV-Q
- Corrected Reg 9, Rule 8 for typographical correction
- Removed Reg 9, Rule 8 future effective date
- Update CARB ATCM 93115 for stationary diesel engines based on most recent version of ATCM

Table IV-U (S69)

- Renumbered to Table IV-R

Table IV-V (S70)

- Renumbered to Table IV-S

Table IV-W0 (Fugitive Matrix)

- Renumbered to Table IV-T0
- Revised to clarify 40 CFR GGG and GGGa applicability

Table IV-W1 (Fugitive Components)

- Renumbered to Table IV-T1
- Removal of NESHAPS 40 CFR 61, Subpart FF requirements for wastewater sources per NSR A/N 24278

Table IV-X (A17)

- Renumbered to Table IV-U
- Revised description to clarify 'thermal' incineration
- Change description to include source test requirement and exemption for Regulation 8-5-502.

Table IV-Y (A31)

- Renumbered to Table IV-V
- Change description to include source test requirement and exemption for Regulation 8-5-502.
- Deleted Reg 8-8 and SIP 8-8 per NSR A/N 24278
- Revised Condition 1240.II.32a description; add S12, S26, S28, S67 and delete S41 and S66 per NSR A/N 24278

Table IV-Z (S71)

- Renumbered to Table IV-W
- Incorporate rule update for BAAQMD 9-8. Remove past due future effective date.
- Update CARB ATCM 93115 for stationary diesel engines based on most recent version of ATCM

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 contains only sections 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 no records of compliance problems at this facility during the past year. The compliance report is contained in Appendix A of this statement of basis.

Changes to permit:

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. Each permit condition is identified with a unique numerical identifier, up to five digits.

When necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting requirements have 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 and all “underline” language will be retained, subject to consideration of comments received.

The existing permit conditions are derived from previously issued District Authorities to Construct (A/C) or Permits to Operate (P/O). Permit conditions may also 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 the permit.

Conditions have also been deleted due to the following:

- Redundancy in recordkeeping 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 is listed following each condition. The regulatory basis may be a rule or regulation. The District is also using the following terms for regulatory basis:

- BACT: This term 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 term is used for a condition imposed by the APCO that limits a source's operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This term 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 term 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 term is used for a condition imposed by the APCO to ensure compliance with limits that arise from the District's Toxic Risk Management Policy.

Changes to permit:

1240.I, Part 16a, Revised to add 'with' for typographical correction

1240.I, Part 18c, Revised to add S12 per NSR A/N 24278

1240.I, Part 18c, Revised to add, S26, S28, and S67 per NSR A/N 24278

1240.I, Part 18e, Deleted per NSR A/N 24278

1240.II, Part 32a, Revised to add S12, S26, S28, S67 and to delete S41 and S66 per NSR A/N 24278

1240.II, Description for S3, Revised to correct source description and abatement device descriptions for typographical corrections

1240.II, Description for S12, Added description per NSR A/N 24278

1240.II, Description for S12, Revised to exclude Heavy Vacuum Gas Oil Service per NSR A/N 24278

1240.II, Part 40, Revised to delete S12 per NSR A/N 24278

1240.II, Part 40a, Revised to delete S12 per NSR A/N 24278

1240.II, Part 40b, Revised to add exemption per NSR A/N 23459

1240.II, Part 40c, Revised to delete S12 per NSR A/N 24278

1240.II, Part 41, Revised to delete S12 per NSR A/N 24278

1240.II, Part 42, Revised to delete S12 per NSR A/N 24278

1240.II, Part 45, Revised to delete S12 per NSR A/N 24278

1240.II, Part 46, Revised to delete S12 per NSR A/N 24278

1240.II, Description S17, Revised description for abatement for typographical correction

1240.II, Description for S66, Deleted per NSR A/N 24278

1240.II, Part 83, Deleted per NSR A/N 24278

1240.II, Part 84, Deleted per NSR A/N 24278

1240.II, Part 87, Deleted per NSR A/N 24278

1240.II, Part 88, Deleted per NSR A/N 24278

1240.II, Description for S41, Deleted per NSR A/N 24278

1240.II, Part 92 Deleted per NSR A/N 24278

1240.II, Part 92a, Deleted per NSR A/N 24278

1240.II, Part 93, Added S12 per NSR A/N 24278

1240.II, Part 93, Added S26, S28 and S67 and deleted S41 and S66 per NSR A/N 24278

1240.II, Part 96, Deleted S25 typographical correction from Renewal application

1240.II, Part 96, Deleted S27, S41 and S66 per NSR A/N 24278

1240.II, Part 97, Added per NSR A/N 24278

1240.II, Part 98, Added per NSR A/N 24278

1240.II, Part 99, Added per NSR A/N 24278

1240.II, Part 100, Added per NSR A/N 24278

19329

- Added comment for NSR AN 22725/22724

21233

- Added comments for changes based on NSR A/N 22724, 22602 (B2626), and 22609
- Changed Parts 6 and 7 source test submittal from 45 to 60 days in Parts 6 and 7 per NSR A/N 22609

22851

- Updated basis to reflect current version of ATCM

22928

- Updated basis to reflect current version of ATCM

VII. Applicable Limits and Compliance Monitoring Requirements

This section of the permit is a summary of numerical limits and related monitoring requirements for each source. The summary includes a citation for each monitoring requirement, frequency of monitoring, and type of monitoring. 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 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 in the discussion when no monitoring is proposed due to the size of a source.

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 requirements only when it can support a conclusion that existing monitoring is inadequate.

Changes to permit:

A note has been added at the beginning of the section to clarify that this section is a summary of the limits and monitoring, and that in the case of a conflict between Sections I-VI and Section VII, the preceding sections take precedence.

Revise source description in table headers to include full facility equipment numbering IDs in 46xx format.

Made editorial corrections throughout Section VII, including deletion of “#” and “BAAQMD” for all references to BAAQMD permit conditions

Table VII-C (S5, S6, S7, S8, S37, S38, S51, S52, S53, S60, S61, S62, S65)

- Deleted tank degassing (BAAQMD 8-5-328) because tanks are exempt

Table VII-E (S12, S26, S28, S67)

- Added S12 and S67 per NSR A/N 24278
- Added BAAQMD and SIP Reg 8-5 applicability for non-exempt tanks per NSR A/N 24278
- Added Condition 1240 per NSR A/N 24278

Table VII-F (S13, S59, S63)

- Add exemption for 8-5-502.1

Table VII-M (S24)

- Add exemption for 8-5-502.1
- Delete Reg 8-8 and SIP 8-8 rows per NSR A/N 24278
- In Reg 8-5 and SIP 8-5 rows, add S12, S26, S28, S67 per NSR A/N 24278

Table VII-N

- Deleted table per NSR A/N 24278 (S67 moved to Table VII-E)

Table VII-O (S31)

- Renumbered to Table IV-N

Table VII-P (S34)

- Renumbered to Table IV-O

Table VII Q (S41)

- Deleted, S41 removed from service per NSR A/N 24278

Table VII-P (S54)

- Renumbered to Table IV-P

Table VII S (S66)

- Deleted, S66 removed from service per NSR A/N 24278

Table VII-T (S68)

- Renumbered to Table IV-Q

Table VII-U (S69)

- Renumbered to Table IV-R

Table VII-V (S70)

- Renumbered to Table IV-S

Table VII W1 (Fugitive Components)

- Renumbered to Table IV-T1
- Deleted BAAQMD-approved CIP, including removal of footnote b, and monitoring frequency noted as Annual
- Removal of 40 CFR 61, NESHAPS Subpart FF citations for consistency with revisions made to Table VII-T1

Table VII-X (A17)

- Renumbered to Table IV-U

Table VII-Y (A31)

- Renumbered to Table IV-V
- Add exemption for 8-5-502.1
- Delete Reg 8-8 and SIP 8-8 rows per NSR A/N 24278
- In Reg 8-5 and SIP 8-5 rows, add S12, S26, S28, S67 per NSR A/N 24278

Table VII-X (A71)

- Renumbered to Table IV-W

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” as defined by Regulation 2-6-202.

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

Changes throughout Section VIII

BAAQMD Regulation 8, Rule 8

- Deleted all methods except those that pertain to WW system components per NSR A/N 24278

NSPS Subpart J

- Deleted, typographical error

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 explaining that specific federally enforceable regulations and standards do not apply to a source or group of sources, or (2) A provision in a major facility review permit explaining that specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting 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.

There are no proposed changes to the permit shield for this permit.

X. Revision History

Changes to permit:

The changes incorporated in this revision (Application 24260) have been added to Section X – Revision History

XI. Glossary

Changes to permit:

The glossary was not updated.

XII. Appendix A - State Implementation Plan

Changes to permit:

This section has been deleted. The address for EPA's website is now found in Sections III and IV.

D. Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility.

E. Compliance Status:

An inter-office memorandum from the Director of Compliance and Enforcement, to the Director of Permit Services, presents a review of the compliance record of Site #: A901. The Compliance and Enforcement Division staff has reviewed the records for Valero Benicia Asphalt Plant for the period between December 20, 2010 through November 20, 2012. This review was initiated as part of the District evaluation of an application by Valero Benicia Asphalt Plant for a Title V permit. The BAAQMD compliance report is provided in Appendix A below.

F. Differences between the Application and the Proposed Permit:

There are no differences between the application(s) and the proposed Rev 3 Title V permit.

APPENDIX A
BAAQMD COMPLIANCE REPORT

COMPLIANCE & ENFORCEMENT DIVISION

Inter-Office Memorandum

December 17, 2012

TO: JIM KARAS - DIRECTOR OF ENGINEERING
FROM: WAYNE KINO - DIRECTOR OF ENFORCEMENT
SUBJECT: REVIEW OF COMPLIANCE RECORD OF:

Wayne Kino 11/17/13
Jim Karas 11/17/13

VALERO BENICIA ASPHALT PLANT - SITE #A0901

Background

This review was initiated as part of the District evaluation of an application by Valero Benicia Asphalt Plant (VBAP) for a Title V Permit Renewal. It is standard practice of the Compliance and Enforcement Division to undertake a compliance record review in advance of a renewal of a Title V Permit to Operate. The purpose of this review is to assure that any non-compliance problems identified during the prior two-year permit term have been adequately addressed by returning the facility to compliance, or, if non-compliance persists, that a schedule of compliance is properly incorporated into the Title V permit compliance schedule. In addition, the review checks for patterns of recurring violation that may be addressed by additional permit terms. Finally, the review is intended to recommend, if necessary, any additional permit conditions and limitations to improve compliance.

Compliance Review

Staff reviewed VBAP Annual Compliance Certifications for December 20, 2010 to November 20, 2012 and found no ongoing non-compliance.

The District has conducted a compliance review of 3 Notices of Violation (NOVs) issued to VBAP from December 20, 2010 to November 20, 2012. The three violations were administrative. It is important to note that all of the violations associated with the NOVs were in compliance at the time of this review. Furthermore, the District's analysis of the NOVs for the 1.8-year period indicated that there no ongoing violations that would currently require a compliance schedule.

The results of the District's compliance review are shown in Table I. As stated above, the 3 violations associated with the 3 NOVs were in compliance at the time of this review. In 100% of the violations, compliance was achieved within 1 day of occurrence.

REVIEW OF COMPLIANCE RECORD OF:
VALERO BENICIA ASPHALT PLANT – SITE #A0901
December 17, 2012

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In some cases, permit condition modifications have been made to address permit violations during the review period. There were several sources that had multiple violations. The violations did not indicate recurrent patterns of violation because investigations into the cause of the violations revealed unrelated causes.

Of the 3 NOVs issued, all of the violations resulted from the facility self-reporting, pursuant to District Regulations and Title-V requirements. Based on this review and analysis of all the violations for the 1.8-year period, the District has concluded that no schedule of compliance or change in permit terms is necessary beyond what is already contained in the VBAP Title V permit, as the record showed that the violations returned to compliance, were intermittent or did not evidence on-going non-compliance, there are no pattern of recurring violation, and the facility was in compliance at the time of this review.

The violation details associated with the 3 Notices of Violation are summarized below and detailed in Table 1 attached.

District Staff has conducted a compliance review of Notice to Comply (NTC's) issued to Valero from December 20, 2010 through November 20, 2012. No NTCs were issued to VBAP during the review period. The District may use the NTC to achieve compliance by using enforcement action appropriate to the severity of the violation. In most cases, these violations involve procedural, administrative, or recordkeeping omissions that did not conceal a violation or were de minimis emissions. During this reporting period none of the NTC's resulted in the issuance of a Notice of Violation for failing to correct a minor NTC violation.

Staff also reviewed additional District compliance records for VBAP for December 20, 2010 to November 20, 2012. During this period VBAP activities known to the District include:

The District received zero (0) air pollution complaints alleging VBAP as the source.

The District received zero (0) notifications for Reportable Compliance Activities (RCA)¹:

The District processed zero (0) dockets for variances and permit appeals, before the District's Hearing Board. There are currently four variances related to revisions of Title-V Permit pending final resolution.

The District did not enter into any enforcement agreements or any abatement orders with VBAP.

¹ Reportable Compliance Activity (RCA), also known as "Episode" reporting, is the reporting of compliance activities involving a facility as outlined in District Regulations and State Law. Reporting covers breakdown requests, indicated monitor excesses, pressure relief device releases, inoperative monitor reports and flare monitoring.

REVIEW OF COMPLIANCE RECORD OF:
VALERO BENICIA ASPHALT PLANT – SITE #A0901
December 17, 2012

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Conclusion

The Compliance and Enforcement Division has made a determination that for the review period VBAP was in intermittent compliance. There is no evidence of on-going non-compliance that would warrant consideration of a Title V permit compliance schedule or additional permit terms. The Division does not have any recommendations for any additional permit conditions and limitations and to improve compliance beyond what is already contained in the Title V Permit under consideration.

WK, RL, RP, EJJ

APPENDIX B
Permit Evaluations
For

- 22609 – Condition 21233 Source Test Submittal Dates
- 22724 – Removal of S-19 and S-24 from Condition 21233, Condition 19329, and BAAQMD Reg 9-10 Applicability
- 23459 – S-12/TK-4606 Exemption Status
- 24278 – Decommissioning Wastewater Treatment Sources and Permitting Untreated Wastewater Tanks S12, S26, S28, and S67

**EVALUATION REPORT
Valero Benicia Asphalt Plant
Plant Number 13193
Application Number 22609**

Background

Valero Refining Company (Valero) is requesting to change the permit condition for the following sources at its Benicia Asphalt Plant:

- S-20 Steam Boiler, 14.7 MMBtu/hr**
- S-21 Steam Boiler H-2B, 14.7 MMBtu/hr**

Both boilers are subject to Permit Condition Number 21233, which is for Regulation 9-10 refinery-wide compliance. Parts 6A and 7 of the condition require the facility to submit source test results within 45 days of the test, and allow an extension of 15 days with APCO approval upon request. In this application, Valero requests for the 15-day submittal extension of the source test results. The District is granting this request since our planning division is currently proposing the 45 days allowance and the 15-day extension with request on the Manual of Procedure as part of updating Regulation 9, Rule 10 for NOx and CO from Boilers, Steam Generators and Process Heaters in Petroleum Refineries. Therefore, Parts 6A and Part 7 will be modified to allow a total of 60 days to submit the source test results.

In addition, Valero has submitted another application (Application 22602) to make the same changes under its Benicia Refinery (Plant 12626).

Valero and WSPA have repeatedly requested this change prior to the Title V permit renewal. Valero stated that because the source test requirements affect all refineries in the Bay Area and with limited number of reliable source testing consultants in the Bay Area, it takes longer for its consultants to provide source test results and therefore, causing the delays of the result submittals to the District.

Emission Calculations

There will be no increase in emissions as a result of this application.

Plant Cumulative Increase

There will be no increase in emissions as a result of this application.

Toxics Risk Screening Analysis

A toxics risk analysis is not required for this application since the emissions are not expected to increase as a result of this application per Regulation 2, Rule 5-New Source Review of Toxic Air Contaminants.

Statement of Compliance

S-20 and S-21 are expected to continue to comply with all applicable requirements specified in the most recent facility Title V permit.

This application will not trigger BACT, offsets, or PSD since there will be no increase in emissions as a result of this application per Regulation 2, Rule 2.

This application is not subject to CEQA since the project is a ministerial action conducted using the fixed standards and objective measurements outlined in the Permit Handbook Chapter 2.1.

A toxics risk analysis is not required for this application as stated above.

Permit Conditions

Permit Condition 21233, Parts 6A and 7 will be modified as shown in the underline/strikeout format below.

Permit Condition 21233

Valero Refining Company – California
3400 E. Second Street
Benicia, Ca 94510
Application 11307 (B2626)
Application 11356 (A0901, 13193)
S-20 (B2626) Modified by Application 12701
S-19 (A0901) Modified by Application 13011 and 15805
S-7 (B2626) Modified by Application 15961
S-19 (A0901) Modified by Application 22724
Application 22602 (B2626)
Application 22609 (A0901)
Plant B2626 and A0901
Regulation 9-10 Refinery-Wide Compliance

*1. The following sources are subject to the refinery-wide NOx emission rate and CO concentration limits in Regulation 9-10: (Basis: Regulation 9-10-301 & 305)

Facility No. B2626, Valero Refining Company		
<u>S#</u>	<u>Description</u>	<u>NOx CEM</u>
7	F-103 Jet Fuel HF, 53 MMBtu/hr	No
20	F-104 Naphtha HF, 62 MMBtu/hr	No
21	F-301 Hydrogen, 614 MMBtu/hr	Yes
22	F-351 Hydrogen, 614 MMBtu/hr	Yes
23	F-401 Gas Oil HC, 200 MMBtu/hr	Yes
24	F-601 Cat Feed HF, 33 MMBtu/hr	No
25	F-701 Cat Feed, 230 MMBtu/hr	Yes

26	F-801 HCN HF, 33 MMBtu/hr	No
30	F-2901 PFR Preheat, 463 MMBtu/hr total	Yes
31	F-2902 PFR Preheat, 463 MMBtu/hr total	Yes
32	F-2903 PFR Preheat, 463 MMBtu/hr total	Yes
33	F-2904 PFR Preheat, 463 MMBtu/hr total	Yes
34	F-2905 PFR Regen Gas, 74 MMBtu/hr	No
35	F-2906 PFR React Gas, 14 MMBtu/hr	No
40	SG-2301 Steam Gen, 218 MMBtu/hr	Yes
41	SG-2302 Steam Gen, 218 MMBtu/hr	Yes
173	F-902 Coker Steam Superheat, 20 MMBtu/hr	No
220	F-4460 MRU Hot Oil, 351 MMBtu/hr	Yes

Facility No. A0901 (13193), Valero Benicia Asphalt Plant

<u>S#</u>	<u>Description</u>	<u>NOx</u> <u>CEM</u>
20	Steam Boiler, 14.7 MMBtu/hr	No
21	Steam Boiler H-2B, 14.7 MMBtu/hr	No

A. Compliance with the daily refinery wide average NOx emission limit, 0.033 lb NOx/MMBtu fired duty is achieved through the use of an approved Alternate Compliance Plan using NOx IERCs in accordance with the provisions in Regulation 2-9-303.

B. The owner/operator of each source listed in Part 1 above shall determine compliance with Regulation 9-10 as follows:

- 1) Calculate NOx emissions from each furnace using measured fuel gas rates, and either:
 - a. CEM data or
 - b. NOx emission factors from Part 5A
- 2) The daily refinery wide average emission rate shall be determined by dividing the combined total emissions from sources listed in Part 1 above by the combined total heat input.
- 3) Sufficient NOx IERC's will be provided in accordance with the provisions of Regulation 2-9-303 to ensure compliance with the refinery wide average NOx emission limit of 0.033 lb NOx/MMBtu fired duty.

*2. The Owner/Operator of each source with a maximum firing rate greater than 25 MMBtu/hr listed in Part 1 shall properly install, properly maintain, and properly operate an O2 monitor and recorder. (Basis: Regulation 9-10-502)

*3. The Owner/Operator shall operate each source listed in Part 1, which does not have a NOx CEM, within specified ranges of operating conditions (firing rate and oxygen content) as detailed in Part 5. The ranges shall be established by utilizing data from District-approved source tests. (Basis: Regulation 9-10-502)

A. The NO_x Box for units with a maximum firing rate of 25 MMBtu/hr or more shall be established using the procedures in Part 4.

B. The NO_x Box for units with a maximum firing rate less than 25MMBtu/hr shall be established as follows: High-fire shall be the maximum rated capacity. Low-fire shall be 20% of the maximum rated capacity (except for S-35, for which the low-fire shall be 8% of the maximum rated capacity). There shall be no maximum or minimum O₂.

*4. The Owner/Operator shall establish the initial NO_x box for each source subject to Part 3 by December 1, 2005. The NO_x Box may consist of two operating ranges in order to allow for operating flexibility and to encourage emission minimization during standard operation. (Basis: Regulation 9-10-502) The procedure for establishing the NO_x box is

A. Conduct District approved source tests for NO_x and CO, while varying the oxygen concentration and firing rate over the desired operating ranges for the furnace;

B. Determine the minimum and maximum oxygen concentrations and firing rates for the desired operating ranges (Note that the minimum O₂ at low-fire may be different than the minimum O₂ at high-fire. The same is true for the maximum O₂). The Owner/Operator shall also verify the accuracy of the O₂ monitor on an annual basis.

C. Determine the highest NO_x emission factor (lb/MMBtu) over the preferred operating ranges while maintaining CO concentration below 200 ppm; the Owner/Operator may choose to use a higher NO_x emission factor than tested.

D. Plot the points representing the desired operating ranges on a graph. The resulting polygon(s) are the NO_x Box, which represents the allowable operating range(s) for the furnace under which the NO_x emission factor from part 5a is deemed to be valid.

1). The NO_x Box can represent/utilize either one or two emission factors.

2) The NO_x Box for each emission factor can be represented either as a 4- or 5-sided polygon The NO_x box is the area within the 4- or 5-sided polygon formed by connecting the source test parameters that lie about the perimeter of successful approved source tests. The source test parameters forming the corners of the NO_x box are listed in Part 5.

E. Upon establishment of each NO_x Box, the Owner/Operator shall prepare a graphical representation of the box. The representation shall be made available on-site for APCO review upon request. The box shall also be submitted to the BAAQMD with permit amendments.

*5. Except as provided in part 5B & C, the Owner/Operator shall operate each source within the NO_x Box ranges listed below at all times of operation. This part shall not apply to any source that has a properly operated and properly installed NO_x CEM. (Basis: Regulation 9-10-502)

A. NO_x Box ranges. The limits listed below are based on a calendar day averaging period for both firing rate and O₂%.

Source No.	Emission Factor (lb/MMBtu)	Min O ₂ at Low Firing (O ₂ % , MMBtu/hr)	Max O ₂ at Low Firing (O ₂ % , MMBtu/hr)	Min O ₂ at High Firing (O ₂ % , MMBtu/hr)	Mid O ₂ at Mid/High Firing (polygon) (O ₂ % , MMBtu/hr)	Max O ₂ at High Firing (O ₂ % , MMBtu/hr)
Plant 12626						
7	0.35	3, 16	17, 10	6, 30	N/A	11, 38
20	0.28	2, 19	12, 23	2, 37	2, 50	5, 47
24	0.757	11,7	14, 8	3, 27	6, 12	7, 29
26	0.194	13, 9	17, 7	6, 21	8, 17	12, 24
34	0.250	17, 2	20, 2	4, 26	N/A	7, 38
35	0.200	(Note 1), 1	(Note 1), 1	(Note 1), 14	N/A	(Note 1), 14
173	0.050	(Note 1), 4	(Note 1), 4	(Note 1), 20	N/A	(Note 1), 20
Plant A0901 (13193)						
S-20	0.055	(Note 1), 2.9	(Note 1), 2.9	(Note 1), 14.7	N/A	(Note 1), 14.7
S-21	0.055	(Note 1), 2.9	(Note 1), 2.9	(Note 1), 14.7	N/A	(Note 1), 14.7

Note 1: Per Part 3B, Oxygen limits do not apply to sources with maximum firing rates less than 25 MMBtu/hr.

B. Part 5A does not apply to low firing rate conditions (i.e., firing rate less than or equal to 20% of the unit's rated capacity), during startup or shutdown periods, or periods of curtailed operation (ex. during heater idling, refractory dry out, etc.) lasting 5 days or less. During these conditions the means for determining compliance with the refinery wide limit shall be accomplished using the method described in 9-10-301.2 (i.e. units out of service & 30-day averaging data).

C. Part 5A does not apply during any source test required or permitted by this condition. See Part 7 for the consequences of source test results that exceed the emission factors in Part 5.

***6. NO_x Box Deviations. (Basis: Regulation 9-10-502)**

A. The Owner/Operator may deviate from the NO_x Box (either the firing rate or oxygen limit) provided that the Owner/Operator conducts a District approved source test that reasonably represents the past operation outside of the established ranges. The source test representing the new conditions shall be conducted no later than the next regularly scheduled source test period, or within eight months, whichever is sooner. The source test results will establish whether the

source was operating outside of the emission factor utilized for the source. The source test results shall be submitted to the District Source Test Manager within 60 days of the test.

1) Source Test = < Emission Factor

If the results of this source test do not exceed the higher NO_x emission factor in Part 5, or the CO limit in Part 9, the unit will not be considered to be in violation during this period for operating out of the "box."

The facility may submit an accelerated permit program permit application to request an administrative change of the permit condition to adjust the NO_x Box operating range(s), based on the new test data.

2) Source Test > Emission Factor

If the results of this source test exceed the permitted emission concentrations or emission rates then the actions described below must be followed:

- Utilizing the measured emission concentration or rate, the Owner/Operator shall perform an assessment of compliance with Regulation 9-10-301 as follows:

1. "Out of Box" Condition - for the day(s) in which the "out of box" condition(s) occurred, the Owner/Operator shall ensure sufficient NO_x IERCs are provided to ensure the facility is in compliance with the refinery wide limit. The Owner/Operator will be in violation of Regulation 9-10-301 for each day there are insufficient NO_x IERCs provided to bring the refinery wide average into compliance with Regulation 9-10-301.

2. Within the Box - for the case when the source is operated within the "box" but source test results indicate a higher emission factor, the Owner/Operator shall apply the higher emission factor retroactively to the date of the previous source test and provide sufficient NO_x IERCs for that time period to ensure the facility is in compliance with the refinery wide limit specified in Regulation 9-10-301. The Owner/Operator will be in violation of Regulation 9-10-301 for each day there are insufficient NO_x IERCs provided to bring the refinery wide average into compliance with Regulation 9-10-301.

- The facility may submit a permit application to request an alteration of the permit condition to change the NO_x emission factor and/or adjust the operating range, based on the new test data.

B. Reporting. The Owner/Operator must report conditions outside of box within 96 hours of occurrence.

*7. For each source subject to Part 3, the Owner/Operator shall conduct source tests on the schedule listed below. The source tests are performed in order to measure NO_x, CO, and O₂ at the as-found firing rate, or at conditions reasonably specified by the APCO. The source test results shall be submitted to the District Source Test Manager within 60 days of the test. (Basis: Regulation 9-10-502)

A. Source Testing Schedule

1) Heater < 25 MMBtu/hr

Annual source test. The time interval between source tests shall not exceed 16 months. The source test results shall be submitted to the District Source Test Manager within 60 days of the test.

2) Heaters \geq 25 MMBtu/hr

Two source tests per consecutive 12 month period. The time interval between source tests shall not exceed 8 months and not be less than 5 months apart. The source test results shall be submitted to the District Source Test Manager within 60 days of the test.

3) If a source has been shutdown longer than the period allowed between source testing periods (e. g. <25 MMBtu/hr - > 16 mos or > 25 MMBtu/hr - > 8 mos), the owner/operator shall conduct the required source test within 30 days of start up of the source.

B. Source Test Results > NO_x Box Emission Factor

If the results of any source test under this part exceed the permitted concentrations or emission rates the Owner/Operator shall follow the requirements of Part 6A2. If the Owner/Operator chooses not to submit an application to revise the emission factor, the Owner/Operator shall conduct another Part 7 source test, at the same conditions, within 90 days of the initial test.

*8. For each source listed in Part 1 with a NO_x CEM installed that does not have a CO CEM installed pursuant to Part 9, the Owner/Operator shall conduct semi-annual District approved CO source tests at as-found conditions. The time interval between source tests shall not exceed 8 months. District conducted CO emission tests associated with District-conducted NO_x CEM field accuracy tests may be substituted for the CO semi-annual source tests. (Basis: Regulation 9-10-502)

*9. For any source listed in Part 1 with a maximum firing limit greater than 25 MMBtu/hr for which any two source test results over any consecutive five year period are greater than or equal to 200 ppmv CO at 3% O₂, the Owner/Operator shall properly install, properly maintain, and properly operate a CEM to continuously measure CO and O₂. The Owner/Operator shall install the CEM within the time period allowed in the District's Manual of Procedures. (Basis: Regulation 9-10-502, 1-522)

*10. In addition to records required by Regulation 9-10-504, the Owner/Operator must maintain records of all source tests conducted to demonstrate compliance with Parts 1 and 5. These records shall be kept on site for at least five years from the date of entry in a District approved log and be made available to District staff upon request. (Basis: Regulation 9-10-504)

End of Condition

Recommendation

Grand the change of permit condition to Valero for the following sources at Plant 13193:

S-20 Steam Boiler, 14.7 MMBtu/hr

S-21 Steam Boiler H-2B, 14.7 MMBtu/hr

by
Xuna Cai
Air Quality Engineer

date

And by
Thu Bui
Senior Air Quality Engineer

date

**EVALUATION REPORT
Valero Benicia Asphalt Plant
Plant Number 13193
Application Number 22724**

Background

Valero Refining Company (Valero) is requesting to change the permit conditions for the following source at its Benicia Asphalt Plant:

S-19 Vacuum Heater, F-4601, 40 MMBtu/hr

S-24 Hot Oil Heater, H-4603, 9 MMBtu/hr

Currently, both heaters are subject to Permit Condition Numbers 19329 and 21233, which are established based on the District's Regulation 9, Rule 10. The facility requests to delete the applicability of the rule to S-19 and S-24 and to remove the links between the sources and the NOx box conditions accordingly.

Per Regulation 9-10-220, "unit" is defined as "any petroleum refinery boiler, steam generator, or process heater, as defined in Sections 9-10-202 and 214 of this Section, having an Authority to Construct or a Permit to Operate prior to January 5, 1994." The Authority to Construct and Permit to Operate for the modification of S-19 was issued in 2003 through Application 7123. The Authority to Construct and Permit to Operate for the modification of S-24 was issued in 1997 through Application 16443. Since both sources have the permit modifications issued after 1994, they are not affected units according to Regulation 9-10 and therefore not subject to any provisions of Regulation 9-10-301, the NOx box requirements.

Emission Calculations

There will be no increase in emissions as a result of this application.

Plant Cumulative Increase

There will be no increase in emissions as a result of this application.

Toxics Risk Screening Analysis

A toxics risk analysis is not required for this application since the emissions are not expected to increase as a result of this application per Regulation 2, Rule 5-New Source Review of Toxic Air Contaminants.

Statement of Compliance

S-19 and S-24 will continue to comply with all applicable requirements specified in the most recent facility Title V permit except the requirements associated with Regulation 9-10.

All reference to Regulation 9-10, Permit Condition 19329 and 21233 will be removed for S-19 and S-24 in the next revision of the Title V Permit for Plant 13193.

This application will not trigger BACT, offsets, or PSD since there will be no increase in emissions as a result of this application per Regulation 2, Rule 2.

This application is not subject to CEQA since the project is a ministerial action conducted using the fixed standards and objective measurements outlined in the Permit Handbook Chapter 2.1.

A toxics risk analysis is not required for this application as stated above.

Permit Conditions

S-19 and S-24 will no longer subject to Permit Condition 19329 and 21233. Reference to the sources in these permit conditions will be removed as shown in the underline/strikeout format below.

Permit Condition 1240 Section I Part 16a, a source test requirement, was removed because S-19 was linked to Permit Condition 21233 as an error and Part 16a was deemed redundant to the part 7 of Permit Condition 21233. Since S-19 will no longer subject to Permit Condition 21233, Part 16a as shown below will be added back to Permit Condition 1240 for S-19:

Permit Condition# 19329

For S20, S21, Steam Boilers

*1. The affected sources making up this Alternative Compliance Plan shall not exceed the following maximum hourly firing rates: (Basis: Regulation 2-9-303.4.1, Cumulative Increase)

Valero Refining Company (Plant # 12626)
S-7 Pipestill Hydrofiner Furnace: F-103, 53 MMBtu/Hr
S-20 Naphtha Hydrofiner Furnace: F-104, 62 MMBtu/Hr
S-21 Hydrogen Reforming Furnace: F-301, 614 MMBtu/Hr
S-22 Hydrogen Reforming Furnace: F-351, 614 MMBtu/Hr
S-23 HCU Recycle Gas Furnace: F-401, 200 MMBtu/Hr
S-24 Cat Feed Hydrofiner Treat Gas Furnace: F-601, 33 MMBtu/Hr
S-25 Fluid Catalytic Cracker Unit: F-701, 230 MMBtu/Hr
S-26 Cat Naphtha Hydrofiner Furnace: F-801, 33 MMBtu/Hr
S-30- S-S33 Power former Furnace: F-2901 thru 2904, 463 MMBtu/Hr
S-34 Powerformer Regenerator Furnace: F-2905, 74 MMBtu/Hr
S-35 Powerformer Reactivation Furnace: F-2906, 14 MMBtu/Hr
S-40 Utility Package Boiler: SG-2301, 218 MMBtu/Hr

S-41 Utility Package Boiler: SG-2301, 218 MMBtu/Hr
 S-173 Coker Steam Superheat Furnace: F-902, 20 MMBtu/Hr
 S-220 MRU Hot Oil Furnace: F-4460, 351 MMBtu/Hr

Valero Asphalt Plant (Plant # A0901)
 S-20 Steam Boiler: H-2A, 14.7 MMBtu/Hr
 S-21 Steam Boiler: H-2B, 14.7 MMBtu/Hr

*2. The applicant shall submit quarterly reports and an annual report (July 1 to June 30) of their ACP activity no later than 30 days after the close of the specified period. (Basis: Regulation 2-9-303.3)

*3. The applicant shall submit all necessary documents to the District to review and approve (or deny) the Alternative Compliance Plan. These documents in support of continuing the ACP shall be submitted no later than 30 days after the close of the calendar year. (Basis: Regulation 2-9-303.3)

*4. The applicant shall maintain all records required in parts #2 and #3 for a period of at least 5 years from the date of such record. These records shall be made available to District staff upon request. (Basis: Regulation 2-9-303.3)

End of Condition

Permit Condition 21233

Valero Refining Company – California
 3400 E. Second Street
 Benicia, Ca 94510
 Application 11307 (B2626)
 Application 11356 (A0901, 13193)
 S-20 (B2626) Modified by Application 12701
 S-19 (A0901) Modified by Application 13011 and 15805
 S-7 (B2626) Modified by Application 15961
 S-19 (A0901 Modified by Application 22724
 Plant B2626 and A0901
 Regulation 9-10 Refinery-Wide Compliance

*1. The following sources are subject to the refinery-wide NOx emission rate and CO concentration limits in Regulation 9-10: (Basis: Regulation 9-10-301 & 305)

Facility No. B2626, Valero Refining Company		
<u>S#</u>	<u>Description</u>	<u>NOx CEM</u>
7	F-103 Jet Fuel HF, 53 MMBtu/hr	No
20	F-104 Naphtha HF, 62 MMBtu/hr	No
21	F-301 Hydrogen, 614 MMBtu/hr	Yes
22	F-351 Hydrogen, 614 MMBtu/hr	Yes
23	F-401 Gas Oil HC, 200 MMBtu/hr	Yes

24	F-601 Cat Feed HF, 33 MMBtu/hr	No
25	F-701 Cat Feed, 230 MMBtu/hr	Yes
26	F-801 HCN HF, 33 MMBtu/hr	No
30	F-2901 PFR Preheat, 463 MMBtu/hr total	Yes
31	F-2902 PFR Preheat, 463 MMBtu/hr total	Yes
32	F-2903 PFR Preheat, 463 MMBtu/hr total	Yes
33	F-2904 PFR Preheat, 463 MMBtu/hr total	Yes
34	F-2905 PFR Regen Gas, 74 MMBtu/hr	No
35	F-2906 PFR React Gas, 14 MMBtu/hr	No
40	SG-2301 Steam Gen, 218 MMBtu/hr	Yes
41	SG-2302 Steam Gen, 218 MMBtu/hr	Yes
173	F-902 Coker Steam Superheat, 20 MMBtu/hr	No
220	F-4460 MRU Hot Oil, 351 MMBtu/hr	Yes

Facility No. A0901 (13193), Valero Benicia Asphalt Plant

<u>S#</u>	<u>Description</u>	<u>NOx</u> <u>CEM</u>
20	Steam Boiler, 14.7 MMBtu/hr	No
21	Steam Boiler H-2B, 14.7 MMBtu/hr	No

A. Compliance with the daily refinery wide average NOx emission limit, 0.033 lb NOx/MMBtu fired duty is achieved through the use of an approved Alternate Compliance Plan using NOx IERCs in accordance with the provisions in Regulation 2-9-303.

B. The owner/operator of each source listed in Part 1 above shall determine compliance with Regulation 9-10 as follows:

- 4) Calculate NOx emissions from each furnace using measured fuel gas rates, and either:
 - c. CEM data or
 - d. NOx emission factors from Part 5A
- 5) The daily refinery wide average emission rate shall be determined by dividing the combined total emissions from sources listed in Part 1 above by the combined total heat input.
- 6) Sufficient NOx IERC's will be provided in accordance with the provisions of Regulation 2-9-303 to ensure compliance with the refinery wide average NOx emission limit of 0.033 lb NOx/MMBtu fired duty.

*2. The Owner/Operator of each source with a maximum firing rate greater than 25 MMBtu/hr listed in Part 1 shall properly install, properly maintain, and properly operate an O2 monitor and recorder. (Basis: Regulation 9-10-502)

*3. The Owner/Operator shall operate each source listed in Part 1, which does not have a NO_x CEM, within specified ranges of operating conditions (firing rate and oxygen content) as detailed in Part 5. The ranges shall be established by utilizing data from District-approved source tests. (Basis: Regulation 9-10-502)

A. The NO_x Box for units with a maximum firing rate of 25 MMBtu/hr or more shall be established using the procedures in Part 4.

B. The NO_x Box for units with a maximum firing rate less than 25MMBtu/hr shall be established as follows: High-fire shall be the maximum rated capacity. Low-fire shall be 20% of the maximum rated capacity (except for S-35, for which the low-fire shall be 8% of the maximum rated capacity). There shall be no maximum or minimum O₂.

*4. The Owner/Operator shall establish the initial NO_x box for each source subject to Part 3 by December 1, 2005. The NO_x Box may consist of two operating ranges in order to allow for operating flexibility and to encourage emission minimization during standard operation. (Basis: Regulation 9-10-502) The procedure for establishing the NO_x box is

A. Conduct District approved source tests for NO_x and CO, while varying the oxygen concentration and firing rate over the desired operating ranges for the furnace;

B. Determine the minimum and maximum oxygen concentrations and firing rates for the desired operating ranges (Note that the minimum O₂ at low-fire may be different than the minimum O₂ at high-fire. The same is true for the maximum O₂). The Owner/Operator shall also verify the accuracy of the O₂ monitor on an annual basis.

C. Determine the highest NO_x emission factor (lb/MMBtu) over the preferred operating ranges while maintaining CO concentration below 200 ppm; the Owner/Operator may choose to use a higher NO_x emission factor than tested.

D. Plot the points representing the desired operating ranges on a graph. The resulting polygon(s) are the NO_x Box, which represents the allowable operating range(s) for the furnace under which the NO_x emission factor from part 5a is deemed to be valid.

1). The NO_x Box can represent/utilize either one or two emission factors.

2) The NO_x Box for each emission factor can be represented either as a 4- or 5-sided polygon The NO_x box is the area within the 4- or 5-sided polygon formed by connecting the source test parameters that lie about the perimeter of successful approved source tests. The source test parameters forming the corners of the NO_x box are listed in Part 5.

E. Upon establishment of each NO_x Box, the Owner/Operator shall prepare a graphical representation of the box. The representation shall be made available on-site for APCO review upon request. The box shall also be submitted to the BAAQMD with permit amendments.

*5. Except as provided in part 5B & C, the Owner/Operator shall operate each source within the NOx Box ranges listed below at all times of operation. This part shall not apply to any source that has a properly operated and properly installed NOx CEM. (Basis: Regulation 9-10-502)

A. NOx Box ranges. The limits listed below are based on a calendar day averaging period for both firing rate and O2%.

Source No.	Emission Factor (lb/MMBtu)	Min O ₂ at Low Firing (O ₂ %, MMBtu/hr)	Max O ₂ at Low Firing (O ₂ %, MMBtu/hr)	Min O ₂ at High Firing (O ₂ %, MMBtu/hr)	Mid O ₂ at Mid/High Firing (polygon) (O ₂ %, MMBtu/hr)	Max O ₂ at High Firing (O ₂ %, MMBtu/hr)
Plant 12626						
7	0.35	3, 16	17, 10	6, 30	N/A	11, 38
20	0.28	2, 19	12, 23	2, 37	2, 50	5, 47
24	0.757	11, 7	14, 8	3, 27	6, 12	7, 29
26	0.194	13, 9	17, 7	6, 21	8, 17	12, 24
34	0.250	17, 2	20, 2	4, 26	N/A	7, 38
35	0.200	(Note 1), 1	(Note 1), 1	(Note 1), 14	N/A	(Note 1), 14
173	0.050	(Note 1), 4	(Note 1), 4	(Note 1), 20	N/A	(Note 1), 20
Plant A0901 (13193)						
S-20	0.055	(Note 1), 2.9	(Note 1), 2.9	(Note 1), 14.7	N/A	(Note 1), 14.7
S-21	0.055	(Note 1), 2.9	(Note 1), 2.9	(Note 1), 14.7	N/A	(Note 1), 14.7

Note 1: Per Part 3B, Oxygen limits do not apply to sources with maximum firing rates less than 25 MMBtu/hr.

D. Part 5A does not apply to low firing rate conditions (i.e., firing rate less than or equal to 20% of the unit's rated capacity), during startup or shutdown periods, or periods of curtailed operation (ex. during heater idling, refractory dry out, etc.) lasting 5 days or less. During these conditions the means for determining compliance with the refinery wide limit shall be accomplished using the method described in 9-10-301.2 (i.e. units out of service & 30-day averaging data).

E. Part 5A does not apply during any source test required or permitted by this condition. See Part 7 for the consequences of source test results that exceed the emission factors in Part 5.

(The rest of the Permit Condition 21233 is not shown here since it is not affected by this application.)

Permit Condition #1240

For All Sources

Permit Conditions II. 1, 11, 12, and 13; and IV. 1, 2, and 3 were modified or added as part of App. No. 14513.

Pursuant to permit application #17515, permit condition I.8 was modified, conditions I.9 and I.10 were added, and what had been conditions I.9 and I.10 were renumbered as I.11 and I.12, respectively.

Pursuant to permit application #17687 the total asphalt plant wide heat input has been corrected from 42 to 66.17 MMBTU/HR, S13 and S59 were permitted, and S12 was exempted from permitting.

Pursuant to permit application #1261 (May, 2000) the total asphalt plant-wide heat input has been corrected from 76.06 to 86.6 MMBTU/HR, and the allowable heat input for S19 was increased from 22.4 to 33 MMBtu/hr.

Pursuant to permit application #1819 (October, 2000), the crude oil throughput to the crude unit, S18, was raised to 5,292,000 barrels/yr.

Pursuant to permit application #7123 (March, 2003) the total asphalt plant-wide heat input has been corrected from 86.6 to 93.6 MMBTU/HR, and the allowable heat input for S19 was increased from 33 to 40 MMBtu/hr.

Pursuant to permit application #19384 (February, 2009), All sources that are abated by A31 or S24 can now also be contained in the closed vent system when the blower is not operating until the pressure of the system reaches 0.5 ounces (0.87 inches of water column). The P/V valves on all sources abated by A31 or S24 shall not exceed 500 ppmv of total organic compounds while the blower is not operating.

Pursuant to permit application # 19193 (February, 2009), process offgas from S-18 Crude Unit routed from the S19 Vacuum Heater to the refinery fuel gas recovery system, S9, Facility B2626.

Pursuant to permit application #21641 (March, 2010), A17 (H46100) is separated from A4 (H4606). A17 will continue to abate S17 Asphalt Truck Loading Rack. A4 will be shut down and serve as an emission stack downstream of A17.

Pursuant to permit application #22724 (November, 2010), part I.16a, a source test requirement, will be added back for S19 Vacuum Heater.

I. ASPHALT PLANT CONDITIONS

S18 Crude Unit, amended by Application 19193

1. The total throughput of feed oil to S18 Crude Unit shall not exceed 5,292,000 barrels in any consecutive 12-month period.

(cumulative increase, toxics, offsets)

2. The total throughput of feed oil to S18 Crude Unit shall not exceed 18,000 barrels in any calendar day. (cumulative increase, toxics)

3. The owner/operator of S-18 Crude Unit shall vent its emissions to the refinery fuel gas recovery system S-9 at all times. (cumulative increase, toxics)
4. Each day, the permittee shall record, by material name, in a District approved log, the total volume of each and every liquid material throughput to S18 during the preceding calendar day, in gallon units or barrel units. At the conclusion of each month, the permittee shall total the daily log records and record the sum as the monthly throughput of all liquid materials to S18, in a District approved log. Additionally, the permittee shall record in the District approved log the throughput of all liquid materials to S18 for each rolling 12 consecutive month period. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)
5. The maximum heat input to all asphalt plant combustion units except S68, Emergency Diesel-Powered Firewater Pump, shall not exceed a total of 93.6 MM BTU/Hr. Compliance will be determined from the daily reading of the PG&E natural gas flow meter. These meter readings shall be logged and initialed by the operations coordinator on a daily basis. These readings and the monthly PG&E bills shall be made available to the District upon request. (cumulative increase)
- 5a. The owner/operator of S19 shall only use natural gas and the maximum heat input to S19, Vacuum Heater, shall not exceed 40 MMbtu/hr. (cumulative increase)
- 5b. CO emissions in the exhaust of S19, Vacuum Heater, shall not exceed 50 ppmdv at 3% oxygen over any one-hour period. (cumulative increase, BACT)
- 5c. CO emissions in the exhaust of S19, Vacuum Heater, shall not exceed 1.47 lb/hr over any one-hour period. (cumulative increase, BACT)
6. Fuel oil and/or diesel fuel shall not be combusted in the asphalt plant's heaters or boilers or other combustion sources except for S68, Emergency Diesel-powered Firewater Pump and S71, Emergency Diesel-powered Air Compressor. (cumulative increase) (modified 8/12/99, 4/24/02, 4/19/06)
7. Mechanical seals will be installed on all new rotary pumps and compressors. Mechanical packing of best available design will be installed in new reciprocating pumps. All compressor seals will be vented to an operating firebox or the vapors will otherwise be eliminated by a method, which is satisfactory to the District. (cumulative increase)
8. Vacuum Heater (S19) shall be equipped with a John Zink LoNOx Burner. Average NOx emissions from S19 shall not exceed 25 ppm corrected to 3% oxygen on a dry basis (one hour averaging period). (cumulative increase, BACT)
9. Deleted 06/02/98.
10. Boilers S20 and S21 and heater S19 shall be equipped with individual continuous recording oxygen analyzers. (2-1-403)
11. Contingent on EPA's approval of 40 CFR 60, Subpart Ja – Standards of Performance for Petroleum Refineries, the owner/operator shall submit a permit application the District for NOx and flaring applicability and revise the Title V permit if necessary. (Regulation 2-1-403)

12. Deleted (vacuum exhaust routed from S19, Vacuum Heater to refinery fuel gas recovery system, S9, Facility B2626)

13. Deleted (vacuum exhaust routed from S19, Vacuum Heater to refinery fuel gas recovery system, S9, Facility B2626)

14. Total asphalt plant emissions shall not exceed the limits listed below:

- a. Non-Methane Hydrocarbons..... 42.705 tons/yr
 - b. Sulfur Dioxide, SO₂..... .. 28.049 tons/yr
 - c. Nitrogen Oxides, as NO₂..... 40.047 tons/yr
- (Cumulative Increase)

15. Asphalt plant wastewater and refinery wastewater shall not be used for dust control at this facility. (Cumulative Increase)

16a. The permit holder shall perform a source test at S19, Vacuum Heater, every 6 months to determine compliance with the NO_x limit in part I.8 of this condition and the CO limits in parts I.5b and I.5c of this condition. The source test shall be performed at the highest duty possible for the prevailing process conditions. All source testing shall be done in accordance with the District's Manual of Procedures. The facility shall receive approval from the District's Source Test Manager for installation of test ports and source testing procedures. The results shall be delivered to the District no later than 45 days from the date of the source test.

(Cumulative Increase, BACT)

16b. Deleted (basis: requirement no longer applicable since exhaust from S18 Crude Unit routed from the S19, Vacuum Heater to the refinery fuel gas recovery system, S9, Facility B2626)

17. A/C source test condition, deleted.

(The rest of the Permit Condition 1240 is not shown here since it is not affected by this application.)

Recommendation

Grand the change of permit conditions to Valero for the following sources at Plant 13193:

- S-19 Vacuum Heater, F-4601, 40 MMBtu/hr**
- S-24 Hot Oil Heater, H-4603, 9 MMBtu/hr**

by
Xuna Cai
Air Quality Engineer

date

And by _____ date
Thu Bui
Senior Air Quality Engineer

**EVALUATION REPORT
VALERO BENICIA ASPHALT PLANT**

Application #23459 - Plant #13193

**3001 Park Road
Benicia, CA 94510**

I. BACKGROUND

Valero has submitted this application for a change of condition to the Permit to Operate for the following equipment:

S-12 Effluent Wastewater/Heavy Gas Oil, (TK-4606), 571,000 gallon capacity abated by A31 Thermal Oxidizer H-4607 and/or S24 Hot Oil Heater H-4603

S-12 is currently exempt from permit under Regulation 2-1-123.2 for storing effluent wastewater, which is an aqueous solution with less than 1 % by weight. In the future, Valero would like to add the storing service of heavy gas oil, which is also exempt under Regulation 2-1-123.3.2 for storing organic liquids where the initial boiling point of the organics is greater than 302°F and exceeds the actual storage temperature by at least 180°F.

This change of service is to allow S-12 to operate in heavy gas oil service in place of the current heavy gas oil tank (S-3, TK 4601C), which needs to be taken out of service temporarily. S-12 will be added into the same Condition # 1240 as of S-3.

Valero submitted Application # 23458 to modify the TV permit for this minor revision application.

II. EMISSION CALCULATIONS

This application is not expected to result in an emissions increase.

III. PLANT CUMULATIVE INCREASE SINCE 4/5/1991

There are no net changes to the plant cumulative emission, because S-12 is exempt from permit requirement.

IV. TOXIC SCREENING ANALYSIS

This application will not result in an increase in toxic air contaminant emissions from existing levels. Therefore, a toxic health risk screening analysis is not required per Regulation 2-5.

V. BEST AVAILABLE CONTROL TECHNOLOGY

BACT does not apply to an exempt source per Regulation 2-2-301.

VI. OFFSETS

This application does not result in emission increases. Therefore, emission offsets are not needed per Regulation 2-2-302.

VII. STATEMENT OF COMPLIANCE

The Effluent Wastewater/Heavy Gas Oil Tank S-12 at the asphalt plant will continue to be exempt from Regulation 2-1-123.2 for storing effluent wastewater, which is an aqueous solution with less than 1 % by weight.

The Effluent Wastewater/Heavy Gas Oil Tank S-12 is also exempt under Regulation 2-1-123.3.2 for storing organic liquids where the initial boiling point of the organics is greater than 302°F and exceeds the actual storage temperature by at least 180°F.

This application is considered to be ministerial under the District's CEQA Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors in accordance with Permit Handbook Chapter 4 for Organic Liquid Storage Tank.

This project is over 1,000 ft from the nearest public school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

Offsets, NSPS, NESHAP and PSD do not apply.

VIII. CONDITIONS

Permit condition #1240 for the Valero Benicia Asphalt Plant.

For All Sources

Permit Conditions II. 1, 11, 12, and 13; and IV. 1, 2, and 3 were modified or added as part of App. No. 14513.

Pursuant to permit application #17515, permit condition I.8 was modified, conditions I.9 and I.10 were added, and what had been conditions I.9 and I.10 were renumbered as I.11 and I.12, respectively.

Pursuant to permit application #17687 the total asphalt plant wide heat input has been corrected from 42 to 66.17 MMBTU/HR, S13 and S59 were permitted, and S12 was exempted from permitting.

Pursuant to permit application #1261 (May, 2000) the total asphalt plant-wide heat input has been corrected from 76.06 to 86.6 MMBTU/HR, and the allowable heat input for S19 was increased from 22.4 to 33 MMbtu/hr.

Pursuant to permit application #1819 (October, 2000), the crude oil throughput to the crude unit, S18, was raised to 5,292,000 barrels/yr.

Pursuant to permit application #7123 (March, 2003) the total asphalt plant-wide heat input has been corrected from 86.6 to 93.6 MMBTU/HR, and the allowable heat input for S19 was increased from 33 to 40 MMBtu/hr.

Pursuant to permit application #19384 (February, 2009), All sources that are abated by A31 or S24 can now also be contained in the closed vent system when the blower is not operating until the pressure of the system reaches 0.5 ounces (0.87 inches of water column). The P/V valves on all sources abated by A31 or S24 shall not exceed 500 ppmv of total organic compounds while the blower is not operating.

Pursuant to permit application # 19193 (February, 2009), process offgas from S-18 Crude Unit routed from the S19 Vacuum Heater to the refinery fuel gas recovery system, S9, Facility B2626.

Pursuant to permit application #21641 (March, 2010), A17 (H46100) is separated from A4 (H4606). A17 will continue to abate S17 Asphalt Truck Loading Rack. A4 will be shut down and serve as an emission stack downstream of A17.

Pursuant to permit application #22724 (November, 2010), part I.16a, a source test requirement, will be added back for S19 Vacuum Heater.

Pursuant to permit application # 23459 (August, 2011), S-12 is storing heavy gas oil with S-3 in addition to effluent wastewater service.

I. ASPHALT PLANT CONDITIONS

S18 Crude Unit, amended by Application 19193

1. The total throughput of feed oil to S18 Crude Unit shall not exceed 5,292,000 barrels in any consecutive 12-month period. (cumulative increase, toxics, offsets)
2. The total throughput of feed oil to S18 Crude Unit shall not exceed 18,000 barrels in any calendar day. (cumulative increase, toxics)
3. The owner/operator of S-18 Crude Unit shall vent its emissions to the refinery fuel gas recovery system S-9 at all times. (cumulative increase, toxics)
4. Each day, the permittee shall record, by material name, in a District approved log, the total volume of each and every liquid material throughput to S18 during the preceding calendar day, in gallon units or barrel units. At the conclusion of each month, the permittee shall total the daily log records and record the sum as the monthly throughput of all liquid materials to S18, in a District approved log. Additionally, the permittee shall record in the District approved log the throughput of all liquid materials to S18 for each rolling 12 consecutive month period. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)
5. The maximum heat input to all asphalt plant combustion units except S68, Emergency Diesel-Powered Firewater Pump, shall not exceed a total of 93.6 MM BTU/Hr. Compliance will be determined from the daily reading of the PG&E natural gas flow meter. These meter readings shall be logged and initialed by the operations coordinator on a daily basis. These readings and the monthly PG&E bills shall be made available to the District upon request. (cumulative increase)
- 5a. The owner/operator of S19 shall only use natural gas and the maximum heat input to S19, Vacuum Heater, shall not exceed 40 MMbtu/hr. (cumulative increase)
- 5b. CO emissions in the exhaust of S19, Vacuum Heater, shall not exceed 50 ppmdv at 3% oxygen over any one-hour period. (cumulative increase, BACT)
- 5c. CO emissions in the exhaust of S19, Vacuum Heater, shall not exceed 1.47 lb/hr over any one-hour period. (cumulative increase, BACT)

6. Fuel oil and/or diesel fuel shall not be combusted in the asphalt plant's heaters or boilers or other combustion sources except for S68, Emergency Diesel-powered Firewater Pump and S71, Emergency Diesel-powered Air Compressor. (cumulative increase) (modified 8/12/99, 4/24/02, 4/19/06)
7. Mechanical seals will be installed on all new rotary pumps and compressors. Mechanical packing of best available design will be installed in new reciprocating pumps. All compressor seals will be vented to an operating firebox or the vapors will otherwise be eliminated by a method, which is satisfactory to the District. (cumulative increase)
8. Vacuum Heater (S19) shall be equipped with a John Zink LoNOx Burner. Average NOx emissions from S19 shall not exceed 25 ppm corrected to 3% oxygen on a dry basis (one hour averaging period). (cumulative increase, BACT)
9. Deleted 06/02/98.
10. Boilers S20 and S21 and heater S19 shall be equipped with individual continuous recording oxygen analyzers. (2-1-403)
11. Contingent on EPA's approval of 40 CFR 60, Subpart Ja – Standards of Performance for Petroleum Refineries, the owner/operator shall submit a permit application the District for NOx and flaring applicability and revise the Title V permit if necessary. (Regulation 2-1-403)
12. Deleted (vacuum exhaust routed from S19, Vacuum Heater to refinery fuel gas recovery system, S9, Facility B2626)
13. Deleted (vacuum exhaust routed from S19, Vacuum Heater to refinery fuel gas recovery system, S9, Facility B2626)
14. Total asphalt plant emissions shall not exceed the limits listed below:

a. Non-Methane Hydrocarbons.....	42.705 tons/yr
b. Sulfur Dioxide, SO2.....	28.049 tons/yr
c. Nitrogen Oxides, as NO2.....	40.047 tons/yr

(Cumulative Increase)
15. Asphalt plant wastewater and refinery wastewater shall not be used for dust control at this facility. (Cumulative Increase)
- 16a. . The permit holder shall perform a source test at S19, Vacuum Heater, every 6 months to determine compliance with the NOx limit in part I.8 of this condition and the CO limits in parts I.5b and I.5c of this condition. The source test shall be performed at the highest duty possible for the prevailing process conditions. All source testing shall be done in accordance with the District's Manual of Procedures. The facility shall receive approval from the District's Source Test Manager for installation of test ports and source testing procedures. The results shall be delivered to the District no later than 45 days from the date of the source test. (Cumulative Increase, BACT)

16b. Deleted (basis: requirement no longer applicable since exhaust from S18 Crude Unit routed from the S19, Vacuum Heater to the refinery fuel gas recovery system, S9, Facility B2626)

17. A/C source test condition, deleted.

18. To assure compliance with part I.14 of Condition 1240, the permit holder shall perform the following monitoring on a semi-annual basis, starting on January 1 of each year.

18a. The permit holder shall estimate emissions of Non-methane hydrocarbons (NMHC) and nitrogen oxides for each quarter.

18b. The permit holder shall estimate fugitive NMHC emissions from valves, flanges, pumps, and compressors using the draft "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" dated February 1999, or later version.

18c. The permit holder shall estimate tank NMHC emissions from the following tanks using the most recent version of EPA's "Tanks" program or EPA publication AP-42: S3, S5-S9, S-12, S13, S37, S38, S51-S53, S59-S63, S65, S70.

18d. The permit holder shall estimate NMHC emissions from the following loading racks using EPA publication AP-42: S16, S17, S31, S54.

18e. The permit holder shall estimate NMHC emissions from the following wastewater sources using the most recent version of EPA's "Water" program: S27, S41, S66, S67. The permit holder may use maximum potential to emit in place of measured throughput.

18f. The permit holder shall estimate NMHC emissions from the following combustion sources: S19-S21. The permit holder shall use fuel measurements for each fuel, the F-factor method in EPA Method 19, and the average concentration in the last source test for these estimates.

18g. The permit holder shall estimate NMHC emissions from the following combustion sources: S24, S34, A17, A31. The permit holder shall use the maximum capacity as an estimate of the fuel usage, and the appropriate emission factor from EPA publication AP-42. The permit holder shall estimate NMHC emissions from S68 and S71. The permit holder shall use the maximum capacity as an estimate of the fuel usage, the actual hours of operation, and the appropriate emission factor from EPA publication AP-42.

18h. The permit holder shall estimate emissions of nitrogen oxides (NOx) from the following combustion sources: S19-S21. The permit holder shall use fuel measurements for each fuel, the F-factor method in EPA Method 19, and the average concentration in the last source test for these estimates.

18i. The permit holder shall estimate emissions of nitrogen oxides (NOx) from the following combustion sources: S24, S34, A17, A31. The permit holder shall use the maximum capacity as an estimate of the fuel usage, and the appropriate emission factor from EPA publication AP-42. The permit holder shall estimate NOx emissions from S68 and S71. The permit holder shall use the maximum capacity as an estimate of the fuel usage, the actual hours of operation, and the appropriate emission factor from EPA publication AP-42.

18j. Within 30 days after the end of each semi-annual period, the permit holder shall calculate the emission estimates required by parts I.18b through 18i for the quarter, summarize the emission estimates for the period, and for the previous period. If the emission estimates exceed the limits in part I.14 of Condition 1240, the permit holder shall report non-compliance with part I.14 of this

condition in accordance with Standard Condition I.F of the Title V permit. The emissions estimates shall be kept on-site for a minimum of five years and be made available to District staff upon request. (Cumulative Increase)

19. The Owner/Operator shall install continuous temperature monitoring and recording device for A17, Incinerator. The Owner/Operator shall operate A17, Incinerator at a minimum temperature of 1570F. The District may adjust this minimum temperature, if source test data demonstrates that an alternate temperature is necessary for or capable of maintaining compliance with Part II.68. (2-6-503)

19a. The temperature limit in part I.19 shall not apply during an “Allowable Temperature Excursion”, provided that the temperature controller setpoint complies with the temperature limit. An Allowable Temperature Excursion is one of the following:

- a. A temperature excursion not exceeding 20 degrees F; or
- b. A temperature excursion for a period or periods which when combined are less than or equal to 15 minutes in any hour; or
- c. A temperature excursion for a period or periods which when combined are more than 15 minutes in any hour, provided that all three of the following criteria are met.
 - i. the excursion does not exceed 50 degrees F;
 - ii. the duration of the excursion does not exceed 24 hours; and
 - iii. the total number of such excursions does not exceed 12 per calendar year (or any consecutive 12 month period).

Two or more excursions greater than 15 minutes in duration occurring during the same 24-hour period shall be counted as one excursion toward the 12 excursion limit. (basis: Regulation 2-1-403)

19b. For each Allowable Temperature Excursion that exceeds 20 degrees F. and 15 minutes in duration, the Permit Holder shall keep sufficient records to demonstrate that they meet the qualifying criteria described above. Records shall be retained for a minimum of five years from the date of entry, and shall be made available to the District upon request. Records shall include at least the following information:

- a. Temperature controller setpoint;
 - b. Starting date and time, and duration of each Allowable Temperature Excursion;
 - c. Measured temperature during each Allowable Temperature Excursion;
 - d. Number of Allowable Temperature Excursions per month, and total number for the current calendar year; and
 - e. All strip charts or other temperature records.
- (basis: Regulation 2-1-403)

19c. For the purposes of parts I.19a and I.19b, a temperature excursion refers only to temperatures below the limit. (basis: Regulation 2-1-403)

19d. The owner/operator shall conduct District approved source tests at A-17 to determine initial compliance with the limits in parts II.68. The owner/operator shall submit the source test results to the District staff no later than 60 days after the source test. (basis: Cumulative Increase)

19e. The owner/operator shall obtain approval for all source test procedures from the District’s Source Test Section prior to conducting any tests. The owner/operator shall comply with all

applicable testing requirements as specified in Volume V of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section, in writing, of the source test protocols and projected test dates at least 7 days prior to testing. (basis: RACT, Cumulative Increase)

20. Deleted Application 9297

II. TANKAGE AND LOADING RACK CONDITIONS:

1. Deleted in Revision 2. Ownership of S2 transferred to Facility B5574 by Application No. 7980/8915.
2. Deleted 5/01. Redundant with condition 1240 II.26.
3. Deleted 07/20/99. Redundant with condition 1240 II.27.
4. Deleted 07/20/99. Redundant with condition 1240 II.54.
5. Deleted 07/20/99. Redundant with condition 1240 II.60.
6. Deleted (basis: requirement no longer applicable since exhaust from S18 Crude Unit routed from the S19, Vacuum Heater to the refinery fuel gas recovery system, S9, Facility B2626)
7. Deleted 07/20/99. Redundant with condition 1240 II.51.
8. The owner/operator shall abate emissions from Source S-17 with Abatement device A-17, Incinerator during all periods of loading operation. (Cumulative Increase)
9. Deleted 08/12/99.
10. Delete. (Source S25 is permanently removed from service)

S1 Crude Oil Storage Tank 1A, External Floating Roof,
Capacity: 3,419,000 Gallons

S2 Crude Oil Storage Tank, External Floating TK-1B,
Capacity: 3,419,000 Gallons

S4 Crude Oil Storage Tank, External Floating Roof,
TK-10A, Capacity: 1,382,000 Gallons

S23 Crude Oil Storage Tank, External Floating Roof,
TK-10B, Capacity: 1,382,000 Gallons

Conditions 11-24 Deleted in Revision 2. Ownership of S1, S2, S4, and S23 transferred to Facility B5574 by Application No. 7980/8915.

S9 Internal Floating Roof Tank, TK-7; Capacity:
571,200 Gallons, White, Storing: Naphtha equipped with a mechanical shoe primary seal, rim mounted secondary seal, and welded deck

25. Material other than Naphtha may be throughput to or stored in S9, if all of the following are satisfied:
 - a. the storage of each material complies with all other conditions applicable to this source

- b. the storage of each material complies with all other applicable regulatory requirements
- c. the permittee keeps District approved records that demonstrate to the District's satisfaction that no toxin listed in Table 2-5-1 is emitted from S9 in an amount in excess of the toxin's respective trigger level set forth in Table 2-1-5. (cumulative increase, toxics)

26. The true vapor pressure of each and all material stored in S9 shall not exceed 11 psia. (cumulative increase, toxics)

27a. S9 shall not be operated unless it is equipped with a District approved internal floating roof with a mechanical shoe primary seal, a rim mounted secondary seal, and a welded deck. (cumulative increase, NSPS)

28. The total throughput of all liquid materials to S9 shall not exceed 24,019,000 gallons (571,880 barrels) in any rolling 12 consecutive month period. (cumulative increase, toxics)

29. On a monthly basis, the permittee shall record in a District approved log the total volume of each and all liquid materials throughput to S9 each month and each rolling 12 consecutive month period, in gallon units or barrel units. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)

S13 Fixed Roof Storage Tank (TK-8); Capacity: 88,000 Gallons, Storing: Kerosene, Light or Heavy Vacuum Gas Oil, and Asphalt abated by (either) A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S13 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S13 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S59 Fixed Roof Storage Tank (TK-5); Capacity: 1,050,000 Gallons, Storing: Kerosene, Light or Heavy Vacuum Gas Oil and Asphalt, abated by A1 or A3 Mist Eliminator F-8 (or) F-10 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S59 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S59 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S63 Kerosene/Light Vacuum Gas Oil/Heavy Vacuum Gas Oil/Asphalt Storage Tank, Fixed Roof, TK-31, Capacity: 1,218,000 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S63 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S63 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

30. Petroleum materials other than Kerosene, Light or Heavy Vacuum Gas Oil, and Asphalt may be stored in S13, S59, and S63 if all of the following are satisfied:

- a. the storage of each petroleum material complies with all other conditions applicable to S13, S59, or S63.
- b. the storage of each petroleum material complies with all other applicable regulatory requirements
- c. the permittee keeps District approved records which demonstrate to the District's satisfaction that no toxin listed in Table 2-1-5 is emitted from S13, S59, or S63 in an amount in excess of the toxin's respective trigger level set forth in Table 2-1-5.
(cumulative increase, toxics)

31. The true vapor pressure of each material stored in S13, S59, or S63 shall not exceed 1.5 psia. (cumulative increase, toxics)

31a. To assure compliance with the limit in part II.31, the permit holder shall take a sample from each tank on an annual basis and determine the true vapor pressure of the sample. Records of these analyses shall be retained for at least 5 years from the date of the analysis, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase, toxics)

32a. The owner/operator shall maintain and operate A31 Thermal Oxidizer H-4607 and S24 Hot Oil Heater H-4603; with an overall collection and destruction efficiency of at least 98.5%, by weight whenever petroleum and VOC materials are stored and/or transferred at S3, S5, S6, S7, S8, S-12, S13, S25, S31, S37, S38, S41, S51, S52, S53, S54, S59, S60, S61, S62, S63, S65, S66 and S70.
(Regulation 8-5-306, NSPS, cumulative increase, BACT, toxics)

32b. Deleted. Combined with Part 32a.

32c. Deleted. Combined with Part 32a.

32d. Deleted. Redundant with Regulation 8-18.

32e. To monitor compliance with the standard in 40 CFR 60.112b(a)(3)(i) for fugitive emissions at closed vent systems, the owner/operator shall inspect the closed vent systems that control S13, S59, and S63 using EPA Method 21 on a semi-annual basis. (Regulation 2-6-503)

33a. The total combined throughput of all materials to S13, S59, and S63 shall not exceed 68,208,000 gallons (1,624,600 barrels) in any rolling 12 consecutive month period. (cumulative increase, toxics)

33b. Cutback asphalt materials including but not limited to SC Cutback Asphalt, MC Cutback Asphalt, and FM-1 Cutback Asphalt and other cutback asphalt materials shall NOT be stored in or transferred to S63. (toxics)

34. On a monthly basis, the permittee shall record in a District approved log the total volume of each liquid material throughput to S13, S59, or S63 by material name (e.g., kerosene, light vacuum gas oil, heavy vacuum gas oil, asphalt) each month and each rolling 12 consecutive month period, in gallon units or barrel units. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request.
(cumulative increase)

35. Deleted May, 2001
36. Deleted May, 2001
37. Deleted May, 2001
38. Deleted May, 2001
39. Deleted May, 2001

S3 Fixed Roof Storage Tank, TK-4601C, Storing: Heavy Vacuum Gas Oil, Capacity: 3,415,000 Gallons operated with a District approved vapor recovery system and abated by (either) A3 or A20 Mist Eliminator F-4610 or F-500 and A31 Thermal Oxidizer H-7. If A31 and the vapor recovery blower are inoperative, S3 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S3 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S12 Fixed Roof Storage Tank, TK-4606, Storing: Heavy Vacuum Gas Oil and/or effluent wastewater, Capacity: 571,000 Gallons operated with a District approved vapor recovery system and abated by (either) A-1 or A3 Mist Eliminator F-4608 or F-4610 and A31 Thermal Oxidizer H-7. If A31 and the vapor recovery blower are inoperative, S12 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S12 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

40. Materials other than Heavy Gas Oil may be stored in S3 and S12, if all of the following are satisfied:

- a. the storage of each petroleum material complies with all other conditions applicable to S3 and S12
- b. the storage of each petroleum material complies with all other applicable regulatory requirements including Regulation 2-1-123
- c. the permittee keeps District approved records that demonstrate to the District's satisfaction that no toxin listed in Table 2-5-1 is emitted from S3 and S-12 in an amount in excess of the toxin's respective trigger level set forth in Table 2-5-1. (cumulative increase, toxics)

41. The permittee shall ensure that at least 38,300,000 gallons (the 1996 calendar year baseline throughput to S3) of gas oil is throughput exclusively to S3 and/or S12 for storage during every rolling 12 consecutive month period, prior to transferring/storing gas oil material into another vessel for which VOC emissions are not abated with a destruction efficiency of at least 98.5%, by weight. (offsets)

42. The true vapor pressure of each and all material stored in S3 and S12 shall not exceed 0.5 psia. (cumulative increase, NSPS)

43. Deleted. Combined with Part 32a.

44. Deleted. Redundant with Regulation 8-18.

45. All tank fittings present at S3 and S12 shall be gasketed. (BACT)

46. At the conclusion of each month, the permittee shall record in a District approved log the total volume of each and all liquid materials throughput to S3 and S12 during that month and for each rolling 12 consecutive month period, in gallon units or barrel units. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)

47. Deleted 11/29/99. Start-up condition

S5 Asphalt Storage Tank, Fixed Roof, TK-2A, Capacity: 3,415,000 Gallons abated by either A1 or A3 Mist Eliminator F-8 or F-10 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S5 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S5 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S6 Asphalt Storage Tank, Fixed Roof, TK-2B, Capacity: 3,415,000 Gallons abated by either A1 or A3 Mist Eliminator F-8 or F-10 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S6 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S6 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S7 Asphalt Storage Tank, Fixed Roof, TK-3, Capacity: 1,050,000 Gallons abated by either A1 or A3 Mist Eliminator F-8 or F-10 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S7 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S7 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S8 Asphalt Storage Tank, Fixed Roof, TK-4, Capacity: 1,050,000 Gallons abated by either A1 or A3 Mist Eliminator F-8 or F-10 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S8 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S8 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S37 Asphalt Storage Tank, Fixed Roof, TK 54, Capacity: 100,000 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S37 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S37 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S38 Asphalt Storage Tank, Fixed Roof, TK-55, Capacity: 100,000 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S38 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S38 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S51 Asphalt Storage Tank TK-506; Fixed Roof Tank, Capacity: 152,880 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S51 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S51 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S52 Asphalt Storage Tank TK 507, Fixed Roof Tank, Capacity: 152,880 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S52 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S52 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S53 Asphalt Storage Tank TK 508, Fixed Roof Tank, Capacity: 152,880 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S53 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S53 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S60 Asphalt Storage Tank TK-505; Fixed Roof, Capacity: 15,000 Gallons abated by (either) A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S60 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S60 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S61 Asphalt Storage Tank, Fixed Roof, TK-30A, Capacity: 995,400 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S61 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S61 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S62 Asphalt Storage Tank, Fixed Roof, TK-30B, Capacity: 995,400 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S62 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S62 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is

operating. (cumulative increase)

S65 Asphalt Storage Tank, Fixed Roof, TK-32 Tank Capacity: 6,920,000 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S65 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S65 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S70 Asphalt Additive Mixing Tank, Fixed Roof, Tank Capacity: 2,200 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S70 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S70 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

48. The sum total asphalt throughput to S5, S6, S7, S8, S37, S38, S51, S52, S53, S60, S61, S62, and S65 shall not exceed 6,738,349 barrels (283,010,658 gallons) in any 12 consecutive month period. (cumulative increase, offsets)

49. For S5, S6, S7, S8, S37, S38, S51, S52, S53, S60, S61, S62, S65, S70: Cutback asphalt materials including but not limited to SC Cutback Asphalt, MC Cutback Asphalt, and FM-1 Cutback Asphalt and other cutback asphalt materials shall not be stored in or transferred to any of the above tanks. (toxics)

50. For S5, S6, S7, S8, S37, S38, S51, S52, S53, S60, and S70: the true vapor pressure of each and all materials stored in each tank shall not exceed 0.5 psia. (cumulative increase, offsets)

51. For S61 and S62, the true vapor pressure of each and all materials stored in each tank shall not exceed 0.49 psia. (cumulative increase, offsets, BACT)

52. For S65, the true vapor pressure of each and all materials stored in S65 shall not exceed 0.49 psia. (cumulative increase, offsets, BACT)

53. Deleted. Redundant with Regulation 8-18.

54. Deleted May, 2001.

55. Deleted. Combined with Part 32a

56. Deleted. Combined with Part 32a

57. Deleted. Combined with Part 32a

58. Separately, for each of S5, S6, S7, S8, S37, S38, S51, S52, S53, S60, S61, S62 S65, and S70, at the conclusion of each month, the permittee shall record, by material name, in a District approved log, the total volume of each liquid material throughput to each tank during that month and during each rolling 12 consecutive month period, in gallon units or barrel units. This log shall be retained for at least

5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)

58a. Deleted Application 17468.

58b. The Owner/Operator shall install and properly maintain continuous temperature monitoring and recording devices for A31, Thermal Oxidizer (H-4607) and S24, Hot Oil Heater (H-4603). The Owner/Operator shall operate A-31 with a minimum combustion zone temperature of 1400F to maintain a 98.5% destruction efficiency, whenever emissions are vented to it by one or more operational vapor recovery blowers in organic vapor service. The Owner/Operator shall operate S-24 at a minimum operating temperature of 1115F to maintain a 98.5% destruction efficiency, whenever emissions are vented to it by one or more vapor recovery blowers in organic vapor service. (Source Test Requirements demonstrating compliance with the 98.5% abatement destruction efficiency and the Regulation 6-310 grain loading requirements were completed February 28 and 29, 2004.) (Applications 12704 for A-31 and Application 12236 for S-24 have been submitted for the Title V permit revisions) (Basis: 40 CFR 60.113b(c)(1)(ii) and 60.113b(c)(2); 40 CFR 60.473c; 40 CFR 61.354(c)(1); 40 CFR 61.354(c)(4), Regulation 2-6-409.2.2, 2-6-414)

58c. The temperature limit in Part II.58b for A-31 shall not apply during an “Allowable Temperature Excursion”, provided that the temperature controller set point remains at a minimum of 1,400°F. An Allowable Temperature Excursion is one of the following:

- a. A temperature excursion not exceeding 20°F; or
- b. A temperature excursion for a period or periods which when combined are less than or equal to 15 minutes in any hour; or
- c. A temperature excursion for a period or periods which when combined are more than 15 minutes in any hour, provided that all three of the following criteria are met.
 - i. the excursion does not exceed 50°F;
 - ii. the duration of the excursion does not exceed 24 hours; and
 - iii. the total number of such excursions does not exceed 12 per calendar year (or any consecutive 12 month period).

Two or more excursions greater than 15 minutes in duration occurring during the same 24-hour period shall be counted as one excursion toward the 12 excursion limit. (basis: Regulation 2-1-403)

58d. For each Allowable Temperature Excursion that exceeds 20°F. and 15 minutes in duration, the Permit Holder shall keep sufficient records to demonstrate that they meet the qualifying criteria described above. Records shall be retained for a minimum of five years from the date of entry, and shall be made available to the District upon request. Records shall include at least the following information:

- a. Temperature controller setpoint;
- b. Starting date and time, and duration of each Allowable Temperature Excursion;
- c. Measured temperature during each Allowable Temperature Excursion;
- d. Number of Allowable Temperature Excursions per month, and total number for the current calendar year; and
- e. All strip charts or other temperature records.

58e. For the purposes of parts II.58c and II.58d, a temperature excursion refers only to temperatures below the limit. (basis: Regulation 2-1-403)

58f. For the purposes of parts II.58c and II.58d, a temperature excursion occurs only when one or more vapor recovery system blowers is operating in organic vapor service, and is vented to A-31. When a blower is used to start up A-31, the blower is in “fresh air” service and not in organic vapor service, until A-31 meets the minimum operating temperature and is acceptable to receive organic vapors. (basis: Regulation 2-1-403)

59. Deleted (S14 is no longer in service)

60. Deleted (S14 is no longer in service)

61. Deleted (S14 is no longer in service)

S15. Deleted (S15 is no longer in service, the gas oil stream is routed to the Refinery for further processing)

62. Deleted (S15 is no longer in service, the gas oil stream is routed to the Refinery for further processing)

63. Deleted (S15 is no longer in service, the gas oil stream is routed to the Refinery for further processing)

64. Deleted (S15 is no longer in service, the gas oil stream is routed to the Refinery for further processing)

S17 Asphalt Loading Racks abated by A2 Mist Eliminator F-9 and A17 Incinerator H-46100

S31 Rail Car Loading Rack; 5 Loading Arms, Loading: Asphalt and Light Vacuum Gas Oil abated by A6 Mist Eliminator F-3 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S31 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S31 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S54 Asphalt Loading Rack abated by (either) A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S54 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S54 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

65. S17 shall be abated by A2 Mist Eliminator F-9 and A17 Incinerator H-46100 at all times that materials are transferred at S17. (cumulative increase)

66. [Deleted. Combined with Part 64b]

67. [Deleted. Combined with part 64b]

68. Emissions from S17 shall be captured by a District approved vapor recovery system and shall be abated by A2 Mist Eliminator F-9 and A17 Incinerator H-46100 with a destruction efficiency of at least 98.5%, by weight, as measured across A17. (cumulative increase, BACT)

69. Deleted Combined with Part 32a.

70. Deleted. Combined with Part 32a.

71. The true vapor pressure of the materials transferred at or sampled from S17 and/or S 54 shall not exceed 0.5 psia except for 5,500 Barrels per year of kerosene when required to produce medium-cure cutback asphalt products. (cumulative increase, offsets)

72. The true vapor pressure of the materials transferred at or sampled from S31 shall not exceed 1.5 psia, unless the material contains asphalt. (cumulative increase, toxics, offsets)

72a. To monitor compliance with the standard in BAAQMD Regulation 8-6-306 for vapor tightness of equipment associated with organic liquid delivery and loading operations at S31, the owner/operator shall inspect the equipment using EPA Method 21 on a quarterly basis. (Regulation 2-6-503)

72b. To monitor compliance with the standard in BAAQMD Regulation 8-6-306 for leak-free equipment associated with organic liquid delivery and loading operations at S31, the owner/operator shall inspect the equipment on a quarterly basis. (Regulation 2-6-503)

73. If asphalt or any asphalt containing material or any material blended with asphalt is transferred at or sampled from S31, the true vapor of the material may not exceed 0.5 psia. (cumulative increase, toxics, offsets)

74. The total combined throughput of asphalt and all asphalt containing materials to S17, S31, and S54 shall not exceed 283,011,000 gallons during any consecutive 12-months. (cumulative increase, offsets)

75. The permittee shall maintain a District approved log of the monthly throughput of asphalt and all asphalt containing materials to S17, S31, and S54 in gallon units or barrel units during each month and during each rolling 12 consecutive month period, in gallon units or barrel units. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)

76. Deleted May, 2001.

77. Deleted May, 2001.

78. Deleted May, 2001.

79. Deleted May, 2001.

80. Deleted May, 2001.

81. Deleted May, 2001.

82. Deleted May, 2001.

S66 Oil Water Separator, Physical Capacity: 830 GPM, Permitted Capacity: 210 GPM abated by (either) A1 or A3 Mist Eliminator F-8 or F-10 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S66 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S66 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

83. The permittee shall ensure that the throughput of liquid material to S66 shall not exceed 110,376,000 gallons per year (210 gallons per minute). (basis: cumulative increase)

84. The cover and each access opening at S66 shall be equipped with a gasketed, vapor tight cover (as defined in Regulation 8, Rule 8). Each cover and access opening shall be kept closed and sealed except when the opening is being used for inspection, maintenance, or wastewater sampling. (basis: Reg. 8, Rule 8)

85. Deleted. Combined with Part 32a.

86. Deleted. Redundant with Regulation 8-18.

87. Not less frequently than on a monthly basis, the permittee shall measure and record the volume (in gallons) of oil (slop oil) product recovered at S66 and not less frequently than on a monthly basis, the permittee shall measure and record the volume (in gallons) of waste water product recovered at S66 (waste water discharge to City of Benicia). The sum of the volume of slop oil product and the volume of wastewater product shall recorded in a District approved log as the throughput of liquid material to S66. (basis: cumulative increase)

88. On a monthly basis, the permittee shall record in a District approved log the total volume of all liquid materials throughput to S66 each month, in gallon units or barrel units. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (basis: cumulative increase)

89. Deleted 2001.

S16 Truck Loading Rack-Heavy Vacuum Gas Oil

90. The true vapor pressure of the materials transferred at and/or sampled from S16 shall not exceed 0.49 psia. (cumulative increase)

91. The total throughput of materials transferred through S16 shall not exceed 25,749,000 gallons (613,000 barrels) during any consecutive 12-months. (cumulative increase)

91a. The permittee shall maintain a District approved log of the monthly throughput of materials transferred at S16 in gallon units or barrel units during each month and during each rolling 12 consecutive month period, in gallon units or barrel units. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)

S41, Wemco Hydrocleaner Induced Air Flotation Machine, abated by A1 or A3 Mist Eliminator F-8 or F-10 and S24 Hot Oil Furnace H-3 or A31 Thermal Oxidizer.

92. The permittee shall ensure that the throughput of liquid material to S41 shall not exceed 77,263,200 gallons per year (147 gallons per minute). (basis: cumulative increase)

92a. The permittee shall maintain a District approved log of the monthly throughput of liquid material transferred to S41 in gallon units during each month and during each rolling 12 consecutive month period. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)

93. The following sources, which shall be operated with a District approved closed vent system, are connected to vapor recovery collection header #1 and vapor recovery blower B-4608 or spare blower B-46501: S5, S6, S7, S8, S12, S25, S41, S59, and S66. Emissions are contained in the closed vent collection header whenever a blower is not operating, as long as no P/V valve in the header is lifting. The pressure of each of the three headers at a representative location shall be monitored at least once every 8 hours, whenever the vapor recovery blower is not operating. If the manometer pressure of any header exceeds 0.5 ounces (0.87 inches of water column), A-31 or S-24 shall be restarted and emissions conveyed to it by the blower. (basis: cumulative increase)

94. The following sources, which shall be operated with a District approved closed vent system, are connected to vapor recovery collection header #2 and vapor recovery blower B-46500 or spare blower B-46501: S3, S13, S37, S38, S51, S52, S53, S54, S60, S61, S62, S63, S65, and S70. Emissions are contained in the closed vent collection header whenever a blower is not operating, as long as no P/V valve in the header is lifting. The pressure of the each of the three headers at a representative location shall be monitored at least once every 8 hours, whenever the vapor recovery blower is not operating. If the manometer pressure of any header exceeds 0.5 ounces (0.87 inches of water column), A-31 or S-24 shall be restarted and emissions conveyed to it by the blower. (basis: cumulative increase)

95. To determine compliance with Parts 93 and 94, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:

a. All manometer pressures of each of the three headers abated by A-31 or S-24

- b. Date and time when the blower is down and which abating equipment (A-31, closed vent system or S-24) is in operation
- c. Reason why the blower is down

All records shall be retained on-site for at least five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (basis: cumulative Increase)

96. The owner/operator of S3, S5, S6, S7, S8, S12, S13, S25, S26, S27, S28, S31, S37, S38, S-39, S40, S41, S51, S52, S53, S54, S59, S60, S61, S62, S63, S65, S66, S67 and S70 shall not use any P/V valve that leaks total organic compounds in excess of 500 ppmv when the vapor recovery blower is not operating. Any exceedance of this limit will result in a violation, except for P/V valve that is subject to Regulation 8-18 and is already on the non-repairable list. (basis: to allow the use of closed vent system in lieu of A-31 or S-24)

III. MARINE OPERATIONS CONDITIONS-S30, Part 1 through 9, deleted because S30 was not in service since April 5, 2005
(Cumulative Increase)

IV. ODOR REDUCTION MEASURES (Added per AN 14513, 9/95)

*1. The permit holder will maintain water seals, P-traps, caps, covers or equivalent on all process water drains. (1-301)

*2. The permit holder will implement an Asphalt Tank Truck Dome Inspection Program for all asphalt tank trucks that they load. If a truck enters the facility with a leaking or malfunctioning dome lid, the permit holder will take the following action.

*a. First occurrence in rolling twelve month period: the permit holder will orally notify the truck driver and dispatcher of the faulty dome lid, and request that the lid be repaired prior to the truck re-entering the facility.

*b. Second occurrence in a rolling twelve month period: the permit holder will notify the driver and the trucking company in writing that if the truck enters the facility again with a malfunctioning dome hatch, the permit holder will not load the truck until the hatch has been repaired.

*c. Third occurrence in a rolling twelve-month period: the permit holder will not load the truck. The permit holder will also notify the driver and dispatcher, verbally and in writing, that the truck will not be loaded until the hatch has been repaired, and the repair has been inspected or repair documentation has been received by the permit holder to ensure that the hatch is in proper working order.

*The permit holder shall keep records of all inspections and notifications. These records shall be made available to the District upon request.
(1-301)

*3. The permit holder shall provide written notification of the Asphalt Tank Truck Dome Inspection Program to any additional trucking company that may do

business with the permit holder in the future, within two weeks of the first asphalt receipt. (1-301)

V. OTHER SOURCES

S24 Hot Oil Heater H-4603; Max Firing Rate 9 MM BTU/hr

1. Respective emissions of nitrogen oxides, and carbon monoxide (CO) from S24 shall not exceed 30 ppm and 50 ppm at 3% O₂. (Cumulative Increase)

IX. RECOMMENDATION

Issue a conditional exemption Valero Refining Company for the following equipment:

S-12 Effluent Wastewater/Heavy Gas Oil, (TK-4606), 571,000 gallon capacity abated by A31 Thermal Oxidizer H-4607 and/or S24 Hot Oil Heater H-4603

2-1-123 Exemption, Liquid Storage and Loading Equipment: The following equipment is exempt from the requirements of Sections 2-1-301 and 302, provided that the source does not require permitting pursuant to Section 2-1-319.

123.3 Containers, reservoirs, tanks or loading equipment used exclusively for:

3.2 Storage or loading of organic liquids or mixtures containing organic liquids; where the initial boiling point of the organics is greater than 302°F and exceeds the actual storage temperature by at least 180°F.

Thu H. Bui
Senior Air Quality Engineer
Engineering Division
Date:

THB:T\ValeroAsphalt\23459e\August 15, 2011

**EVALUATION REPORT
VALERO BENICIA ASPHALT PLANT**

Application #24278 - Plant #13193

**3001 Park Road
Benicia, CA 94510**

I. BACKGROUND

Valero has submitted this application for a modification for the following equipment:

- S-12 Untreated Wastewater Fixed Roof Tank, TK-4606, 571,000 gallon capacity, abated by A31 Thermal Oxidizer H-4607 and/or S24 Hot Oil Heater H-4603**
- S-26 Untreated Wastewater Fixed Roof Tank, TK-4613, 3,800 gallon capacity, abated by A31 Thermal Oxidizer H-4607 and/or S24 Hot Oil Heater H-4603**
- S-28 Untreated Wastewater Fixed Roof Tank, TK-4611B, 88,000 gallon capacity, abated by A31 Thermal Oxidizer H-4607 and/or S24 Hot Oil Heater H-4603**
- S-67 Untreated Wastewater Fixed Roof Tank, TK-4612B, 5,900 gallon capacity, abated by A31 Thermal Oxidizer H-4607 and/or S24 Hot Oil Heater H-4603**

Valero requested to surrender the permits to operate for the following decommissioned equipment:

- S-27 Recovered Oil Tank, TK-4612A, 1,260 gallon capacity**
- S-41 WEMCO Hydrocleaner – Induced Air Floatation Separator, 5,000 BBL/day, 145 pgm**
- S-66 Oil Water Separator, 210 gal/min**

The wastewater generated by the Asphalt Plant was previously treated on-site in the API Separator (S-66) and the WEMCO Separator (S-41) and stored at the API Separator slope oil collection tanks (S-27) before being discharged to the City of Benicia wastewater treatment plant. The wastewater is now collected in holding tanks (S-12, S-26, S-28 and S-67) at the Asphalt Plant and is pumped to and treated in the existing wastewater treatment facilities at Valero Refinery. As a result, S-66, S-41 and S-27 are decommissioned (shutdown) and the services of three exempt tanks (S-12, S-26 and S-28) have been changed from treated to untreated wastewater. In addition, the service of permitted tank S-67 has been changed from treated to untreated wastewater.

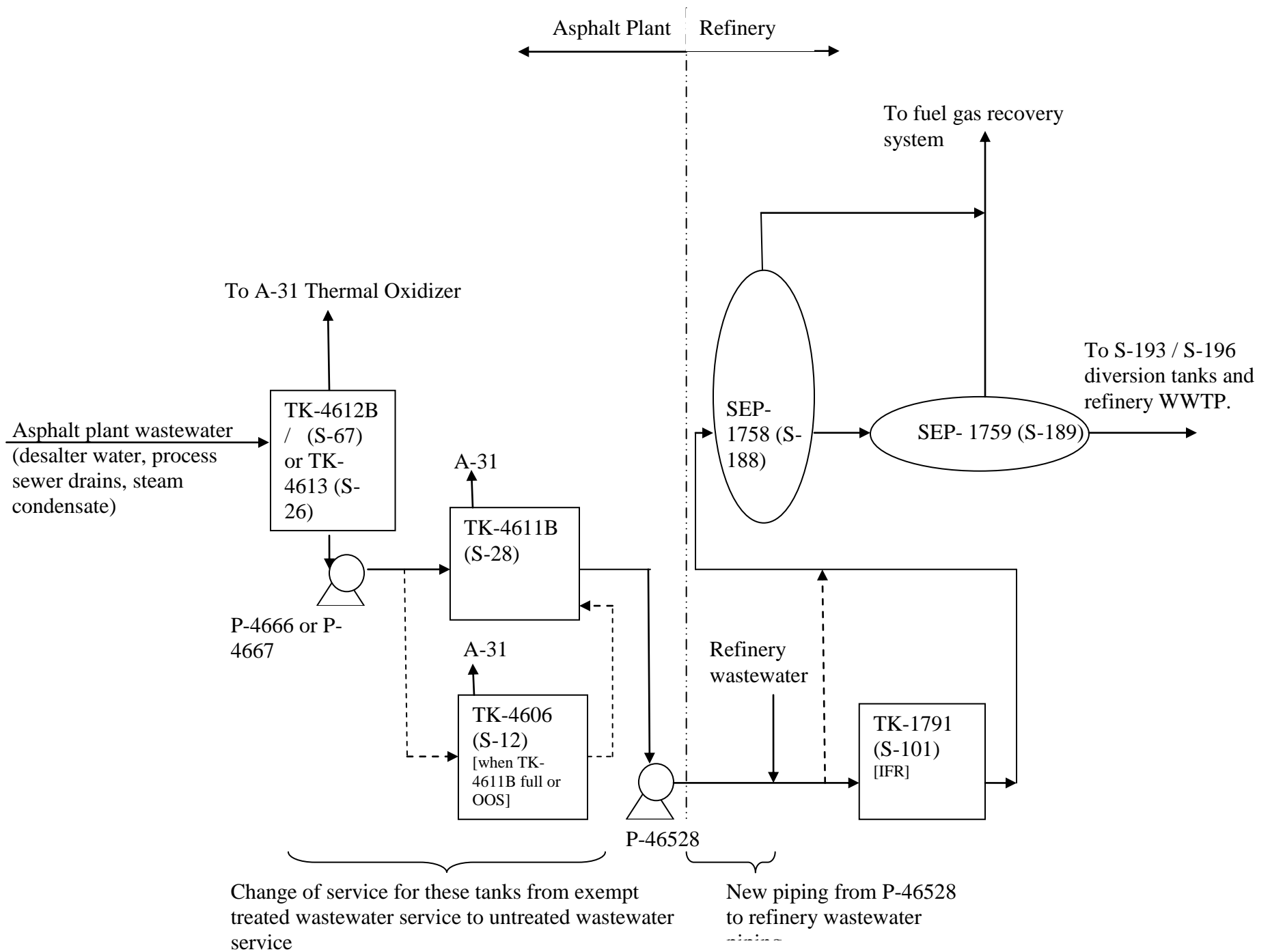
The BAP wastewater is an aqueous solution containing less than 1% (wt) organic material and sources in which this material are stored and transported are exempt from permitting in accordance with Regulation 2-1-123.2. However, Valero has made the conservative applicability determination that the untreated BAP wastewater tanks (S-12, S-26 and S-28) should be managed as liquid organic storage tanks subject to Regulation 8, Rule 5 because it is possible that the organic material in the wastewater could form a layer on top of the water in the tanks, and the resulting vapor pressure in the tanks could exceed the Regulation 8-5-117 threshold of 0.5 psia. All three untreated wastewater tanks (S-12, S-26

and S-28) will be subject to Regulation 8-5 for storage of organic compounds. They are considered as new sources since they were exempt before.

S-67 was permitted to store treated wastewater and was switched to store untreated wastewater since January 2012. Valero will retain the same grandfathered maximum throughput for S-67 at 87,249,600 gal/yr (166 gpm), based on the pump design (P-4666 or P-4667). S-67 is a modified source since it stores a different material with emission increases. S-67 will lose its grandfather status.

Valero submitted Application # 24277 to modify the TV permit for this minor revision application. Changes to Valero Refinery's wastewater treatment operation will be reviewed separately under Application #24277 as a result of combining the Asphalt throughput into the existing Refinery wastewater treatment equipment.

This project required BAP wastewater transfer pipeline installation and connections to existing piping at both facilities (Plant #12626 and Plant # 13193). The following process flow diagram describes the new arrangement that connects the untreated wastewater from the Asphalt Plant into Valero Refinery.



II. EMISSION CALCULATIONS

BAP Wastewater Treatment Emissions contemporaneous emissions for shutdown sources (S-27, S-41 and S-66 and changed service source S-67). S-12, S-26, S-28 were exempt sources; therefore, the baseline emission is zero for the past 3 years.

S-27 and S-41 were shutdown in 2010 and S-66 was shut down in December 2010. S-67 changed service in March 2012. According to Regulation 2-2-605.1, the average 3 years immediately after the shutdown date (baseline contemporaneous emissions) were based from periods between 3/1/2009 and 2/29/2012. Valero does not want any contemporaneous emission reduction for S-41 and S-66 since the EPA's "Warner9" emission calculations are not readily available.

Contemporaneous Emission Reduction for Shutdown and Changed Service

	TK-4612A (S-27) gal/yr Shutdown	WEMCO (S-41) gal/yr Shutdown	API Separator (S-66) gal/yr Shutdown	TK-4612B (S-67) Changed Service
3/1/09 - 12/31/09	416,993	9,048,949	8,756,857	397,136
2010	8,686,228	961,417	9,647,645	7,880,845
2011	0	0	9,021,438	8,182,710
1/1/12 – 2/29/12	0	0	0	642,819
Average 3 year Baseline Throughput (gal/yr)	3,033,407	3,336,789	9,141,980	5,486,897
Baseline Controlled POC Emissions (lb/yr)	8 ²	0 ¹	0 ¹	19 ²
Total POC (lb/yr)	27			

¹ S-41 and S-66 emission are not included in the contemporaneous emission reduction credit

² S-27 and S-67 emissions based on EPA Tanks 4.0.9d calculation and 98.5% control efficiency

BAP Wastewater Treatment Emissions after the combining with Refinery

	TK-4613 (S-26)	TK-4606 (S-12)	TK-4611B (S-28)	TK-4612B (S-67)
Future Throughput untreated wastewater	87,249,600 gal/yr	87,249,600 (S-12 is S-28 backup when full)		87,249,600 gal/yr
Pre-project Treated Wastewater, Controlled POC Emissions (lb/yr)	0	0		69
Post-project Untreated Wastewater, Controlled POC Emissions (lb/yr)	264	629		265
Net Controlled POC Emissions (lb/yr)	264	629		196
Total POC (lb/yr)	1,089			
Net Project Emission Increase (lb/yr)	1,089-27 = 1,062			

Tank emissions based on EPA Tanks 4.0.9d calculation and 98.5% control efficiency

II. PLANT CUMULATIVE INCREASE SINCE 4/5/1991

<u>Current</u> <u>Ton/yr</u>	<u>New</u> <u>Ton/yr</u>	<u>New Total</u> <u>Lbs/yr</u>	<u>Tons/yr</u>	
POC =	0.00	0.531	1,062	0.531
NO _x =	0.00	0.00	0.00	0.00
SO ₂ =	0.00	0.00	0.00	0.00
CO =	0.00	0.00	0.00	0.00
NPOC =	0.00	0.00	0.00	0.00
PM ₁₀ =	0.00	0.00	0.00	0.00

IV. TOXIC SCREENING ANALYSIS

The toxics emission from this application will not exceed the acute or chronic trigger level that would require a toxic health risk screening analysis per Regulation 2-5.

Toxic Air Contaminant (TAC) Emissions for Untreated Wastewater								
TAC	Content in Liquid (mg/l)	Wt. fraction ¹	Annual ² TAC (lb/year)	Maximum ³ Hourly TAC (lb/hr)	Acute Trigger, lb/hr	Chronic Trigger, lb/year	Exceed Acute Trigger ?	Exceed Chronic Trigger ?
Benzene	5.12	5.12E-04	5.44E-01	6.21E-05	2.90E+00	3.80E+00	NO	NO
Toluene	9.19	9.19E-04	9.76E-01	1.11E-04	8.20E+01	1.20E+04	NO	NO
Ethylbenzene	0.375	3.75E-05	3.98E-03	4.55E-06	NA	4.30E+01	NA	NO
m, p-Xylene	1.41	1.41E-04	1.50E-02	1.71E-05	4.90E+01	2.70E+04	NO	NO
o-xylene	0.665	6.65E-05	7.06E-02	8.06E-06	4.90E+01	2.70E+04	NO	NO
Naphthalene	0.748	9.70E-06	7.94E-03	9.07E-06	NA	3.20E+00	NA	NO
n-Butylbenzene	0.097	6.10E-06	1.03E-03	1.18E-06	NA	NA	NA	NA
Isopropylbenzene	0.061	5.70E-06	6.48E-03	7.40E-07	NA	NA	NA	NA
p-Isopropyltoluene	0.057	7.48E-05	6.05E-02	6.91E-07	NA	NA	NA	NA
n-Propylbenzene	0.097	9.70E-06	1.03E-03	1.18E-06	NA	NA	NA	NA
1,2,4-	0.149	1.49E-05	1.58E-03	1.81E-06	NA	NA	NA	NA

¹ Content in Liquid (mg/l) from lab data. Assume liquid and vapor weight fractions are equal

² Annual TAC based on net increase in emissions for project (S-12, S-26, S-28 and S-67 = 1,062 lb/year).

³ Maximum Hourly TAC based on hourly average of total maximum daily emissions for project (2.91 lb/day or 0.12 lb/hour).

Trichlorobenzene								
1,2,4-Trimethylbenzene	0.589	5.89E-05	6.26E-02	7.14E-06	NA	NA	NA	NA
1,3,5-Trimethylbenzene	0.162	1.62E-05	1.72E-03	1.96E-06	NA	NA	NA	NA

V. BEST AVAILABLE CONTROL TECHNOLOGY

BACT applies to all four tanks since the emissions from each tank are more than 10 pounds per highest day per Regulation 2-2-301. All four tanks are currently equipped with the vapor loss control devices (A-31 and/or S-24), which use BACT with at least 98% control efficiency.

VI. OFFSETS

The emission increases minus the contemporaneous emission reduction from shutdown of S-27 and change of service for S-67 are shown below.

Contemporaneous Emission Reduction Credit from shutdown of S-27 and changed service of S-67	(27) lb/yr POC
Future Emission Increases for permitted sources S-12, S-26, S-28 and S-67	1,089 lb/yr POC
Net Emission Increases	1,062 lb/yr or 0.531 tpy POC
Certificate Number	971
Starting Balance	8.381 tons
Reduction	0.611 tons
Ending Balance	7.770 tons

The POC emission increase requires offsets per Regulation 2-2-301. Valero will use the Certificate of Deposit #971 to provide the needed offsets for POC at a ratio of 1.15:1 per Regulation 2-2-302.2 as shown above.

VII. STATEMENT OF COMPLIANCE

This application is subject to Regulation 8, Rule 5 – Storage of Organic Liquid. Sources S-12, S-26, S-28 and S-67 are expected to be in compliance with Regulation 8-5-301 for tanks equipped with a vapor loss control device. All four tanks are currently controlled by A-31 Thermal Oxidizer and/or S-24 Hot Oil Heater with at least 98.5% control efficiency as specified in Condition 1240, part 58b.

New fugitive components associated with this project and in untreated wastewater service will not be subject to Regulation 8-18 and will not be incorporated into the maintenance and inspection program for fugitive devices. The untreated wastewater in this pipeline is an aqueous solution with less than 1% organics and is exempt from permitting (2-1-123.2). The untreated wastewater piping at BAP and the transfer pipeline to the refinery are not subject to fugitive monitoring under Regulation 8, Rule 18 or any federal LDAR regulation.

New Source Performance Standards (NSPS) 40 CFR Part 60

S-26 (3,800 gallons) and S-67 (5,875 gallons) are exempt from New Source Performance Standards (NSPS) found in 40 CFR Part 60, Subpart Ka because applicability threshold for Subpart Ka is 40,000 gallons. S-12 (551,000 gallons) and S-28 (88,000 gallons) meet the date range requirements and the size threshold for Subpart Ka, however, the untreated BAP wastewater does not meet the definition of petroleum liquid. Therefore, S-26 and S-28 are not subject to NSPS, Subpart Ka.

NSPS Subpart QQQ is not triggered because the new transfer piping does not enter any drains in the refinery sewer system.

Maximum Achievable Control Technology (MACT) 40 CFR Part 63

MACT Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries

MACT Subpart CC applies to sources at petroleum refineries emitting hazardous air pollutants (HAPs), including benzene. MACT CC excludes wastewater storage tanks from the definition of storage vessel and covers wastewater storage tanks under the wastewater provisions. The wastewater provisions of MACT CC contains specific requirements for wastewater sources including storage tanks if those tanks store MACT CC Group 1 wastewater, which is defined as wastewater subject to the control standards of the Benzene Waste Operation NESHAP (40 CFR 61 Subpart FF). Valero manages all BAP wastewater streams as uncontrolled aqueous wastes in accordance with 40 CFR 61 Subpart FF, § 61.342(e)(2). These streams are exempt from the 40 CFR Subpart FF control requirements, therefore, in accordance with the MACT CC definitions in 40 CFR 63.641, these uncontrolled aqueous wastes are MACT CC Group 2 wastewater streams. Sources in which Group 2 wastewater streams are managed are subject to MACT CC at 63.640(c)(3), but are not subject to any MACT CC compliance requirements for wastewater streams in 63.647.

The affected refinery sources retain the applicability as currently shown in the facility's Title V permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61

40 CFR 61 Subpart FF – Benzene Waste Operations NESHAP (BWON)

40 CFR 61 Subpart FF (BWON) applies to benzene-containing waste streams at petroleum refineries. Valero manages the combined BWON program at the Benicia Asphalt Plant (BAP) and Benicia Refinery under the 6BQ compliance option in 40 CFR 61 Subpart FF, Section 61.342(e). The untreated BAP wastewater is managed as an uncontrolled aqueous waste in accordance with 61.342(e)(2). The tanks and other waste management units in which this waste is managed are not subject to any control standards in Subpart FF.

The affected refinery sources retain the applicability as currently shown in the facility's Title V permit.

This application is considered to be ministerial under the District's CEQA Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors in accordance with Permit Handbook Chapter 4 for Organic Liquid Storage Tank.

This project is over 1,000 ft from the nearest public school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

NSPS, NESHAP and PSD do not apply.

VIII. CONDITIONS

Permit condition #1240 for the Valero Benicia Asphalt Plant.

For All Sources

Permit Conditions II. 1, 11, 12, and 13; and IV. 1, 2, and 3 were modified or added as part of App. No. 14513.

Pursuant to permit application #17515, permit condition I.8 was modified, conditions I.9 and I.10 were added, and what had been conditions I.9 and I.10 were renumbered as I.11 and I.12, respectively.

Pursuant to permit application #17687 the total asphalt plant wide heat input has been corrected from 42 to 66.17 MMBTU/HR, S13 and S59 were permitted, and S12 was exempted from permitting.

Pursuant to permit application #1261 (May, 2000) the total asphalt plant-wide heat input has been corrected from 76.06 to 86.6 MMBTU/HR, and the allowable heat input for S19 was increased from 22.4 to 33 MMbtu/hr.

Pursuant to permit application #1819 (October, 2000), the crude oil throughput to the crude unit, S18, was raised to 5,292,000 barrels/yr.

Pursuant to permit application #7123 (March, 2003) the total asphalt plant-wide heat input has been corrected from 86.6 to 93.6 MMBTU/HR, and the allowable heat input for S19 was increased from 33 to 40 MMBtu/hr.

Pursuant to permit application #19384 (February, 2009), All sources that are abated by A31 or S24 can now also be contained in the closed vent system when the blower is not operating until the pressure of the system reaches 0.5 ounces (0.87 inches of water column). The P/V valves on all sources abated by A31 or S24 shall not exceed 500 ppmv of total organic compounds while the blower is not operating.

Pursuant to permit application # 19193 (February, 2009), process offgas from S-18 Crude Unit routed from the S19 Vacuum Heater to the refinery fuel gas recovery system, S9, Facility B2626.

Pursuant to permit application #21641 (March, 2010), A17 (H46100) is separated from A4 (H4606). A17 will continue to abate S17 Asphalt Truck Loading Rack. A4 will be shut down and serve as an emission stack downstream of A17.

Pursuant to permit application #22724 (November, 2010), part I.16a, a source test requirement, will be added back for S19 Vacuum Heater.

Pursuant to permit application # 23459 (August, 2011), S-12 is storing heavy gas oil with S-3 in addition to effluent wastewater service.

[Pursuant to permit application #24278 \(November 2012\), Wastewater Amendment, S-27, S-41 and S-66 were shutdown; S-67 changed service from storing waste oil to untreated wastewater; S-12, S-26 and S-28 changed service from exempt to untreated wastewater. The BAP wastewater is combined with refinery wastewater for treatment onsite.](#)

I. ASPHALT PLANT CONDITIONS

S18 Crude Unit, amended by Application 19193

1. The total throughput of feed oil to S18 Crude Unit shall not exceed 5,292,000 barrels in any consecutive 12-month period. (cumulative increase, toxics, offsets)
2. The total throughput of feed oil to S18 Crude Unit shall not exceed 18,000 barrels in any calendar day. (cumulative increase, toxics)
3. The owner/operator of S-18 Crude Unit shall vent its emissions to the refinery fuel gas recovery system S-9 at all times. (cumulative increase, toxics)

4. Each day, the permittee shall record, by material name, in a District approved log, the total volume of each and every liquid material throughput to S18 during the preceding calendar day, in gallon units or barrel units. At the conclusion of each month, the permittee shall total the daily log records and record the sum as the monthly throughput of all liquid materials to S18, in a District approved log. Additionally, the permittee shall record in the District approved log the throughput of all liquid materials to S18 for each rolling 12 consecutive month period. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)
5. The maximum heat input to all asphalt plant combustion units except S68, Emergency Diesel-Powered Firewater Pump, shall not exceed a total of 93.6 MM BTU/Hr. Compliance will be determined from the daily reading of the PG&E natural gas flow meter. These meter readings shall be logged and initialed by the operations coordinator on a daily basis. These readings and the monthly PG&E bills shall be made available to the District upon request. (cumulative increase)
 - 5a. The owner/operator of S19 shall only use natural gas and the maximum heat input to S19, Vacuum Heater, shall not exceed 40 MMbtu/hr. (cumulative increase)
 - 5b. CO emissions in the exhaust of S19, Vacuum Heater, shall not exceed 50 ppmdv at 3% oxygen over any one-hour period. (cumulative increase, BACT)
 - 5c. CO emissions in the exhaust of S19, Vacuum Heater, shall not exceed 1.47 lb/hr over any one-hour period. (cumulative increase, BACT)
6. Fuel oil and/or diesel fuel shall not be combusted in the asphalt plant's heaters or boilers or other combustion sources except for S68, Emergency Diesel-powered Firewater Pump and S71, Emergency Diesel-powered Air Compressor. (cumulative increase) (modified 8/12/99, 4/24/02, 4/19/06)
7. Mechanical seals will be installed on all new rotary pumps and compressors. Mechanical packing of best available design will be installed in new reciprocating pumps. All compressor seals will be vented to an operating firebox or the vapors will otherwise be eliminated by a method, which is satisfactory to the District. (cumulative increase)
8. Vacuum Heater (S19) shall be equipped with a John Zink LoNOx Burner. Average NOx emissions from S19 shall not exceed 25 ppm corrected to 3% oxygen on a dry basis (one hour averaging period). (cumulative increase, BACT)

9. Deleted 06/02/98.
10. Boilers S20 and S21 and heater S19 shall be equipped with individual continuous recording oxygen analyzers. (2-1-403)
11. Contingent on EPA's approval of 40 CFR 60, Subpart Ja – Standards of Performance for Petroleum Refineries, the owner/operator shall submit a permit application the District for NOx and flaring applicability and revise the Title V permit if necessary. (Regulation 2-1-403)
12. Deleted (vacuum exhaust routed from S19, Vacuum Heater to refinery fuel gas recovery system, S9, Facility B2626)
13. Deleted (vacuum exhaust routed from S19, Vacuum Heater to refinery fuel gas recovery system, S9, Facility B2626)
14. Total asphalt plant emissions shall not exceed the limits listed below:
 - a. Non-Methane Hydrocarbons..... 42.705 tons/yr
 - b. Sulfur Dioxide, SO2..... .. 28.049 tons/yr
 - c. Nitrogen Oxides, as NO2..... 40.047 tons/yr(Cumulative Increase)
15. Asphalt plant wastewater and refinery wastewater shall not be used for dust control at this facility. (Cumulative Increase)
- 16a. The permit holder shall perform a source test at S19, Vacuum Heater, every 6 months to determine compliance with the NOx limit in part I.8 of this condition and the CO limits in parts I.5b and I.5c of this condition. The source test shall be performed at the highest duty possible for the prevailing process conditions. All source testing shall be done in accordance with the District's Manual of Procedures. The facility shall receive approval from the District's Source Test Manager for installation of test ports and source testing procedures. The results shall be delivered to the District no later than 45 days from the date of the source test. (Cumulative Increase, BACT)
- 16b. Deleted (basis: requirement no longer applicable since exhaust from S18 Crude Unit routed from the S19, Vacuum Heater to the refinery fuel gas recovery system, S9, Facility B2626)
17. A/C source test condition, deleted.
18. To assure compliance with part I.14 of Condition 1240, the permit holder shall perform the following monitoring on a semi-annual basis, starting on January 1 of each year. [\(Cumulative Increase\)](#)
- 18a. The permit holder shall estimate emissions of Non-methane hydrocarbons (NMHC) and nitrogen oxides for each quarter. [\(Cumulative Increase\)](#)

- 18b. The permit holder shall estimate fugitive NMHC emissions from valves, flanges, pumps, and compressors using the draft “California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities” dated February 1999, or later version. [\(Cumulative Increase\)](#)
- 18c. The permit holder shall estimate tank NMHC emissions from the following tanks using the most recent version of EPA’s “Tanks” program or EPA publication AP-42: S3, S5-S9, S-12, S13, [S26, S28](#), S37, S38, S51-S53, S59-S63, S65, [S-67 and S70](#). [\(Cumulative Increase\)](#)
- 18d. The permit holder shall estimate NMHC emissions from the following loading racks using EPA publication AP-42: S16, S17, S31, S54. [\(Cumulative Increase\)](#)
- 18e. ~~Deleted. S-27, S-41 and S-66 have been shutdown. Untreated BAP wastewater is now transferred to refinery for treatment. S-67 is now in untreated wastewater service. The permit holder shall estimate NMHC emissions from the following wastewater sources using the most recent version of EPA’s “Water” program: S27, S41, S66, S67. The permit holder may use maximum potential to emit in place of measured throughput.~~
- 18f. The permit holder shall estimate NMHC emissions from the following combustion sources: S19-S21. The permit holder shall use fuel measurements for each fuel, the F-factor method in EPA Method 19, and the average concentration in the last source test for these estimates. [\(Cumulative Increase\)](#)
- 18g. The permit holder shall estimate NMHC emissions from the following combustion sources: S24, S34, A17, A31. The permit holder shall use the maximum capacity as an estimate of the fuel usage, and the appropriate emission factor from EPA publication AP-42. The permit holder shall estimate NMHC emissions from S68 and S71. The permit holder shall use the maximum capacity as an estimate of the fuel usage, the actual hours of operation, and the appropriate emission factor from EPA publication AP-42. [\(Cumulative Increase\)](#)
- 18h. The permit holder shall estimate emissions of nitrogen oxides (NOx) from the following combustion sources: S19-S21. The permit holder shall use fuel measurements for each fuel, the F-factor method in EPA Method 19, and the average concentration in the last source test for these estimates. [\(Cumulative Increase\)](#)
- 18i. The permit holder shall estimate emissions of nitrogen oxides (NOx) from the following combustion sources: S24, S34, A17, A31. The permit holder shall use the maximum capacity as an estimate of the fuel usage, and the appropriate emission factor from EPA publication AP-42. The permit holder shall estimate NOx emissions from S68 and S71. The permit holder shall use the maximum capacity as an estimate of the fuel usage, the actual hours of operation, and the appropriate emission factor from EPA publication AP-42. [\(Cumulative Increase\)](#)

- 18j. Within 30 days after the end of each semi-annual period, the permit holder shall calculate the emission estimates required by parts I.18b through 18i for the quarter, summarize the emission estimates for the period, and for the previous period. If the emission estimates exceed the limits in part I.14 of Condition 1240, the permit holder shall report non-compliance with part I.14 of this condition in accordance with Standard Condition I.F of the Title V permit. The emissions estimates shall be kept on-site for a minimum of five years and be made available to District staff upon request. (Cumulative Increase)
19. The Owner/Operator shall install continuous temperature monitoring and recording device for A17, Incinerator. The Owner/Operator shall operate A17, Incinerator at a minimum temperature of 1570F. The District may adjust this minimum temperature, if source test data demonstrates that an alternate temperature is necessary for or capable of maintaining compliance with Part II.68. (2-6-503)
- 19a. The temperature limit in part I.19 shall not apply during an "Allowable Temperature Excursion", provided that the temperature controller setpoint complies with the temperature limit. An Allowable Temperature Excursion is one of the following:
- a. A temperature excursion not exceeding 20 degrees F; or
 - b. A temperature excursion for a period or periods which when combined are less than or equal to 15 minutes in any hour; or
 - c. A temperature excursion for a period or periods which when combined are more than 15 minutes in any hour, provided that all three of the following criteria are met.
 - i. the excursion does not exceed 50 degrees F;
 - ii. the duration of the excursion does not exceed 24 hours; and
 - iii. the total number of such excursions does not exceed 12 per calendar year (or any consecutive 12 month period).

Two or more excursions greater than 15 minutes in duration occurring during the same 24-hour period shall be counted as one excursion toward the 12 excursion limit. (basis: Regulation 2-1-403)

- 19b. For each Allowable Temperature Excursion that exceeds 20 degrees F. and 15 minutes in duration, the Permit Holder shall keep sufficient records to demonstrate that they meet the qualifying criteria described above. Records shall be retained for a minimum of five years from the date of entry, and shall be made available to the District upon request. Records shall include at least the following information:
- a. Temperature controller setpoint;
 - b. Starting date and time, and duration of each Allowable Temperature Excursion;
 - c. Measured temperature during each Allowable Temperature Excursion;

- d. Number of Allowable Temperature Excursions per month, and total number for the current calendar year; and
 - e. All strip charts or other temperature records.
(basis: Regulation 2-1-403)
- 19c. For the purposes of parts I.19a and I.19b, a temperature excursion refers only to temperatures below the limit. (basis: Regulation 2-1-403)
- 19d. The owner/operator shall conduct District approved source tests at A-17 to determine initial compliance with the limits in parts II.68. The owner/operator shall submit the source test results to the District staff no later than 60 days after the source test. (basis: Cumulative Increase)
- 19e. The owner/operator shall obtain approval for all source test procedures from the District's Source Test Section prior to conducting any tests. The owner/operator shall comply with all applicable testing requirements as specified in Volume V of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section, in writing, of the source test protocols and projected test dates at least 7 days prior to testing. (basis: RACT, Cumulative Increase)
20. Deleted. Application 9297
- II. TANKAGE AND LOADING RACK CONDITIONS:
- 1. Deleted in Revision 2. Ownership of S2 transferred to Facility B5574 by Application No. 7980/8915.
 - 2. Deleted 5/01. Redundant with condition 1240 II.26.
 - 3. Deleted 07/20/99. Redundant with condition 1240 II.27.
 - 4. Deleted 07/20/99. Redundant with condition 1240 II.54.
 - 5. Deleted 07/20/99. Redundant with condition 1240 II.60.
 - 6. Deleted (basis: requirement no longer applicable since exhaust from S18 Crude Unit routed from the S19, Vacuum Heater to the refinery fuel gas recovery system, S9, Facility B2626)
 - 7. Deleted 07/20/99. Redundant with condition 1240 II.51.
 - 8. The owner/operator shall abate emissions from Source S-17 with Abatement device A-17, Incinerator during all periods of loading operation. (Cumulative Increase)
 - 9. **Deleted 08/12/99.**

10. Delete. (Source S25 is permanently removed from service)

S1 Crude Oil Storage Tank 1A, External Floating Roof,
Capacity: 3,419,000 Gallons

S2 Crude Oil Storage Tank, External Floating TK-1B,
Capacity: 3,419,000 Gallons

S4 Crude Oil Storage Tank, External Floating Roof,
TK-10A, Capacity: 1,382,000 Gallons

S23 Crude Oil Storage Tank, External Floating Roof,
TK-10B, Capacity: 1,382,000 Gallons

Conditions 11-24 Deleted in Revision 2. Ownership of S1, S2, S4, and S23 transferred to Facility B5574 by Application No. 7980/8915.

S9 Internal Floating Roof Tank, TK-7; Capacity:
571,200 Gallons, White, Storing: Naphtha equipped with a mechanical shoe primary seal, rim mounted secondary seal, and welded deck

25. Material other than Naphtha may be throughput to or stored in S9, if all of the following are satisfied:

- a. the storage of each material complies with all other conditions applicable to this source
- b. the storage of each material complies with all other applicable regulatory requirements
- c. the permittee keeps District approved records that demonstrate to the District's satisfaction that no toxin listed in Table 2-5-1 is emitted from S9 in an amount in excess of the toxin's respective trigger level set forth in Table 2-1-5. (cumulative increase, toxics)

27. The true vapor pressure of each and all material stored in S9 shall not exceed 11 psia. (cumulative increase, toxics)

27a. S9 shall not be operated unless it is equipped with a District approved internal floating roof with a mechanical shoe primary seal, a rim mounted secondary seal, and a welded deck. (cumulative increase, NSPS)

28. The total throughput of all liquid materials to S9 shall not exceed 24,019,000 gallons (571,880 barrels) in any rolling 12 consecutive month period. (cumulative increase, toxics)

29. On a monthly basis, the permittee shall record in a District approved log the total volume of each and all liquid materials throughput to S9 each month and each rolling 12 consecutive month period, in gallon units or barrel units. This log shall be retained for at least 5 years from date of

entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)

- S13 Fixed Roof Storage Tank (TK-8); Capacity: 88,000 Gallons, Storing: Kerosene, Light or Heavy Vacuum Gas Oil, and Asphalt abated by (either) A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S13 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S13 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S59 Fixed Roof Storage Tank (TK-5); Capacity: 1,050,000 Gallons, Storing: Kerosene, Light or Heavy Vacuum Gas Oil and Asphalt, abated by A1 or A3 Mist Eliminator F-8 (or) F-10 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S59 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S59 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S63 Kerosene/Light Vacuum Gas Oil/Heavy Vacuum Gas Oil/Asphalt Storage Tank, Fixed Roof, TK-31, Capacity: 1,218,000 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S63 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S63 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
30. Petroleum materials other than Kerosene, Light or Heavy Vacuum Gas Oil, and Asphalt may be stored in S13, S59, and S63 if all of the following are satisfied:
- a. the storage of each petroleum material complies with all other conditions applicable to S13, S59, or S63.
 - b. the storage of each petroleum material complies with all other applicable regulatory requirements
 - c. the permittee keeps District approved records which demonstrate to the District's satisfaction that no toxin listed in Table 2-1-5 is emitted from S13, S59, or S63 in an amount in excess of the toxin's respective trigger level set forth in Table 2-1-5.
- (cumulative increase, toxics)
31. The true vapor pressure of each material stored in S13, S59, or S63 shall not exceed 1.5 psia. (cumulative increase, toxics)

- 31a. To assure compliance with the limit in part II.31, the permit holder shall take a sample from each tank on an annual basis and determine the true vapor pressure of the sample. Records of these analyses shall be retained for at least 5 years from the date of the analysis, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase, toxics)
- 32a. The owner/operator shall maintain and operate A31 Thermal Oxidizer H-4607 and S24 Hot Oil Heater H-4603; with an overall collection and destruction efficiency of at least 98.5%, by weight whenever petroleum and VOC materials are stored and/or transferred at S3, S5, S6, S7, S8, S-12, S13, S26, S285, S31, S37, S38, S41, S51, S52, S53, S54, S59, S60, S61, S62, S63, S65, S676 and S70. (Regulation 8-5-306, NSPS, cumulative increase, BACT, toxics)
- 32b. Deleted. Combined with Part 32a.
- 32c. Deleted. Combined with Part 32a.
- 32d. Deleted. Redundant with Regulation 8-18.
- 32e. To monitor compliance with the standard in 40 CFR 60.112b(a)(3)(i) for fugitive emissions at closed vent systems, the owner/operator shall inspect the closed vent systems that control S13, S59, and S63 using EPA Method 21 on a semi-annual basis. (Regulation 2-6-503)
- 33a. The total combined throughput of all materials to S13, S59, and S63 shall not exceed 68,208,000 gallons (1,624,600 barrels) in any rolling 12 consecutive month period. (cumulative increase, toxics)
- 33b. Cutback asphalt materials including but not limited to SC Cutback Asphalt, MC Cutback Asphalt, and FM-1 Cutback Asphalt and other cutback asphalt materials shall NOT be stored in or transferred to S63. (toxics)
34. On a monthly basis, the permittee shall record in a District approved log the total volume of each liquid material throughput to S13, S59, or S63 by material name (e.g., kerosene, light vacuum gas oil, heavy vacuum gas oil, asphalt) each month and each rolling 12 consecutive month period, in gallon units or barrel units. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)
40. Deleted May, 2001

41. Deleted May, 2001

42. Deleted May, 2001

43. Deleted May, 2001

44. Deleted May, 2001

S3 Fixed Roof Storage Tank, TK-4601C, Storing: Heavy Vacuum Gas Oil, Capacity: 3,415,000 Gallons operated with a District approved vapor recovery system and abated by (either) A3 or A20 Mist Eliminator F-4610 or F-500 and A31 Thermal Oxidizer H-7. If A31 and the vapor recovery blower are inoperative, S3 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S3 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

S12 Fixed Roof Storage Tank, TK-4606, Storing: ~~Heavy Vacuum Gas Oil and/or effluent-Untreated~~ wastewater, Capacity: 571,000 Gallons operated with a District approved vapor recovery system and abated by (either) A-1 or A3 Mist Eliminator F-4608 or F-4610 and A31 Thermal Oxidizer H-7. If A31 and the vapor recovery blower are inoperative, S12 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S12 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

40. Materials other than Heavy Gas Oil may be stored in S3 ~~and S12~~, if all of the following are satisfied:

- a. the storage of each petroleum material complies with all other conditions applicable to S3 ~~and S12~~
- b. the storage of each petroleum material complies with all other applicable regulatory requirements including Regulation 2-1-123
- c. the permittee keeps District approved records that demonstrate to the District's satisfaction that no toxin listed in Table 2-5-1 is emitted from S3 ~~and S-12~~ in an amount in excess of the toxin's respective trigger level set forth in Table 2-5-1. (cumulative increase, toxics)

41. The permittee shall ensure that at least 38,300,000 gallons (the 1996 calendar year baseline throughput to S3) of gas oil is throughput exclusively to S3 ~~and/or S12~~ for storage during every rolling 12 consecutive month period, prior to transferring/storing gas oil material into another vessel for which VOC emissions are not abated with a destruction efficiency of at least 98.5%, by weight. (offsets)

42. The true vapor pressure of each and all material stored in S3 ~~and S12~~ shall not exceed 0.5 psia. (cumulative increase, NSPS)
43. Deleted. Combined with Part 32a.
44. Deleted. Redundant with Regulation 8-18.
45. All tank fittings present at S3 ~~and S12~~ shall be gasketted. (BACT)
46. At the conclusion of each month, the permittee shall record in a District approved log the total volume of each and all liquid materials throughput to S3 ~~and S12~~ during that month and for each rolling 12 consecutive month period, in gallon units or barrel units. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)
47. Deleted 11/29/99. Start-up condition
- S5 Asphalt Storage Tank, Fixed Roof, TK-2A, Capacity: 3,415,000 Gallons abated by either A1 or A3 Mist Eliminator F-8 or F-10 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S5 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S5 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S6 Asphalt Storage Tank, Fixed Roof, TK-2B, Capacity: 3,415,000 Gallons abated by either A1 or A3 Mist Eliminator F-8 or F-10 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S6 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S6 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S7 Asphalt Storage Tank, Fixed Roof, TK-3, Capacity: 1,050,000 Gallons abated by either A1 or A3 Mist Eliminator F-8 or F-10 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S7 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S7 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S8 Asphalt Storage Tank, Fixed Roof, TK-4, Capacity: 1,050,000 Gallons abated by either A1 or A3 Mist Eliminator F-8 or F-10 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative,

- S8 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S8 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S37 Asphalt Storage Tank, Fixed Roof, TK 54, Capacity: 100,000 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S37 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S37 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S38 Asphalt Storage Tank, Fixed Roof, TK-55, Capacity: 100,000 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S38 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S38 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S51 Asphalt Storage Tank TK-506; Fixed Roof Tank, Capacity: 152,880 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S51 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S51 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S52 Asphalt Storage Tank TK 507, Fixed Roof Tank, Capacity: 152,880 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S52 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S52 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S53 Asphalt Storage Tank TK 508, Fixed Roof Tank, Capacity: 152,880 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S53 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S53 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

- S60 Asphalt Storage Tank TK-505; Fixed Roof, Capacity: 15,000 Gallons abated by (either) A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S60 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S60 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S61 Asphalt Storage Tank, Fixed Roof, TK-30A, Capacity: 995,400 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S61 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S61 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S62 Asphalt Storage Tank, Fixed Roof, TK-30B, Capacity: 995,400 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S62 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S62 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S65 Asphalt Storage Tank, Fixed Roof, TK-32 Tank Capacity: 6,920,000 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S65 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S65 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S70 Asphalt Additive Mixing Tank, Fixed Roof, Tank Capacity: 2,200 Gallons abated by A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S70 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S70 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
48. The sum total asphalt throughput to S5, S6, S7, S8, S37, S38, S51, S52, S53, S60, S61, S62, and S65 shall not exceed 6,738,349 barrels (283,010,658 gallons) in any 12 consecutive month period. (cumulative increase, offsets)

49. For S5, S6, S7, S8, S37, S38, S51, S52, S53, S60, S61, S62, S65, S70: Cutback asphalt materials including but not limited to SC Cutback Asphalt, MC Cutback Asphalt, and FM-1 Cutback Asphalt and other cutback asphalt materials shall not be stored in or transferred to any of the above tanks. (toxics)
50. For S5, S6, S7, S8, S37, S38, S51, S52, S53, S60, and S70: the true vapor pressure of each and all materials stored in each tank shall not exceed 0.5 psia. (cumulative increase, offsets)
51. For S61 and S62, the true vapor pressure of each and all materials stored in each tank shall not exceed 0.49 psia. (cumulative increase, offsets, BACT)
52. For S65, the true vapor pressure of each and all materials stored in S65 shall not exceed 0.49 psia. (cumulative increase, offsets, BACT)
53. Deleted. Redundant with Regulation 8-18.
54. Deleted May, 2001.
55. Deleted. Combined with Part 32a
56. Deleted. Combined with Part 32a
57. Deleted. Combined with Part 32a
58. Separately, for each of S5, S6, S7, S8, S37, S38, S51, S52, S53, S60, S61, S62 S65, and S70, at the conclusion of each month, the permittee shall record, by material name, in a District approved log, the total volume of each liquid material throughput to each tank during that month and during each rolling 12 consecutive month period, in gallon units or barrel units. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)
- 58a. Deleted Application 17468.
- 58b. The Owner/Operator shall install and properly maintain continuous temperature monitoring and recording devices for A31, Thermal Oxidizer (H-4607) and S24, Hot Oil Heater (H-4603). The Owner/Operator shall operate A-31 with a minimum combustion zone temperature of 1400F to maintain a 98.5% destruction efficiency, whenever emissions are vented to it by one or more operational vapor recovery blowers in organic vapor service. The Owner/Operator shall operate S-24 at a minimum operating

temperature of 1115F to maintain a 98.5% destruction efficiency, whenever emissions are vented to it by one or more vapor recovery blowers in organic vapor service. (Source Test Requirements demonstrating compliance with the 98.5% abatement destruction efficiency and the Regulation 6-310 grain loading requirements were completed February 28 and 29, 2004.) (Applications 12704 for A-31 and Application 12236 for S-24 have been submitted for the Title V permit revisions) (Basis: 40 CFR 60.113b(c)(1)(ii) and 60.113b(c)(2); 40 CFR 60.473c; 40 CFR 61.354(c)(1); 40 CFR 61.354(c)(4), Regulation 2-6-409.2.2, 2-6-414)

- 58c. The temperature limit in Part II.58b for A-31 shall not apply during an "Allowable Temperature Excursion", provided that the temperature controller set point remains at a minimum of 1,400°F. An Allowable Temperature Excursion is one of the following:
- a. A temperature excursion not exceeding 20°F; or
 - b. A temperature excursion for a period or periods which when combined are less than or equal to 15 minutes in any hour; or
 - c. A temperature excursion for a period or periods which when combined are more than 15 minutes in any hour, provided that all three of the following criteria are met.
 - i. the excursion does not exceed 50°F;
 - ii. the duration of the excursion does not exceed 24 hours; and
 - iii. the total number of such excursions does not exceed 12 per calendar year (or any consecutive 12 month period).

Two or more excursions greater than 15 minutes in duration occurring during the same 24-hour period shall be counted as one excursion toward the 12 excursion limit. (basis: Regulation 2-1-403)

- 58d. For each Allowable Temperature Excursion that exceeds 20°F. and 15 minutes in duration, the Permit Holder shall keep sufficient records to demonstrate that they meet the qualifying criteria described above. Records shall be retained for a minimum of five years from the date of entry, and shall be made available to the District upon request. Records shall include at least the following information:
- a. Temperature controller setpoint;
 - b. Starting date and time, and duration of each Allowable Temperature Excursion;
 - c. Measured temperature during each Allowable Temperature Excursion;
 - d. Number of Allowable Temperature Excursions per month, and total number for the current calendar year; and
 - e. All strip charts or other temperature records.
- 58e. For the purposes of parts II.58c and II.58d, a temperature excursion refers only to temperatures below the limit. (basis: Regulation 2-1-403)

- 58f. For the purposes of parts II.58c and II.58d, a temperature excursion occurs only when one or more vapor recovery system blowers is operating in organic vapor service, and is vented to A-31. When a blower is used to start up A-31, the blower is in “fresh air” service and not in organic vapor service, until A-31 meets the minimum operating temperature and is acceptable to receive organic vapors. (basis: Regulation 2-1-403)
59. Deleted (S14 is no longer in service)
60. Deleted (S14 is no longer in service)
61. Deleted (S14 is no longer in service)
- S15. Deleted (S15 is no longer in service, the gas oil stream is routed to the Refinery for further processing)
62. Deleted (S15 is no longer in service, the gas oil stream is routed to the Refinery for further processing)
63. Deleted (S15 is no longer in service, the gas oil stream is routed to the Refinery for further processing)
64. Deleted (S15 is no longer in service, the gas oil stream is routed to the Refinery for further processing)
- S17 Asphalt Loading Racks abated by A2 Mist Eliminator F-9 and A17 Incinerator H-46100
- S31 Rail Car Loading Rack; 5 Loading Arms, Loading: Asphalt and Light Vacuum Gas Oil abated by A6 Mist Eliminator F-3 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S31 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S31 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)
- S54 Asphalt Loading Rack abated by (either) A3 or A20 Mist Eliminator F-10 or F-500 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S54 emissions shall be contained in a District approved closed vent system as specified in Parts 94 and 96. Alternately, S54 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating. (cumulative increase)

65. S17 shall be abated by A2 Mist Eliminator F-9 and A17 Incinerator H-46100 at all times that materials are transferred at S17. (cumulative increase)
66. [Deleted. Combined with Part 64b]
67. [Deleted. Combined with part 64b]
68. Emissions from S17 shall be captured by a District approved vapor recovery system and shall be abated by A2 Mist Eliminator F-9 and A17 Incinerator H-46100 with a destruction efficiency of at least 98.5%, by weight, as measured across A17. (cumulative increase, BACT)
69. Deleted Combined with Part 32a.
70. Deleted. Combined with Part 32a.
71. The true vapor pressure of the materials transferred at or sampled from S17 and/or S 54 shall not exceed 0.5 psia except for 5,500 Barrels per year of kerosene when required to produce medium-cure cutback asphalt products. (cumulative increase, offsets)
72. The true vapor pressure of the materials transferred at or sampled from S31 shall not exceed 1.5 psia, unless the material contains asphalt. (cumulative increase, toxics, offsets)
- 72a. To monitor compliance with the standard in BAAQMD Regulation 8-6-306 for vapor tightness of equipment associated with organic liquid delivery and loading operations at S31, the owner/operator shall inspect the equipment using EPA Method 21 on a quarterly basis. (Regulation 2-6-503)
- 72b. To monitor compliance with the standard in BAAQMD Regulation 8-6-306 for leak-free equipment associated with organic liquid delivery and loading operations at S31, the owner/operator shall inspect the equipment on a quarterly basis. (Regulation 2-6-503)
73. If asphalt or any asphalt containing material or any material blended with asphalt is transferred at or sampled from S31, the true vapor of the material may not exceed 0.5 psia. (cumulative increase, toxics, offsets)
74. The total combined throughput of asphalt and all asphalt containing materials to S17, S31, and S54 shall not exceed 283,011,000 gallons during any consecutive 12-months. (cumulative increase, offsets)

75. The permittee shall maintain a District approved log of the monthly throughput of asphalt and all asphalt containing materials to S17, S31, and S54 in gallon units or barrel units during each month and during each rolling 12 consecutive month period, in gallon units or barrel units. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request.
(cumulative increase)

76. Deleted May, 2001.

77. Deleted May, 2001.

78. Deleted May, 2001.

79. Deleted May, 2001.

80. Deleted May, 2001.

81. Deleted May, 2001.

82. Deleted May, 2001.

S66 ~~Deleted (S66 is no longer in service, the untreated wastewater stream is routed to the Refinery for further processing). Oil Water Separator, Physical Capacity: 830 GPM, Permitted Capacity: 210 GPM abated by (either) A1 or A3 Mist Eliminator F-8 or F-10 and A31 Thermal Oxidizer H-4607. If A31 and the vapor recovery blower are inoperative, S66 emissions shall be contained in a District approved closed vent system as specified in Parts 93 and 96. Alternately, S66 emissions shall be vented to source S24, Hot Oil Heater (H-4603), as a backup until A31 is operating.~~
(cumulative increase)

83. ~~Deleted (S66 is no longer in service, the untreated wastewater stream is routed to the Refinery for further processing). The permittee shall ensure that the throughput of liquid material to S66 shall not exceed 110,376,000 gallons per year (210 gallons per minute). (basis: cumulative increase)~~

84. ~~Deleted (S66 is no longer in service, the untreated wastewater stream is routed to the Refinery for further processing). The cover and each access opening at S66 shall be equipped with a gasketed, vapor tight cover (as defined in Regulation 8, Rule 8). Each cover and access opening shall be kept closed and sealed except when the opening is being used for inspection, maintenance, or wastewater sampling. (basis: Reg. 8, Rule 8)~~

85. Deleted. Combined with Part 32a.

86. Deleted. Redundant with Regulation 8-18.

87. ~~Deleted (S66 is no longer in service, the untreated wastewater stream is routed to the Refinery for further processing). Not less frequently than on a monthly basis, the permittee shall measure and record the volume (in gallons) of oil (slop oil) product recovered at S66 and not less frequently than on a monthly basis, the permittee shall measure and record the volume (in gallons) of waste water product recovered at S66 (waste water discharge to City of Benicia). The sum of the volume of slop oil product and the volume of wastewater product shall recorded in a District approved log as the throughput of liquid material to S66. (basis: cumulative increase)~~

88. ~~Deleted (S66 is no longer in service, the untreated wastewater stream is routed to the Refinery for further processing). On a monthly basis, the permittee shall record in a District approved log the total volume of all liquid materials throughput to S66 each month, in gallon units or barrel units. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (basis: cumulative increase)~~

89. Deleted 2001.

S16 Truck Loading Rack-Heavy Vacuum Gas Oil

90. The true vapor pressure of the materials transferred at and/or sampled from S16 shall not exceed 0.49 psia. (cumulative increase)

91. The total throughput of materials transferred through S16 shall not exceed 25,749,000 gallons (613,000 barrels) during any consecutive 12-months. (cumulative increase)

91a. The permittee shall maintain a District approved log of the monthly throughput of materials transferred at S16 in gallon units or barrel units during each month and during each rolling 12 consecutive month period, in gallon units or barrel units. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)

S41, ~~Deleted (S41 is no longer in service, the untreated wastewater stream is routed to the Refinery for further processing). Wemco Hydrocleaner Induced Air Flotation Machine, abated by A1 or A3 Mist Eliminator F-8 or F-10 and S24 Hot Oil Furnace H-3 or A31 Thermal Oxidizer.~~

92. ~~Deleted (S41 is no longer in service, the untreated wastewater stream is routed to the Refinery for further processing). The permittee shall ensure that the throughput of liquid material to S41 shall not exceed 77,263,200 gallons per year (147 gallons per minute). (basis: cumulative increase)~~
- 92a. ~~Deleted (S41 is no longer in service, the untreated wastewater stream is routed to the Refinery for further processing). The permittee shall maintain a District approved log of the monthly throughput of liquid material transferred to S41 in gallon units during each month and during each rolling 12 consecutive month period. This log shall be retained for at least 5 years from date of entry, shall be kept on site, and shall be made available to the District staff on request. (cumulative increase)~~
93. The following sources, which shall be operated with a District approved closed vent system, are connected to vapor recovery collection header #1 and vapor recovery blower B-4608 or spare blower B-46501: S5, S6, S7, S8, S12, ~~S26, S-28S25, S41~~, S59, and S67~~6~~. Emissions are contained in the closed vent collection header whenever a blower is not operating, as long as no P/V valve in the header is lifting. The pressure of each of the three headers at a representative location shall be monitored at least once every 8 hours, whenever the vapor recovery blower is not operating. If the manometer pressure of any header exceeds 0.5 ounces (0.87 inches of water column), A-31 or S-24 shall be restarted and emissions conveyed to it by the blower. (basis: cumulative increase)
94. The following sources, which shall be operated with a District approved closed vent system, are connected to vapor recovery collection header #2 and vapor recovery blower B-46500 or spare blower B-46501: S3, S13, S37, S38, S51, S52, S53, S54, S60, S61, S62, S63, S65, and S70. Emissions are contained in the closed vent collection header whenever a blower is not operating, as long as no P/V valve in the header is lifting. The pressure of the each of the three headers at a representative location shall be monitored at least once every 8 hours, whenever the vapor recovery blower is not operating. If the manometer pressure of any header exceeds 0.5 ounces (0.87 inches of water column), A-31 or S-24 shall be restarted and emissions conveyed to it by the blower. (basis: cumulative increase)
96. To determine compliance with Parts 93 and 94, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
- a. All manometer pressures of each of the three headers abated by A-31 or S-24

- b. Date and time when the blower is down and which abating equipment (A-31, closed vent system or S-24) is in operation
- c. Reason why the blower is down

All records shall be retained on-site for at least five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (basis: cumulative Increase)

- 96. The owner/operator of S3, S5, S6, S7, S8, S12, S13, ~~S25~~, S26, ~~+~~, S28, S31, S37, S38, S-39, S40, ~~S41~~, S51, S52, S53, S54, S59, S60, S61, S62, S63, S65, ~~S66~~, S67 and S70 shall not use any P/V valve that leaks total organic compounds in excess of 500 ppmv when the vapor recovery blower is not operating. Any exceedance of this limit will result in a violation, except for P/V valve that is subject to Regulation 8-18 and is already on the non-repairable list. (basis: to allow the use of closed vent system in lieu of A-31 or S-24)

97. The owner/operator of S26 shall not exceed 87,249,600 gallons of untreated wastewater during any consecutive twelve-month period. (Basis: Cumulative Increase)

98. The owner/operator of S12 and S28 shall not exceed a combined throughput of 87,249,600 gallons of untreated wastewater during any consecutive twelve-month period. (Basis: Cumulative Increase). (Basis: Cumulative Increase)

97-99. The owner/operator of S67 shall not exceed 87,249,600 gallons of untreated wastewater during any consecutive twelve-month period. (Basis: Cumulative Increase)

100. The Owner/Operator may store alternate liquids(s) other than the materials specified in Parts 97, 98 and 99 and/or usages in excess of those specified in Part 97, 98 and 99 provided that the owner/operator can demonstrate that all of the following are satisfied:

- a. Total POC abated emissions from:
 - S-26 does not exceed 264 pounds;
 - Combined S12 and S28 do not exceed 629 pounds; and
 - S67 does not exceed 196 pounds
 - in any consecutive twelve month period;
 - b. The use of these materials does not increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5
- (Basis: Cumulative Increase; Toxics)

101. To determine compliance with Parts 97, 98, 99 and 100, the owner/operator shall maintain the following records and provide all of

the data necessary to evaluate compliance with the above parts, including the following information:

- a. Quantities of each type of liquid stored at these sources on a monthly basis
- b. If a material other than those specified in parts 97, 98 and 99 is stored, POC and toxic component contents of each material used; and mass emission calculations to demonstrate compliance with Part 100, on a monthly basis;
- c. Monthly throughput and /or emission calculations shall be totaled for each consecutive twelve-month period

All records shall be retained on-site for at least five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (Basis: Cumulative Increase)

III. MARINE OPERATIONS CONDITIONS-S30, Part 1 through 9, deleted because S30 was not in service since April 5, 2005
(Cumulative Increase)

IV. ODOR REDUCTION MEASURES (Added per AN 14513, 9/95)

* Any condition that is preceded by an asterisk is not federally enforceable.

- *1. The permit holder will maintain water seals, P-traps, caps, covers or equivalent on all process water drains. (1-301)
- *2. The permit holder will implement an Asphalt Tank Truck Dome Inspection Program for all asphalt tank trucks that they load. If a truck enters the facility with a leaking or malfunctioning dome lid, the permit holder will take the following action.
 - *a. First occurrence in rolling twelve month period: the permit holder will orally notify the truck driver and dispatcher of the faulty dome lid, and request that the lid be repaired prior to the truck re-entering the facility.
 - *b. Second occurrence in a rolling twelve month period: the permit holder will notify the driver and the trucking company in writing that if the truck enters the facility again with a malfunctioning dome hatch, the permit holder will not load the truck until the hatch has been repaired.
 - *c. Third occurrence in a rolling twelve-month period: the permit holder will not load the truck. The permit holder will also notify the driver and dispatcher, verbally and in writing, that the truck will not be loaded until the hatch has been repaired, and the repair has been inspected or repair

documentation has been received by the permit holder to ensure that the hatch is in proper working order.

*The permit holder shall keep records of all inspections and notifications. These records shall be made available to the District upon request. (1-301)

- *3. The permit holder shall provide written notification of the Asphalt Tank Truck Dome Inspection Program to any additional trucking company that may do business with the permit holder in the future, within two weeks of the first asphalt receipt. (1-301)

V. OTHER SOURCES

S24 Hot Oil Heater H-4603; Max Firing Rate 9 MM BTU/hr

- 1. Respective emissions of nitrogen oxides, and carbon monoxide (CO) from S24 shall not exceed 30 ppm and 50 ppm at 3% O₂. (Cumulative Increase)

IX. RECOMMENDATION

Issue conditional permits to operate to Valero Refining Company for the following equipment:

- S-12 Untreated Wastewater Fixed Roof Tank, TK-4606, 571,000 gallon capacity, abated by A31 Thermal Oxidizer H-4607 and/or S24 Hot Oil Heater H-4603**
- S-26 Untreated Wastewater Fixed Roof Tank, TK-4613, 3,800 gallon capacity, abated by A31 Thermal Oxidizer H-4607 and/or S24 Hot Oil Heater H-4603**
- S-28 Untreated Wastewater Fixed Roof Tank, TK-4611B, 88,000 gallon capacity, abated by A31 Thermal Oxidizer H-4607 and/or S24 Hot Oil Heater H-4603**
- S-67 Untreated Wastewater Fixed Roof Tank, TK-4612B, 5,900 gallon capacity, abated by A31 Thermal Oxidizer H-4607 and/or S24 Hot Oil Heater H-4603**

*Thu H. Bui
Senior Air Quality Engineer
Engineering Division*

Date: