



OCT 17 2012

Mark J. Pishinsky
Veneco, Inc.
1518 Mill Rock Way, Suite 100
Bakersfield, CA 93311

**Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1122816**

Dear Mr. Pishinsky:

Enclosed for your review and comment is the District's analysis of Veneco, Inc.'s application for an Authority to Construct for four new 500 bbl oil storage tanks served by a vapor control system vented to a flare, at the Bowerbank well pad near the Belridge Oil Field within the SE/4 of Section 9, Township 29S, Range 24E MDBM.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. David Torii of Permit Services at 661-392-5620.

Sincerely,



David Warner
Director of Permit Services

DW: DBT/cm

Enclosures



OCT 17 2012

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1122816

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The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

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Sincerely,

David Warner
Director of Permit Services

DW: DBT/cm

Enclosure

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Veneco, Inc. for four new 500 bbl oil storage tanks served by a vapor control system vented to a flare, at the Bowerbank well pad near the Belridge Oil Field within the SE/4 of Section 9, Township 29S, Range 24E MDBM.

The analysis of the regulatory basis for this proposed action, Project #S-1122816, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, REGION'S ADDRESS.**

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
New Tank Battery

Facility Name: Veneco, Inc.
Mailing Address: 1518 Mill Rock Way, Suite 100
Bakersfield, CA 93311
Contact Person: Mark J. Pishinsky
Telephone: 661-617-8939
Fax: 661-617-8978
E-Mail: Mark.Pishinsky@venecoinc.com
Application #(s): S-8185-1-0, '2-0, '3-0, '4-0 and '5-0
Project #: 1122816
Deemed Complete: 8/16/12

Engineer: David Torii
Lead Engineer: Allan Phillips

ASMR ADZ
OCT 04 2012

I. Proposal

Veneco, Inc. (Veneco) has requested Authorities to Construct (ATCs) for four new 500 bbl oil storage tanks (Baker tanks) served by vapor control system vented to a flare.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4311	Flares (6/18/09)
Rule 4409	Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities (4/30/05)
Rule 4623	Storage of Organic Liquids (05/19/05)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)	
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines	

III. Project Location

The equipment will be located at the Bowerbank well pad near the Belridge Oil Field within the SE/4 of Section 9, Township 29S, Range 24E in Veneco's Light Oil Central stationary source. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school.

Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

The proposed tanks store production from the Bowerbank lease prior to transport to a refinery. The four 500 bbl Baker Tanks in this project operate as: one wash tank, one stock tank and two produced water tanks.

VOC emissions from the tanks are controlled to 95% by a shared vapor control system in accordance with tank S-8185-1 that lists the vapor control system permit conditions. The vapor control system collects vapors from the tanks, and routes the vapors to a flare S-8185-5. See process flow diagram in Appendix B.

V. Equipment Listing

Proposed ATCs:

- S-8185-1-0: 500 BBL WASH BAKER TANK WITH VAPOR CONTROL SYSTEM INCLUDING SEPARATOR VESSEL(S) AND A H2S SCRUBBER VENTING TO FLARE S-8185-5 SERVING TANKS S-8185-2, '3 AND '4
- S-8185-2-0: 500 BBL STOCK BAKER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8185-1
- S-8185-3-0: 500 BBL PRODUCED WATER BAKER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8185-1
- S-8185-4-0: 500 BBL PRODUCED WATER BAKER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8185-1
- S-8185-5-0: MACTRONIC AIR ASSISTED PRODUCED GAS FLARE SERVING VAPOR CONTROL SYSTEM LISTED ON S-8185-1

Post Project Equipment Description:

- S-8185-1-0: 500 BBL WASH BAKER TANK WITH VAPOR CONTROL SYSTEM INCLUDING SEPARATOR VESSEL(S) AND A H2S SCRUBBER VENTING TO FLARE S-8185-5 SERVING TANKS S-8185-2, '3 AND '4
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S-8185-5-0: MACTRONIC AIR ASSISTED PRODUCED GAS FLARE SERVING VAPOR CONTROL SYSTEM LISTED ON S-8185-1

VI. Emission Control Technology Evaluation

The tank vapor control system collects vapors from the tanks and routes the vapors to a air-assisted flare equipped with a Mactronic air-assist flare burner (tip) and flow sensing ignition system. Air assist will provide smokeless operation. The combustion efficiency for flares is typically greater than 99%.

VII. General Calculations

A. Assumptions

- Facility will operate 24 hours per day, 7 days per week, and 52 weeks per year.
- Only fugitive VOCs emitted from components in gas and light oil service are calculated.
- Fugitive emissions from heavy oil liquid service components are negligible.
- Flare throughput: 800 MMBtu/day

B. Emission Factors

Pursuant to California Implementation Guidelines for Estimating Mass Emissions of fugitive Hydrocarbon Leaks at Petroleum Facilities, CAPCOA/CARB, February 1999, emissions in this project are calculated using the revised screening emissions factors (see Appendix C for a calculation spreadsheets showing the emission factors used and the resulting emissions).

Pursuant to District FYI 83 the following emission factors from EPA AP-42 section 13.5 Industrial Flares (9/91) represent best data for flares located at oil exploration and production operations, refineries, chemical plants, gas plants, and other petroleum related industries. The subject flare is located at an oil exploration operation; therefore, the emission factors from FYI 18 will be used:

Flare Emission Factors		
Pollutant	lb./MMBtu	Source of Emission Factor
VOC	0.063	EPA AP-42 section 13.5
CO	0.370	EPA AP-42 section 13.5
NOx (as NO2)	0.068	EPA AP-42 section 13.5
PM10 (BACT)	0.008	EPA AP-42 section 13.5
SOx (as SO2)	0.00285	Applicant

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since these are a new emissions units, PE1 = 0 for all pollutants.

2. Post Project Potential to Emit (PE2)

Emissions from the tanks are summarized below; the calculation spreadsheets are included in Appendix C.

Emissions from the flare are calculated as follows:

$$800 \text{ MMBtu/day} \times 0.068 \text{ lb-NOx/MMBtu} = 54.4 \text{ lb-NOx/day}$$

$$800 \text{ MMBtu/day} \times 365 \text{ days/yr} \times 0.068 \text{ lb-NOx/MMBtu} = 19,856 \text{ lb-NOx/day}$$

PE2 (lb/day)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-8185-1-0	0	0	0	0	0.52*
S-8185-2-0	0	0	0	0	0.25
S-8185-3-0	0	0	0	0	0.25
S-8185-4-0	0	0	0	0	0.25
S-8185-5-0	54.4	2.3	6.4	296.0	50.4

*includes emissions from both tank and vapor control system fugitive emission components

PE2 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-8185-1-0	0	0	0	0	190*
S-8185-2-0	0	0	0	0	91
S-8185-3-0	0	0	0	0	91
S-8185-4-0	0	0	0	0	91
S-8185-5-0	19,856	832	2336	108,040	18,396
Total	19,856	832	2336	108,040	18,859

*includes emissions from both tank and vapor control system fugitive emission components

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

Since this is a new facility, there are no valid ATCs, PTOs, or ERCs at the Stationary Source; therefore, the SSPE1 is equal to zero.

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-8185-1-0	0	0	0	0	190
S-8185-2-0	0	0	0	0	91
S-8185-3-0	0	0	0	0	91
S-8185-4-0	0	0	0	0	91
S-8185-5-0	19,856	832	2336	108,040	18,396
SSPE2	19,856	832	2336	108,040	18,859

5. Major Source Determination

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. However, for the purposes of determining major source status, the SSPE2 shall not include the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site."

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, fugitive emissions are not included in the Major Source determination.

Major Source Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	0	0	0	0	0
SSPE2	19,856	832	2336	108,040	18,859
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No

As seen in the table above, the facility is not an existing Major Source and is not becoming a Major Source as a result of this project.

6. Baseline Emissions (BE)

The BE calculation (in lbs/year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 for:

- Any unit located at a non-Major Source,

- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

As shown in Section VII.C.5 above, the facility is not a Major Source for any pollutant.

Therefore BE=PE1.

Since these are new emissions units, BE = PE1 = 0 for all pollutants.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is not a major source for any of the pollutants addressed in this project, this project does not constitute an SB 288 major modification.

8. Federal Major Modification

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification. Additionally, since the facility is not a major source for PM₁₀ (140,000 lb/year), it is not a major source for PM_{2.5} (200,000 lb/year).

9. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix A.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

As seen in Section VII.C.2 above, the applicant is proposing to install a new flare with a PE greater than 2 lb/day for NO_x, SO_x, PM₁₀, CO, and VOC. BACT is triggered for NO_x, SO_x, PM₁₀, and VOC only since the PEs are greater than 2 lbs/day. However BACT is not triggered for CO since the SSPE2 for CO is not greater than 200,000 lbs/year, as demonstrated in Section VII.C.5 above.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

As discussed in Section I above, there are no modified emissions units associated with this project. Therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project does not constitute an SB 288 and/or Federal Major Modification for NO_x emissions. Therefore BACT is not triggered for any pollutant.

2. BACT Guideline

BACT Guideline 1.4.1 applies to the tank vapor control system flare. [Waste Gas Flare - 15.3 MMBtu/hr, Serving a Tank Vapor Control System] (See Appendix D)

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see **Appendix E**), BACT has been satisfied with the following:

- NO_x: Air assist
- PM₁₀: Air assist with Automatic (flow sensing) ignition system
- VOC: Air assist
- SO_x: Automatic (flow sensing) ignition system

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	19,856	832	2336	108,040	18,859
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	No	No

2. Quantity of Offsets Required

As seen above, the SSPE2 is not greater than the offset thresholds for all the pollutants; therefore offset calculations are not necessary and offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSPE2 of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. As shown in Section VII.C.5 above, the SSPE2 is not greater than the Major Source threshold for

any pollutant. Therefore, public noticing is not required for this project for new Major Source purposes.

b. PE > 100 lb/day

The PE2 for S-8185-5-0 is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
NO _x	54.4	100 lb/day	No
SO _x	2.3	100 lb/day	No
PM ₁₀	6.4	100 lb/day	No
CO	296.0	100 lb/day	Yes
VOC	50.4	100 lb/day	No

Therefore, public noticing for PE > 100 lb/day purposes is required.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	0	19,856	20,000 lb/year	No
SO _x	0	832	54,750 lb/year	No
PM ₁₀	0	2336	29,200 lb/year	No
CO	0	108,040	200,000 lb/year	No
VOC	0	18,859	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	0	19,856	19,856	20,000 lb/year	No
SO _x	0	832	832	20,000 lb/year	No
PM ₁₀	0	2336	2336	20,000 lb/year	No
CO	0	108,040	108,040	20,000 lb/year	Yes
VOC	0	18,859	18,859	20,000 lb/year	No

As demonstrated above, the SSIPE for CO was greater than 20,000 lb/year; therefore public noticing for SSIPE purposes is required.

2. Public Notice Action

As discussed above, public noticing is required for this project for CO emissions in excess of 100 lb/day and 20,000 lb/year. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

- S-8185-1-0: VOC fugitive emissions from the components in gas and light oil service on the tank and vapor control system shall not exceed 0.5 lb/day. [District Rule 2201] N
- S-8185-2-0: VOC fugitive emissions from the components in gas and light oil service on the tank and vapor control system shall not exceed 0.3 lb/day. [District Rule 2201] N
- S-8185-3-0: VOC fugitive emissions from the components in gas and light oil service on the tank and vapor control system shall not exceed 0.3 lb/day. [District Rule 2201] N
- S-8185-4-0: VOC fugitive emissions from the components in gas and light oil service on the tank and vapor control system shall not exceed 0.3 lb/day. [District Rule 2201] N

S-8185-5-0: Gas rate to the flare shall not exceed 800 MMBtu per day. [District Rule 2201] N

Emission rates for the flare shall not exceed any of the following: PM10: 0.008 lb/MMBtu, NOx (as NO2): 0.068 lb/MMBtu, VOC: 0.063 lb/MMBtu or CO: 0.37 lb/MMBtu. [District Rule 2201] N

The sulfur content of the gas being flared shall not exceed exceed 1.0 gr S/100scf. [District Rules 2201 and 4801]

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

S-8185-1-0, '2-0, '3-0 and '4-0:

- Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201]

S-8185-5-0:

- Permittee shall keep accurate records of daily and annual flared gas flow rate and heat input in MMBtu/day and MMBtu/yr. [District Rule 2201] N
- Records of the gas sulfur content and required gas flow measurements shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] N
- Permittee shall keep accurate records of annual throughput, material usage, or other information necessary to demonstrate that facility emissions are less than 10 tons NOx/yr and 10 tons VOC/yr for exemption from Rule 4311. [District Rule 4311] N

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to Appendix F of this document for the AAQA summary sheet.

For the AAQA, stack parameter were calculated utilizing District Approved: Flare Modeling Parameter Estimator. The AERMOD model was used, with the parameters and meteorological data for 2005-2009 from Bakersfield to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid.

Technical Services performed modeling for criteria pollutants CO, NO_x, SO_x and PM₁₀; as well as a RMR. The emission rates used for criteria pollutant modeling were 12.3 lb/hr CO, 2.27 lb/hr NO_x, 0.1 lb/hr SO_x, and 0.87 lb/hr PM₁₀.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass ¹	X	X	X	Pass
SO _x	Pass	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass ²	Pass ²
PM _{2.5}	X	X	X	Pass ²	Pass ²

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

Rule 2520 Federally Mandated Operating Permits

Since this facility's potential emissions do not exceed any major source thresholds of Rule 2201, this facility is not a major source, and Rule 2520 does not apply.

Rule 4001 New Source Performance Standards

This rule incorporates the New Source Performance Standards from 40 CFR Part 60. 40 CFR Part 60, Subparts, K, Ka and Kb could potentially apply to the storage tanks located at this facility. However, pursuant to 40 CFR 60.110 (b), 60.110(a) (b), and 60.110(b) (b), these subparts do not apply to storage vessels less than 10,000 bbls, used for petroleum or condensate, that is stored, processed, and/or treated at a drilling and production facility prior to custody transfer.

Therefore, the requirements of this subpart are not applicable to this project.

District Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringelmann 1 or equivalent to 20% opacity.

The flare must comply with BPS which is air assisted with non-automatic or electronic or ballistic ignition. It will combust only natural gas with a sulfur content not exceeding 1.0 gr/100 scf. Compliance is expected.

A permit condition will be listed on the permit as follows:

- {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

Therefore, compliance with District Rule 4101 requirements is expected.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (**Appendix F**), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Rule 4201 Particulate Matter Concentration

A person shall not discharge into the atmosphere from any single source operation particulate matter in excess of 0.1 grains per cubic foot of gas at standard conditions. Natural gas is a clean burning fuel with low post combustion particulate matter content. Compliance is expected.

District Rule 4311 Flares

This rule limits VOC and NOx emissions from flares. Facility S-8185 has a potential to emit less than 10 tons/yr NOx and 10 tons/yr VOCs. Therefore the facility is exempt from all requirements of the rule except the record-keeping requirements of Section 6.2.4. Section 6.2.4 states that "beginning January 1, 2007 facilities claiming an exemption pursuant to Section 4.3 shall record annual throughput, material usage, or other information necessary to demonstrate an exemption under that section." Facility will keep records of annual volumes of

gas combusted in the flares to ensure that NO_x and VOC emissions remain below 10 tons/yr. The following condition is included on the ATC:

Permittee shall keep accurate records of annual throughput, material usage, or other information necessary to demonstrate that facility emissions are less than 10 tons NO_x/yr and 10 tons VOC/yr for exemption from Rule 4311. [District Rule 4311] N

Therefore compliance is expected.

Rule 4409 Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities

This rule serves to limit VOC emissions from components at facilities associated with light crude oil production, natural gas production, and natural gas processing, and requires periodic inspection and necessary maintenance of all subject components in accordance with an operator management plan. The facility produces light oil. Therefore the following conditions will apply:

- {3468} The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409] N
- {3469} By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409] N
- {3470} In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409] N
- {3472} The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and

the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409] N

- {3473} Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409] N
- {3474} Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409] N
- {3471} All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409] N

Compliance with the requirements of this rule is expected.

Rule 4623, *Storage of Organic Liquids*

The purpose of this rule is to limit volatile organic compound (VOC) emissions from the storage of organic liquids. This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored.

Tanks S-8185-1-0 through '4-0

The affected tanks are served by a vapor control system that has a control efficiency of at least 95%. This rule also requires the tank and tank vapor control system to be maintained in a leak-free condition. Leak-free is defined in the rule as no readings on a portable VOC detection device greater than 10,000 ppmv above background and no dripping of organic liquid at a rate of more than 3 drops per minute.

The following conditions are included on the ATCs:

A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201] N

All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] N

Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] N

Compliance with the requirements of this rule is expected.

District Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes. The flare will combust gas with a sulfur content not exceeding 1 gr S/100 scf.

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus, the District is the Lead Agency for this project.

The District's engineering evaluation (this document— **Appendix G**) demonstrates that the proposed storage tanks would not result in an increase in project specific greenhouse gas emissions in excess of 230 metric tons/year. The District therefore concludes that the tanks would have a less than cumulatively significant impact on global climate change.

Per District Policy, project specific greenhouse gas emissions less than or equal to 230 metric tons-CO₂e/year are considered to be zero for District permitting purposes and are exempt from further environmental review.

Project specific impacts on global climate change were evaluated consistent with the adopted District policy – *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The District's engineering evaluation (this document – **Appendix G**) demonstrates that the proposed flare meets Best Performance Standards (BPS).

The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful public noticing period, issue ATCs S-8185-1-0, '2-0, '3-0, '4-0 and '5-0 subject to the permit conditions on the attached draft ATC in **Appendix H**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-8185-1-0	3020-05C	21,000 gallons	\$135
S-8185-2-0	3020-05C	21,000 gallons	\$135
S-8185-3-0	3020-05C	21,000 gallons	\$135
S-8185-4-0	3020-05C	21,000 gallons	\$135
S-8185-5-0	3020-02H	greater than 15.0 MMBtu/hr	\$1030

APPENDIX A
Quarterly Net Emissions Change (QNEC)

Permit #: S-8185-1-0	Last Updated
Facility: VENOCO, INC.	08/18/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	190.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					47.0
Q2:					47.0
Q3:					47.0
Q4:					47.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-8185-2-0	Last Updated
Facility: VENOCO, INC.	08/18/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	91.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					23.0
Q2:					23.0
Q3:					23.0
Q4:					23.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-8185-3-0	Last Updated
Facility: VENOCO, INC.	08/18/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	91.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					23.0
Q2:					23.0
Q3:					23.0
Q4:					23.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-8185-4-0	Last Updated
Facility: VENOCO, INC.	08/18/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	91.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					23.0
Q2:					23.0
Q3:					23.0
Q4:					23.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-8185-5-0	Last Updated
Facility: VENOCO, INC.	08/18/2012 TORID.

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	19856.0	832.0	2336.0	108040.0	18396.0
Daily Emis. Limit (lb/Day)	50.5	2.3	6.4	296.0	50.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	4964.0	208.0	584.0	27010.0	4599.0
Q2:	4964.0	208.0	584.0	27010.0	4599.0
Q3:	4964.0	208.0	584.0	27010.0	4599.0
Q4:	4964.0	208.0	584.0	27010.0	4599.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - PE1, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.

PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.

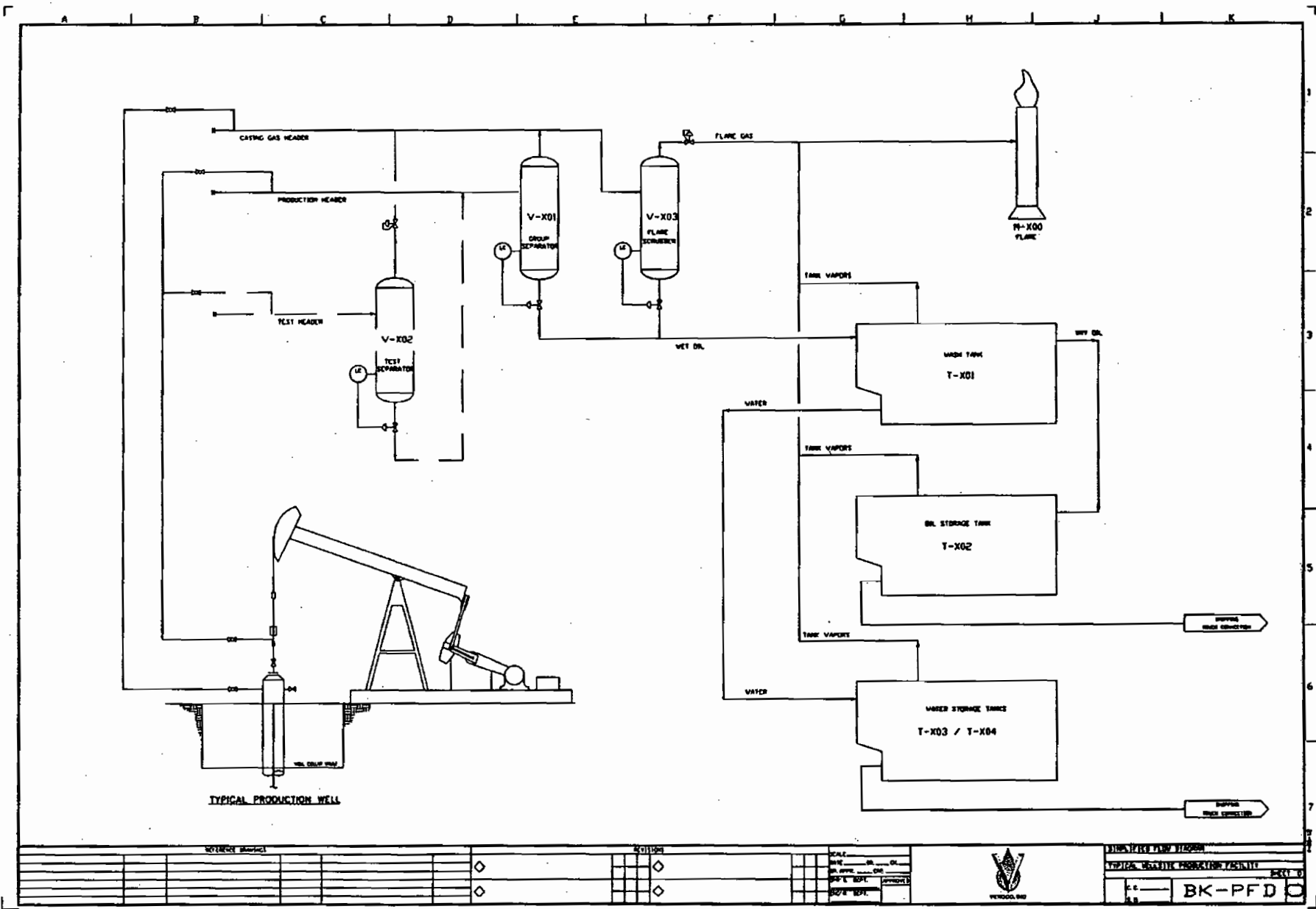
PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

S-8185-1-0 Quarterly NEC [QNEC]					
	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
VOC	190	47	0	0	47

S-8185-2-0, '3-0 and '4-0 Quarterly NEC [QNEC]					
	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
VOC	91	23	0	0	23

S-8185-5-0 Quarterly NEC [QNEC]					
	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	19,856	4,964	0	0	4,964
SO _x	832	208	0	0	208
PM ₁₀	2336	584	0	0	584
CO	108,040	27,010	0	0	27,010
VOC	18,396	4,599	0	0	4,599

APPENDIX B
Process Flow Diagram



TYPICAL PRODUCTION WELL

REVISIONS

REVISIONS

SCALE	DATE
BY	DR.
CHK'D BY	APP'D BY
DATE	PROJECT



TYPICAL PRODUCTION FACILITY	
PAGE 0	
DATE	BK-PFD

APPENDIX C

Tank Emission Calculation Spreadsheets

VENOCO Oil Company
Component Increase from Proposed Modifications
Bower Bank TVR System & Flare

Fugitive Emissions Using Screening Emission Factors

California Implementation Guidelines for Estimating Mass Emissions
of Fugitive Hydrocarbon Leaks at Petroleum Facilities

Table IV-2c. Oil and Gas Production
Screening Value Ranges Emission Factors

Percentage of components with ≥ 10,000 ppmv leaks allowed? 0 %
Weight percentage of VOC in the total organic compounds in gas? 100 %
Weight percentage of VOC in the total organic compounds in oil? 100 %

Equipment Type	Service	Component Count	Total allowable leaking components	Screening Value EF - TOC		TOC emissions (lb/day)
				< 10,000 ppmv (lb/day/source)	> 10,000 ppmv (lb/day/source)	
Valves	Gas/Light Liquid	38	0	1.852E-03	7.333E+00	0.07
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A
Others	Gas/Light Liquid	33	0	7.778E-03	7.281E+00	0.26
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00
Connectors	Gas/Light Liquid	30	0	6.349E-04	1.370E+00	0.02
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00
Flanges	Gas/Light Liquid	120	0	1.482E-03	3.228E+00	0.18
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00

* Emission factor not available. All components from equipment type and service will be assessed as < 10,000 ppmv

Total Organic Compound (TOC) Emissions = 0.5 lb/day

191 lb/yr

Methane Wt % of TOC from Gas Analyses = 53.32 %
CO2 wt % relative to TOC from Gas Analyses = 4.34 %
CO2 Equivalency factor for Methane = 23
Metric Ton = 2204.6 lb

Methane CO2 (eqv) = TOC lb/day x 365 day/yr x % by wt Methane x (CO2 eqv factor) / (lbs/metric ton)

CO2 = TOC lb/day x 365 day/yr x % by wt CO2 / lbs/metric ton

Methane CO2 (eqv) = 1.064 ton/yr
CO2 = 0.004 ton/yr
Total CO2 (eqv) from proposed modification = 1.067 ton/yr

VENOCO Oil Company
Component Increase from Proposed Modifications
500 Bbl Storage Tank

Fugitive Emissions Using Screening Emission Factors

California Implementation Guidelines for Estimating Mass Emissions
of Fugitive Hydrocarbon Leaks at Petroleum Facilities

Table IV-2c. Oil and Gas Production
Screening Value Ranges Emission Factors

Percentage of components with $\geq 10,000$ ppmv leaks allowed? 0 %
Weight percentage of VOC in the total organic compounds in gas? 100 %
Weight percentage of VOC in the total organic compounds in oil? 100 %

Equipment Type	Service	Component Count	Total allowable leaking components	Screening Value EF - TOC		TOC emissions (lb/day)
				< 10,000 ppmv (lb/day/source)	> 10,000 ppmv (lb/day/source)	
Valves	Gas/Light Liquid	5	0	1.852E-03	7.333E+00	0.01
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A
Others	Gas/Light Liquid	25	0	7.778E-03	7.281E+00	0.19
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00
Connectors	Gas/Light Liquid	15	0	6.349E-04	1.370E+00	0.01
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00
Flanges	Gas/Light Liquid	25	0	1.482E-03	3.228E+00	0.04
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00

* Emission factor not available. All components from equipment type and service will be assessed as < 10,000 ppmv

Total Organic Compound (TOC) Emissions = 0.25 lb/day

91 lb/yr

Methane Wt % of TOC from Gas Analyses = 53.32 %
CO2 wt % relative to TOC from Gas Analyses = 4.34 %
CO2 Equivalency factor for Methane = 23
Metric Ton = 2204.6 lb

Methane CO2 (eqv) = TOC lb/day x 365 day/yr x % by wt Methane x (CO2 eqv factor) / (lbs/metric ton)

CO2 = TOC lb/day x 365 day/yr x % by wt CO@ / lbs/metric ton

Methane CO2 (eqv) = 0.508 ton/yr
CO2 = 0.002 ton/yr
Total CO2 (eqv) from proposed modification = 0.510 ton/yr

APPENDIX D
BACT Guideline 1.4.1

[Per » B A C T » Bact Guideline.asp?category Level1=1&category Level2=4&category Level3=1&last Update=11 » 9 :](#)

[Back](#)

**Best Available Control Technology (BACT) Guideline 1.4.1
Last Update: 11/9/1995**

Waste Gas Flare - 15.3 MMBtu/hr, Serving a Tank Vapor Control System

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Steam-assisted or air-assisted when steam unavailable		
NOx	Steam-assisted or air-assisted when steam unavailable		
PM10	Steam-assisted with smokeless combustion or Air-assisted flare with smokeless combustion when steam unavailable. Pilot Light Fired Solely on LPG or Natural Gas		
SOx	Pilot Light Fired Solely on LPG or Natural Gas		
VOC	Steam-assisted or air-assisted when steam unavailable		

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

This is a Summary Page for this Class of Source. For background information, see Permit Specific BACT Determinations on [Details Page](#).

APPENDIX E
Top-Down BACT Analysis

A. NOx

BACT Guideline 1.4.1 lists the controls that are considered potentially applicable to Waste Gas Flare - 15.3 MMBtu/hr, Serving a Tank Vapor Control System. The NOx control measures are summarized below.

Step 1 - Identify All Possible Control Technologies

1. Steam-assisted or air assisted when steam unavailable (Achieved in Practice).

Step 2 - Eliminate Technologically Infeasible Options

Steam is not available

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

The following options are ranked based on their emission factor:

1. Air assist (Achieved in Practice).

Step 4 - Cost Effective Analysis

A cost effective analysis must be performed for all control options in the list from step 3 in the order of their ranking to determine the cost effective option with the lowest emissions.

Only one control technology is identified. The applicant is proposing the use of an air-assisted flare. This type flare is equivalent to the highest ranked technologically feasible option; therefore, a cost effective analysis is not necessary.

Step 5 - Select BACT

Air assist.

B. PM10

BACT Guideline 1.4.1 lists the controls that are considered potentially applicable to Waste Gas Flare - 15.3 MMBtu/hr, Serving a Tank Vapor Control System. The PM10 control measures are summarized below.

Step 1 - Identify All Possible Control Technologies

1. Steam-assisted with Smokeless combustion or Air-assisted flare with smokeless combustion when steam unavailable. Pilot Light Fired Solely on LPG or Natural Gas (Achieved in Practice).
2. Steam-assisted with Smokeless combustion or Air-assisted flare with smokeless

combustion when steam unavailable. Automatic (flow sensing) ignition system (Proposed by applicant and equivalent to above option)

Step 2 - Eliminate Technologically Infeasible Options

Steam is not available

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

The following options are ranked based on their emission factor:

1. Air assist. Pilot Light Fired Solely on LPG or Natural Gas (Achieved in Practice).
2. Air assist. Automatic (flow sensing) ignition system (Proposed by applicant and equivalent to above option)

Step 4 - Cost Effective Analysis

A cost effective analysis must be performed for all control options in the list from step 3 in the order of their ranking to determine the cost effective option with the lowest emissions.

Only one control technology is identified. The applicant is proposing the use of an air-assisted flare with automatic (flow sensing) ignition system. This is equivalent to the highest ranked technologically feasible option; therefore, a cost effective analysis is not necessary.

Step 5 - Select BACT

Air assist with a natural gas-fired pilot.

C. SO_x

BACT Guideline 1.4.1 lists the controls that are considered potentially applicable to Waste Gas Flare - 15.3 MMBtu/hr, Serving a Tank Vapor Control System. The NO_x control measures are summarized below.

Step 1 - Identify All Possible Control Technologies

1. Pilot Light Fired Solely on LPG or Natural Gas (Achieved in Practice).
2. Automatic (flow sensing) ignition system (Proposed by applicant and equivalent to above option)

Step 2 - Eliminate Technologically Infeasible Options

All identified technologies are technologically feasible

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

The following options are ranked based on their emission factor:

1. Pilot Light Fired Solely on LPG or Natural Gas (Achieved in Practice).
2. Automatic (flow sensing) ignition system (Proposed by applicant and equivalent to above option)

Step 4 - Cost Effective Analysis

A cost effective analysis must be performed for all control options in the list from step 3 in the order of their ranking to determine the cost effective option with the lowest emissions.

The applicant is proposing the use of a automatic (flow sensing) ignition system. This is equivalent to the highest ranked technologically feasible option; therefore, a cost effective analysis is not necessary.

Step 5 - Select BACT

Automatic (flow sensing) ignition system

D. VOC

BACT Guideline 1.4.1 lists the controls that are considered potentially applicable to Waste Gas Flare - 15.3 MMBtu/hr, Serving a Tank Vapor Control System. The VOC control measures are summarized below.

Step 1 - Identify All Possible Control Technologies

1. Steam-assisted or air assisted when steam unavailable (Achieved in Practice).

Step 2 - Eliminate Technologically Infeasible Options

Steam is not available

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

The following options are ranked based on their emission factor:

1. Air assist (Achieved in Practice).

Step 4 - Cost Effective Analysis

A cost effective analysis must be performed for all control options in the list from step 3 in the order of their ranking to determine the cost effective option with the lowest emissions.

Only one control technology is identified. The applicant is proposing the use of an air-assisted flare. This type flare is equivalent to the highest ranked technologically feasible option; therefore, a cost effective analysis is not necessary.

Step 5 - Select BACT

Air assist.

APPENDIX F
HRA/AAQA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: David Torii – Permit Services
 From: Kyle Melching – Technical Services
 Date: October 3, 2012
 Facility Name: Venoco, Inc.
 Location: LOC
 Application #(s): S-8185-1-0 thru 5-0
 Project #: S-1122816

A. RMR SUMMARY

	RMR Summary			
Categories	Crude Oil Tanks (Units 1-0 thru 4-0)	NG Flare (Unit 5-0)	Project Totals	Facility Totals
Prioritization Score	0.00*	0.05*	0.05	<1.0
Acute Hazard Index	N/A	N/A	N/A	0.00
Chronic Hazard Index	N/A	N/A	N/A	0.00
Maximum Individual Cancer Risk (10 ⁻⁶)	N/A	N/A	N/A	0.00
T-BACT Required?	No	No		
Special Permit Conditions?	No	No		

*The project passed on prioritization with a score less than 1; therefore, no further analysis was required.

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 5-0

1. The flare will be limited to 800 mmbtu/day.

B. RMR REPORT

I. Project Description

Technical Services received a request on August 13, 2012, to perform an Ambient Air Quality Analysis and a Risk Management Review for 4 crude oil storage tanks served by vapor control with a 1.5 mmscf/hr natural gas flare.

II. Analysis

Toxic emissions were calculated using Emission factors for natural gas external combustion flares. Toxic emissions were also calculated for emissions from crude oil tanks using District approved emission factors for Oilfield Equipment Fugitives Heavy Crude Oil. In accordance with the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905-1, March 2, 2001), risks from the project were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEART's database. The prioritization score for the project was less than 1.0 (see RMR Summary Table); Therefore, no further evaluation is required.

The following parameters were used for the review:

Analysis Parameters Unit 1-0 thru 5-0			
# of Crude Oil Tanks	4	Location Type	Rural
Tank Emission (lb/hr)	0.01	Closest Receptor (m)	1317
Tank Emissions (lb/hr)	91	Type of Receptor	Business
Natural Gas Combustion (mmscf/hr)	0.0333	Max Hours per Year	8760
Natural Gas Combustion (mmscf/yr)	292	Fuel Type	Natural Gas

For the AAQA, stack parameter were calculated utilizing District Approved: Flare Modeling Parameter Estimator. The AERMOD model was used, with the parameters and meteorological data for 2005-2009 from Bakersfield to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid.

Technical Services performed modeling for criteria pollutants CO, NOx, SOx and PM₁₀; as well as a RMR. The emission rates used for criteria pollutant modeling were 12.3 lb/hr CO, 2.27 lb/hr NOx, 0.1 lb/hr SOx, and 0.87 lb/hr PM₁₀.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass ¹	X	X	X	Pass
SO _x	Pass	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass ²	Pass ²
PM _{2.5}	X	X	X	Pass ²	Pass ²

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

The prioritization score for this project is not above 1.0. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT).

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on Page 1 of this report must be included for the proposed unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Toxic emissions summary
- D. Prioritization score
- E. Facility Summary
- F. AAQA Summary

**APPENDIX G
CEQA/BPS**

BPS Analysis

CO2e Calculations

Tanks S-8185-1-0 through '4-0:

Assuming the fugitive VOCs are 100% methane and the combined total VOC emissions for all four tanks is 464 lb/year, the CO2E emissions are equal to:

$$21 \times 464 \text{ lb} \times 4.54 \text{ E}^{-4} \text{ tonnes/lb} = 4.4 \text{ tonne-CO2E/year}$$

The CEQA GHG significance threshold of 230 metric tonnesCO2e/year is not exceeded for the tanks; therefore, a top-down BPS analysis is not required.

Flare S-8185-5-0:

$$0.0529 \text{ metric tonnesCO2e/MMBtu} \times 800 \text{ MMBtu/day} \times 365 \text{ day/year} = 15,447 \text{ metric tonnesCO2e/year}$$

The CEQA GHG significance threshold of 230 metric tonnesCO2e/year is exceeded for the flare; therefore, a top-down BPS analysis is required.

Step 1 - Identify BPS for Flare

1) -Incineration in existing engine, boiler, etc that creates useful work – provided that equipment is available and practically capable of incinerating vapors (see equipment specific BPS for standards and requirements for new fired equipment) and currently burning fossil fuel; or,

-Transfer to Sales Gas Line – provided that access to sales gas line infrastructure is available; or,

-Reinjection to Formation – provided that access to a disposal well is available.

The following options supersede the BPS requirements above if: a) equipment listed above is not available; or, b) gas cannot safely be transferred to equipment listed above; or, c) used to control emergency gas releases.

2) -Incineration in new Thermal Oxidizer – see equipment specific Thermal Oxidizer BPS for standards and requirements for new equipment; or,

-Incineration in New Flare with >98% TOC destruction efficiency, steam assist, air assist when steam is not available, or Coanda effect and equipped with non-continuous automatic electronic or ballistic ignition; or,

-Incineration in Existing Thermal Oxidizer or Flare

Step 2 – Eliminate Infeasible Options

The options listed above in option 1 are not available

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

2) -Incineration in new Thermal Oxidizer – see equipment specific Thermal Oxidizer BPS for standards and requirements for new equipment; or,

-Incineration in New Flare with >98% TOC destruction efficiency, steam assist, air assist when steam is not available, or Coanda effect and equipped with non-continuous automatic electronic or ballistic ignition; or,

-Incineration in Existing Thermal Oxidizer or Flare

Step 4 - Select BPS

Incineration in New Air Assisted Flare with >98% TOC destruction efficiency

Step 5

The following condition will be included on the permit to ensure compliance with BPS requirements:

The flare is to be used only if disposal wells, a sales gas line, combustion sources creating useful work i.e. steam generator S-3187-19 or permit exempt heater are not available. The flare shall have a destruction efficiency > 98% and be steam assist or air assist if steam is unavailable, or Coanda effect and equipped with non-continuous automatic electronic or ballistic ignition. [Public Resources Code 21000-21177: California Environmental Quality Act, District Rule 4102, and CH&SC 41700] N

APPENDIX H
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-8185-1-0

LEGAL OWNER OR OPERATOR: VENOCO, INC.
MAILING ADDRESS: 1518 MILL ROCK WAY
SUITE 100
BAKERSFIELD, CA 93311

LOCATION: LIGHT OIL CENTRAL STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: SE9 TOWNSHIP: 29S RANGE: 24E

EQUIPMENT DESCRIPTION:
500 BBL WASH BAKER TANK WITH VAPOR CONTROL SYSTEM INCLUDING SEPARATOR VESSEL(S) AND A H2S SCRUBBER VENTING TO FLARE S-8185-5 SERVING TANKS S-8185-2, '3 AND '4

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tanks and routes them to flare S-8185-5. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. [District Rule 2201]
3. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623]
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623]
6. VOC fugitive emissions from the components in gas and light oil service on the tank and vapor control system shall not exceed 0.5 lb/day. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Sayed Sadredin, Executive Director, APCO

DRAFT
DAVID WARNER, Director of Permit Services

S-8185-1-0; Oct 11 2012 11:54AM - TORID : Joint Inspection NOT Required

7. Fugitive VOC emissions rate shall be, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank. [District Rule 2201]
8. {3468} The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]
9. {3469} By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]
10. {3470} In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]
11. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409]
12. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623]
13. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623]
14. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623]
15. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623]
16. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623]
17. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623]

CONDITIONS CONTINUE ON NEXT PAGE

18. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623]
19. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623 or 2080]
20. This tank shall be degassed by restricting the outflow of water and floating off the oilpad, such that at least 90 percent of the tank volume is displaced. [District Rule 4623 or 2080]
21. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623 or 2080]
22. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623 or 2080]
23. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
24. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623 or 2080]
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623 or 2080]
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623 or 2080]
27. The following three conditions only apply if the tank is holding organic liquids with a TVP of 1.5 psia or greater. [District Rule 4623]
28. During sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
29. Permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623]
30. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409]
31. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409]
32. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409]
33. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-8185-2-0

LEGAL OWNER OR OPERATOR: VENOCO, INC.
MAILING ADDRESS: 1518 MILL ROCK WAY
SUITE 100
BAKERSFIELD, CA 93311

LOCATION: LIGHT OIL CENTRAL STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: SE9 TOWNSHIP: 29S RANGE: 24E

EQUIPMENT DESCRIPTION:
500 BBL STOCK BAKER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8185-1

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]
3. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623]
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623]
5. VOC fugitive emissions from the components in gas and light oil service on the tank and vapor control system shall not exceed 0.3 lb/day. [District Rule 2201]
6. Fugitive VOC emissions rate shall be, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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Sayed Sadredin, Executive Director APCO

DRAFT
DAVID WARNER, Director of Permit Services

S-8185-2-0 : Oct 11 2012 11:54AM - TORID : Joint Inspection NOT Required

7. {3468} The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]
8. {3469} By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]
9. {3470} In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]
10. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409]
11. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623]
12. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623]
13. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623]
14. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623]
15. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623]
16. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623]
17. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623]

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CONDITIONS CONTINUE ON NEXT PAGE

18. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623 or 2080]
19. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623 or 2080]
20. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623 or 2080]
21. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623 or 2080]
22. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
23. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623 or 2080]
24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623 or 2080]
25. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623 or 2080]
26. The following three conditions only apply if the tank is holding organic liquids with a TVP of 1.5 psia or greater. [District Rule 4623]
27. During sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
28. Permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623]
29. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409]
30. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409]
31. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409]

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CONDITIONS CONTINUE ON NEXT PAGE

32. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-8185-3-0

LEGAL OWNER OR OPERATOR: VENOCO, INC.
MAILING ADDRESS: 1518 MILL ROCK WAY
SUITE 100
BAKERSFIELD, CA 93311

LOCATION: LIGHT OIL CENTRAL STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: SE9 TOWNSHIP: 29S RANGE: 24E

EQUIPMENT DESCRIPTION:
500 BBL PRODUCED WATER BAKER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8185-1

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]
3. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623]
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623]
5. VOC fugitive emissions from the components in gas and light oil service on the tank and vapor control system shall not exceed 0.3 lb/day. [District Rule 2201]
6. Fugitive VOC emissions rate shall be, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
S-8185-3-0 : Oct 11 2012 11:55AM -- TORID : Joint Inspection NOT Required

7. {3468} The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]
8. {3469} By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]
9. {3470} In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4409 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Sections 4.1 and 4.2 of Rule 4409. [District Rule 4409]
10. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4409]
11. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623]
12. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623]
13. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623]
14. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623]
15. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623]
16. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623]
17. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623]

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CONDITIONS CONTINUE ON NEXT PAGE

18. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623 or 2080]
19. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623 or 2080]
20. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623 or 2080]
21. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623 or 2080]
22. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
23. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623 or 2080]
24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623 or 2080]
25. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623 or 2080]
26. The following three conditions only apply if the tank is holding organic liquids with a TVP of 1.5 psia or greater. [District Rule 4623]
27. During sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
28. Permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623]
29. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409]
30. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409]
31. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409]

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CONDITIONS CONTINUE ON NEXT PAGE

32. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-8185-4-0

LEGAL OWNER OR OPERATOR: VENOCO, INC.
MAILING ADDRESS: 1518 MILL ROCK WAY
SUITE 100
BAKERSFIELD, CA 93311

LOCATION: LIGHT OIL CENTRAL STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: SE9 TOWNSHIP: 29S RANGE: 24E

EQUIPMENT DESCRIPTION:
500 BBL PRODUCED WATER BAKER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8185-1

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]
3. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623]
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623]
5. VOC fugitive emissions from the components in gas and light oil service on the tank and vapor control system shall not exceed 0.3 lb/day. [District Rule 2201]
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Seyed Sadredin, Executive Director, APCO

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DAVID WARNER, Director of Permit Services

S-8185-4-0 : Oct 11 2012 11:55AM - TORID : Joint Inspection NOT Required

7. {3468} The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4409]
8. {3469} By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4409]
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CONDITIONS CONTINUE ON NEXT PAGE

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19. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623 or 2080]
20. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623 or 2080]
21. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623 or 2080]
22. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
23. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623 or 2080]
24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623 or 2080]
25. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623 or 2080]
26. The following three conditions only apply if the tank is holding organic liquids with a TVP of 1.5 psia or greater. [District Rule 4623]
27. During sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
28. Permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623]
29. Records of leaks detected during quarterly or annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4409]
30. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4409]
31. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4409]

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CONDITIONS CONTINUE ON NEXT PAGE

32. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201].

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-8185-5-0

LEGAL OWNER OR OPERATOR: VENOCO, INC.
MAILING ADDRESS: 1518 MILL ROCK WAY
SUITE 100
BAKERSFIELD, CA 93311

LOCATION: LIGHT OIL CENTRAL STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: SE9 TOWNSHIP: 29S RANGE: 24E

EQUIPMENT DESCRIPTION:
MACTRONIC AIR ASSISTED PRODUCED GAS FLARE SERVING VAPOR CONTROL SYSTEM LISTED ON S-8185-1

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1/4 or 5% opacity. [District Rule 4101]
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. The outlet shall be equipped with an automatic ignition system. [District Rule 2201]
5. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 2201]
6. Flare shall be equipped with flared gas flow meter. [District Rule 2201]
7. Gas rate to the flare shall not exceed 800 MMBtu per day. [District Rule 2201]
8. Emission rates for the flare shall not exceed any of the following: PM10: 0.008 lb/MMBtu, NOx (as NO2): 0.068 lb/MMBtu, VOC: 0.063 lb/MMBtu or CO: 0.37 lb/MMBtu. [District Rule 2201]
9. The sulfur content of the gas being flared shall not exceed exceed 1.0 gr S/100scf. [District Rules 2201 and 4801]
10. The sulfur content of the gas being incinerated shall be determined using ASTM Test Methods D3246, D4084, D4810, double GC for H2S and mercaptans, or other method approved by the APCO. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services

S-8185-5-0: Oct 11 2012 11:55AM - TORID : Joint Inspection NOT Required

11. The higher heating value of the flared gas shall be monitored at least quarterly or upon change of source of flared gas. [District Rules 1070 and 2201]
12. Permittee shall keep accurate records of daily and annual flared gas flow rate and heat input in MMBtu/day and MMBtu/yr. [District Rule 2201]
13. Records of the gas sulfur content and required gas flow measurements shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
14. Permittee shall keep accurate records of annual throughput, material usage, or other information necessary to demonstrate that facility emissions are less than 10 tons NO_x/yr and 10 tons VOC/yr for exemption from Rule 4311. [District Rule 4311]
15. The flare is to be used only if disposal wells, a sales gas line, combustion sources creating useful work i.e. steam generator and/or permit exempt heater are not available. The flare shall have a destruction efficiency > 98% and be air assist and equipped with non-continuous automatic electronic or ballistic ignition. [Public Resources Code 21000-21177: California Environmental Quality Act, District Rule]

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