San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

DEC 07 2011

Mr. Jerry Frost
Vintage Production California LLC
9600 Ming Ave, Suite 300
Bakersfield, CA 93311

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1326
Project # 1114061

Dear Mr. Frost:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. The applicant is requesting that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes an increase in throughput and lowering of true vapor pressure permit limits for a fixed- roof crude oil storage tank.

After addressing any EPA comments made during the 45-day comment period, the Authority to Construct will be issued to the facility with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: RE/cm

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
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www.valleyair.org www.healthyairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

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DEC 07 2011

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St.
San Francisco, CA 94105

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1326
Project # 1114061

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for Vintage Production California LLC NE Section 21, T27S, R28E, which has been issued a Title V permit. Vintage Production California LLC is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The project authorizes an increase in throughput and lowering of true vapor pressure permit limits for a fixed- roof crude oil storage tank.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authority to Construct # S-1326-333-3 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: RE/cm

Enclosures

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San Joaquin Valley
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DEC 07 2011

Mike Tollstrup, Chief
Project Assessment Branch
Air Resources Board
P O Box 2815
Sacramento, CA 95812-2815

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1326
Project # 1114061

Dear Mr. Tollstrup:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. The applicant is requesting that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes an increase in throughput and lowering of true vapor pressure permit limits for a fixed- roof crude oil storage tank.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authority to Construct # S-1326-333-3 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 30-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: RE/cm

Enclosures

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Bakersfield Californian

**NOTICE OF PRELIMINARY DECISION
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND
THE PROPOSED SIGNIFICANT MODIFICATION OF FEDERALLY
MANDATED OPERATING PERMIT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed significant modification of Vintage Production California LLC for its heavy oil production stationary source in the central Kern County fields, CA, NE Section 21, T27S, R28E, California. The project authorizes an increase in throughput and lowering of true vapor pressure permit limits for a fixed- roof crude oil storage tank.

The District's analysis of the legal and factual basis for this proposed action, project #1114061, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. The project authorizes an increase in throughput and lowering of true vapor pressure permit limits for a fixed- roof crude oil storage tank. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested by the public, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308-0244.

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Modification of crude oil tank

Facility Name:	Vintage Production California LLC	Date:	November 22, 2011
Mailing Address:	9600 Ming Ave, Suite 300	Engineer:	Richard Edgehill
	Bakersfield, CA 93311	Lead Engineer:	Steve Leonard
Contact Person:	Jerry Frost		
Telephone:	(661) 869-8000 and 246-7581 (cell)		
Fax:	(661) 869-8059		
E-Mail:	Jerry_Frost@oxy.com		
Application #(s):	S-1326-333-2		
Project #:	S-1114061		
Deemed Complete:	October 5, 2011		

I. Proposal

Vintage Production California, LLC (VPC) is requesting an Authority to Construct (ATC) to increase the throughput and decrease the true vapor pressure (TVP) permit limits of a 2000 bbl fixed- roof crude oil storage tank.

The project results in a small increase in VOC emissions (< 0.5 lb/day). Offsets are not required. However, the project is a Federal Major Modification and therefore BACT and public notice are required.

PTO S-1326-333-0 is included in **Attachment I**.

VPC is a major stationary source with a Title V permit. The project is a Federal Major Modification and therefore it is classified as a Title V Significant Modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. VPC must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project prior to startup under the forthcoming ATC.

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) Subpart Kb – **not applicable**- tvp < 0.5 psia
Rule 4102	Nuisance (12/17/92)
Rule 4623	Storage of Organic Liquids (05/19/05)

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 tank S-1326-333 is located in VPC's Heavy Oil Central Stationary Source NE Section 21, Township 27S, Range 28E. The tank is not located within 1,000 feet of a K-12 school. A project location map is included in **Attachment II**.

IV. Process Description

The tank receives production prior to shipment offsite (custody transfer).

Proposed Modifications

Applicant has requested that that the throughput limit be increased from 150 bbl/day to 500 bbl/day and that the tvp limit be decreased from 0.5 psia to 0.21 psia. No other changes are proposed.

A process diagram is included in **Attachment III**.

V. Equipment Listing

Pre-Project Equipment Description:

PTO S-1326-333-0: ONE 2,000 BBL FIXED- ROOF CRUDE OIL STOCK TANK (SOUTH UNIT TANK FARM NO. 2)

Proposed Modification:

PTO S-1326-333-2: MODIFICATION OF ONE 2,000 BBL FIXED- ROOF CRUDE OIL STOCK TANK (SOUTH UNIT TANK FARM NO. 2): INCREASE THROUGHPUT AND REDUCE TVP LIMIT

Post Project Equipment Description:

PTO S-1326-333-2: ONE 2,000 BBL FIXED- ROOF CRUDE OIL STOCK TANK (SOUTH UNIT TANK FARM NO. 2)

VI. Emission Control Technology Evaluation

The tank is equipped with a pressure-vacuum (PV) relief vent valve set to within 10% of the maximum allowable working pressure of the tank. The PV-valve reduces VOC wind induced emissions from the tank vent.

VII. General Calculations

A. Assumptions

- The tank operates 24 hours per day, 7 days per week, and 52 weeks per year.
- Emissions consist of VOC only

Federal Major Modification Calculation

- Projected (future) throughput assumed to be the permit limit, 500 bbl/day
- Baseline period throughput (average of 2009 and 2010), 133 bbl/day – applicant email
- Maximum throughput possible during baseline period is pre-project permit limit, 150 bbl/day
- tvp = 0.02 psia, laboratory report for South Unit Wash Tank submitted to the District with application (**Attachment IV**)

	Capacity (bbl)	Diameter (ft)	Height (ft)	TVP limit (psia)	Throughput (bbl/day)	T °F
S-1326-333	2000	29.9	16 (avg 9)	0.5 (PE1) 0.21 (PE2)	150 (PE1) 500 (PE2)	135

B. Emission Factors

- Pre- and post-project tank emissions were calculated using the spreadsheet Tanks Emissions - Fixed Roof Crude Oil Less Than 26 API (see **Attachment V**). The spreadsheet for tanks was developed using the equations for fixed-roof tanks from EPA AP-42, Chapter 7.1.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

PTO S-1326-333-0

Pre-Project Potential to Emit (PE1)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
VOC	12.3	4,473

2. Post Project Potential to Emit (PE2)

ATC S-1326-333-2

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
VOC	12.5	4,561

Greenhouse Gas (GHG) Emissions

The project results in 88 lb/yr increase in annual VOC emissions. Assuming this is 100% methane (CH_4), which has a GWP for methane of 23 lb $CO2_e$/lb CH_4, the increase is 2024 lbCO2e/yr does not exceed the threshold of 230 mtons CO2e/yr.

The emissions profiles are included in **Attachment VI**.

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

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (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 that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE1 calculations are not necessary.

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

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) 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 that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE2 calculations are not necessary.

5. Major Source Determination

Pursuant to Section 3.23 of District Rule 2201, a Major Source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.23.2 states, "for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site."

This source is an existing Major Source for VOC emissions and will remain a Major Source for VOC. No change in other pollutants are proposed or expected 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 Section 3.7 of District Rule 2201, BE = Pre-project Potential to Emit 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 Section 3.22 of District Rule 2201.

Clean Emissions Unit, Located at a Major Source
Pursuant to Rule 2201, Section 3.12, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

The tank is equipped with a pressure relief valve, which meets the requirements for achieved-in-practice BACT of current BACT Guideline 7.3.1 Petroleum and Petrochemical Production - Fixed Roof Organic Liquid Storage or Processing Tank, < 5,000 bbl Tank capacity.

Therefore, Baseline Emissions (BE) are equal to the Pre-Project Potential to Emit (PE1).

BE = PE1 = 4,473 lb VOCs/year

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 a major source for VOCs, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO_x	0	50,000	No
SO_x	0	80,000	No
PM_{10}	0	30,000	No
VOC	4,561	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute a SB288 Major Modification.

8. Federal Major Modification

District Rule 2201, Section 3.17 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA. For determination of whether the project is a Federal Major Modification the project increase in emissions is calculated and compared with the Federal Major Modification thresholds in the table below.

For existing emissions units, the increase in emissions is calculated as follows.

Emission Increase = PAE – BAE - UBC

where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions
UBC = Unused baseline capacity

BAE is calculated using tvp and throughput for any 24 month period within the previous 10 year period. UBC is the portion of PAE that the tank could have accommodated during the baseline period unrelated to the current project.

A summary of the input parameters and results of spreadsheet calculations (**Attachment V**) used in the calculation are listed in the table below.

	Throughput (bbl/day)	tvp (psia)	lb/yr
PAE	500[1]	0.02[4]	434
BAE	133[2]	0.02	167
UBC	150[3]	0.02	179 – 167 (BAE)

[1] projected (future) throughput assumed to be the permit limit
[2] baseline period throughput (average of 2009 and 2010) – applicant email
[3] maximum throughput possible during baseline period
[4] laboratory report for South Unit Wash Tank submitted to the District with application.

Emission Increase = PAE – BAE - UBC
= 434 – 167 – (179 – 167)
= 255 lb/yr (0.7 lb/day)

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)**	Thresholds (lb/yr)	Federal Major Modification?
NO_x*	0	0	No
VOC*	255	0	Yes

Since the Federal Major Modification Thresholds have been surpassed for VOC the project is a Federal Major Modification.

9. Quarterly Net Emissions Change (QNEC)

VOCs			
	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
S-1326-333	4,561	4,473	22

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 exempted pursuant to Section 4.2, 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 SB288 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 discussed in Section I above, there are no new emissions units associated with this project; therefore BACT for new units with PE > 2 lb/day purposes is not triggered.

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

AIPE = PE2 – HAPE

Where,
AIPE = Adjusted Increase in Permitted Emissions, (lb/day)
PE2 = Post-Project Potential to Emit, (lb/day)
HAPE = Historically Adjusted Potential to Emit, (lb/day)

HAPE = PE1 x (EF2/EF1)

Where,
PE1 = The emissions unit's Potential to Emit prior to modification or relocation, (lb/day)
EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1
EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

AIPE = PE2 – (PE1 * (EF2 / EF1))

EF2 = EF1

AIPE = 12.5 – (12.3 * (1.0))
= 0.2

As demonstrated above, the AIPE is not greater than 2.0 lb/day for VOC emissions; therefore BACT is not triggered for modification purposes.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project constitutes a Federal Major Modification for VOC emissions; therefore BACT is triggered for VOC for all emissions units in the project for which there is an emission increase

2. BACT Guidance

Per District Policy APR 1305, Section IX, "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 for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis."

BACT Guideline 7.3.1 applies to Petroleum and Petrochemical Production – Fixed Roof Organic Liquid Storage or Processing Tank, < 5,000 bbl tank capacity (see **Attachment VII**)

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 **Attachment VIII**), BACT has been satisfied with the following:

VOC:pressure and vacuum (PV) relief valve on tank vent set to within 10% of maximum allowable pressure

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the post-project stationary source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 or Rule 2201.

The following table compares the post-project facility-wide annual emissions in order to determine if offsets will be required for this project.

Offset Applicability			
Pollutant	**SSPE2 (lb/yr)**	**Offset Threshold Levels (lb/yr)**	**Offsets Calculations Required?**
VOC	> 20,000	20,000	Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for VOCs, the only air contaminant emitted from the tanks. Therefore offset calculations will be required for this project.

Per Sections 4.7.1 and 4.7.3, the quantity of offsets in pounds per year for VOCs is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project,

Where,
PE2 = Post Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)
ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = Pre-project Potential to Emit 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)

The facility is proposing to install eight new emissions units; therefore Baseline Emissions are equal to zero. Also, there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

Offsets Required (lb/year) = ([PE2 – BE] + ICCE) x DOR

PE2 (VOCs) = 4,516 lb/year
BE (VOCs) = 4,365 lb/year
ICCE = 0 lb/year

Offsets Required (lb/year) = 4,561 – 4,473
= 88 ~ 0*

*District policy APR 1130 states that IPEs less than or equal to 0.5 lb/day to be set to zero for purposes of providing emission offsets. The IPE is 0.4 lb/day for the project.

Offsets are not required for the project.

C. Public Notification

1. Applicability

Public noticing is required for:

a. New Major Sources, Federal Major Modifications, and SB288 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 SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated in VII.C.7, this project is a Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

The following table compares the pre-project SSPE1 with the post-project SSPE2 in order to determine if any offset thresholds have been surpassed.

Offset Threshold				
Pollutant	**SSPE1 (lb/yr)**	**SSPE2 (lb/yr)**	**Offset Levels (lb/yr)**	**Public Notice Required?**
VOC	> 20,000	> 20,000	20,000	No

Since the VOC offset threshold was not surpassed, public noticing is not triggered for offsets threshold purposes.

d. SSIPE > 20,000 lb/year

SSIPE= SSPE2 – SSPE1

Stationary Source Increase in Permitted Emissions (SSIPE)			
Pollutant	**SSPE2 (lb/yr)**	**SSPE1 (lb/yr)**	**SSIPE (lb/yr)**
VOC	> 20,000	>20,000	151

As shown in the above table, the SSIPE for this project does not exceed the 20,000 lb/yr public notice threshold. Therefore, public noticing is not required for SSIPE purposes.

2. Public Notice Action

As discussed above, public noticing is required for this project as it is a Federal Major Modification. 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)

Daily Emission Limits, DELs, are required by Rule 2201 Section 5.7.2.

DELs for the emission units in this project will be included on the ATCs in the form of tanks' throughput and the tank contents' maximum true vapor pressure (TVP). The

permittee will be required to maintain accurate records of tank content TVP and tanks monthly average daily throughput to validate the DEL.

Crude oil throughput shall not exceed 500 barrels per day based on a monthly average. [District Rules 2201 and 4623] Y

This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.21 psia under all storage conditions. [District Rules 2201 and 4623] Y

E. Compliance Assurance

The following measures shall be taken to ensure continued compliance with District Rules:

1. Source Testing

The permittee will be required to perform periodic TVP testing for all tanks in this project using the latest EPA and CARB approved version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph" to validate non-applicability of Rule 4623. The testing shall be conducted once every 24 month period or every time when the source of liquid stored is changed.

True vapor pressure and API gravity of liquids introduced, stored or held in the tank shall be measured within 60 days of startup and at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rules 2201 and 4623] Y

2. Monitoring

Monitoring is not required.

3. Record Keeping

Record keeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following conditions will appear on the permits:

Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 & 4623] Y

All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070, 2201 and 4623] Y

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Operator shall submit the records of TVP and API gravity testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2201 and 4623] Y

F. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed above, the project is a Federal Major Modification, therefore this requirement is applicable. Included in **Attachment IX** is VPC's Title V Compliance Certification form and Statewide Compliance Certification document.

G. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to reauthorize a tank. Since the project is at the current facility location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. Section 3.29 defines a significant permit modification as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

The project is Federal Major Modification and therefore is also a Title V Significant Modification. As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Included in **Attachment IX** is VPC's Title V Compliance Certification form. Continued compliance with this rule is expected.

Rule 4102 - Public Nuisance

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Nuisance conditions are not expected with installation of the routine replacement tanks.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Attachment X)**, the total facility prioritization score including this project was less than one. Therefore, no further analysis was required and the project is approvable without TBACT.

Rule 4623, 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.

According to Section 4.4, tanks exclusively receiving and or storing organic liquids with a TVP less than 0.5 psia are exempt from this Rule except for complying with Sections 6.2, 6.3.6, 6.4 and 7.2. Therefore, the following conditions shall be placed on the ATC:

{2480} This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.21 psia under all storage conditions. [District Rules 2201 and 4623] Y

{2910} Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rules 2201 and 4623] Y

{2482} The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rules 2201 and 4623] Y

{2483} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2201 and 4623] Y

{2911} The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Y

{2912} Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 2201 and 4623] Y

{2913} The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Y

{2490} All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070, 2201, and 4623] Y

Compliance is expected.

CH&SC 42301.6 California Health & Safety Code (School Notice)

This facility is not within 1,000 feet of a K-12 school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (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 San Joaquin Valley Unified Air Pollution Control District (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) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project 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.

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. Issue Authority to Construct S-1326-333-1 subject to the permit conditions on the attached draft Authority to Construct in **Attachment XI.**

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1326-333	3020-05-E	126,000 gallons	$246.00

Attachments

I: PTO S-1326-333-0
II: Location Map
III: Facility Diagram
IV: Laboratory Analysis
V: Tank Emissions Calculations
VI: Emissions Profiles
VII: BACT Guideline
VIII: BACT Analysis
IX: Statewide Compliance Statement and Title V Compliance Certification Form
X: HRA
XI: Draft ATCs

ATTACHMENT I
PTO S-1326-333-0

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1326-333-0 **EXPIRATION DATE:** 03/31/2006

SECTION: NE21 **TOWNSHIP:** 27S **RANGE:** 28E

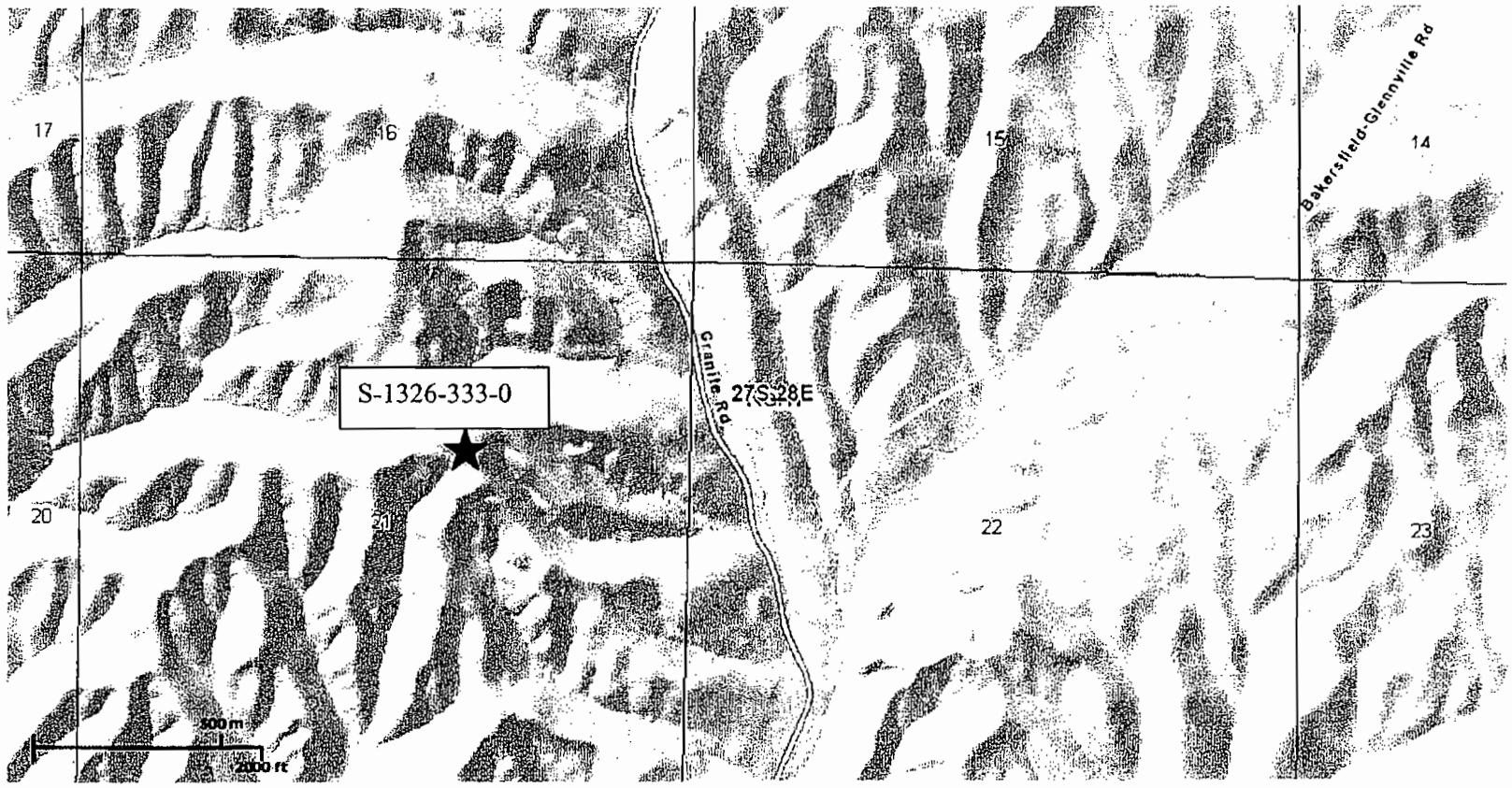
EQUIPMENT DESCRIPTION:
ONE 84,000 GALLON FIXED ROOF STOCK TANK (SOUTH UNIT TANK FARM NO. 2)

PERMIT UNIT REQUIREMENTS

1. Average daily tank throughput (on quarterly basis) shall not exceed 150 bbl/day of fluid. [District Rule 2201]
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
3. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
4. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623]
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623]
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623]
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]
8. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]
9. Permittee shall maintain accurate records of average daily throughput (on quarterly basis) and such records shall be made readily available for District inspection upon request for a period of two years. [District Rule 1070]
10. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623]
11. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
12. Formerly permit number S-3529-55.

ATTACHMENT II
Location Map

DOGGR Online Mapping System (DOMS)

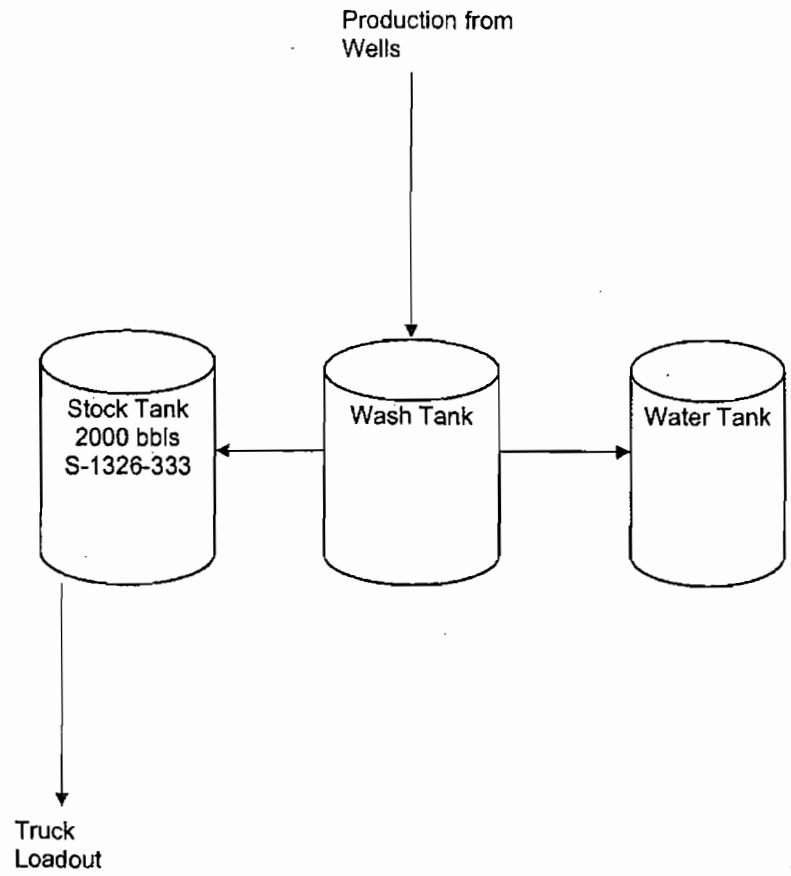


ATTACHMENT III
Facility Diagram

Vintage Production CA

BUSINESS NAME: **South Unit Tank Farm**
SCALE: NONE

Facility Diagram



ATTACHMENT IV
Laboratory Analysis

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

Vintage Production California LLC - 2
9600 Ming Avenue Ste 300
Bakersfield, CA 93311-1373

Project: Master
Project #:
Attention: Jerry Frost

Work Order No.: 1107115
Reported: 07/22/2011
Received: 07/08/2011 16:02

Lab Sample ID: 1107115-04
Client Sample ID: S Unit Wash Tk. (Mt Poso)

Collected By: Rick Ogletree
Date Collected: 7/8/2011 12:20:00PM

Analyte	Results	PQL	Units	Flag	Method	Date Prepared	Date Analyzed	Init.
Petroleum Chemistry								
API Gravity @ 60F, Hydrometer	17.4		°API		ASTM D 287	7/11/11	7/11/11	JAH
Total Vapor Pressure, Reactive Organic Compounds (ROCs)								
Total Vapor Pressure, ROCs	0.02	0.01	psia		LBNL	7/18/11	7/18/11	LTB
Total Vapor Pressure, ROCs Test Conditions								
Tank Temperature	135		°F		LBNL	7/18/11	7/18/11	LTB
Test, Atmospheric Pressure	14.43		psia		LBNL	7/18/11	7/18/11	LTB
Test, Barometric Pressure	29.37		in. of Hg		LBNL	7/18/11	7/18/11	LTB
Test Temperature	136		°F		LBNL	7/18/11	7/18/11	LTB

ATTACHMENT V
Tank Calculations

Tank Input Data	
permit number (S-xxxx-xx-xx)	--
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.21
liquid bulk storage temperature, Tb (°F)	135
is this a constant-level tank? **{yes, no}**	no
will flashing losses occur in this tank (only if first-line tank)? **{yes, no}**	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	29.9
capacity of tank (bbl)	2,000
conical or dome roof? **{c, d}**	c
shell height of tank (feet)	16
average liquid height (feet)	9
are the roof and shell the same color? **{yes,no}**	yes
For roof: color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	4
condition {1: Good, 2: Poor}	1
------This row only used if shell is different color from roof------	3
------This row only used if shell is different color from roof------	1

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		500
maximum annual fluid throughput (bbl)	182,500	182,500
-----This row only used if flashing losses occur in this tank------		100
-----This row only used if flashing losses occur in this tank------		36,500
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, Tax (°F)		77.65
daily minimum ambient temperature, Tan (°F)		53.15
daily total solar insulation factor, I (Btu/ft^2-day)		1648.9
atmospheric pressure, Pa (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (Tlx), Pvx (psia	118.6	1.6372
water vapor pressure at daily minimum liquid surface temperature (Tln), Pvn (psia	107.8	1.2062
water vapor pressure at average liquid surface temperature (Tla), Pva (psia)	113.2	1.4117
roof outage, Hro (feet)		0.3115
vapor space volume, Vv (cubic feet)		5133.77
paint factor, alpha		0.68
vapor density, Wv (lb/cubic foot)		0.0034
daily vapor temperature range, delta Tv (degrees Rankine)		49.04
vapor space expansion factor, Ke		0.1139

Results	lb/year	lb/day
Standing Storage Loss	729	2.00
Working Loss	3,833	10.50
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	4,561	12.5

Summary Table	
Permit Number	--
Facility Tank I.D.	--
Tank capacity (bbl)	2,000
Tank diameter (ft)	29.9
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	500
Maximum Annual Fluid Throughput (bbl/year)	182,500
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N\A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	12.5
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	4,561

Tank Input Data	
permit number (S-xxxx-xx-xx)	--
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.5
liquid bulk storage temperature, Tb (°F)	135
is this a constant-level tank? **{yes, no}**	no
will flashing losses occur in this tank (only if first-line tank)? **{yes, no}**	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	29.9
capacity of tank (bbl)	2,000
conical or dome roof? **{c, d}**	c
shell height of tank (feet)	16
average liquid height (feet)	9
are the roof and shell the same color? **{yes,no}**	yes
For roof: color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	4
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof------	3
------This row only used if shell is different color from roof------	1

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		150
maximum annual fluid throughput (bbl)	54,750	54,750
------This row only used if flashing losses occur in this tank------		100
------This row only used if flashing losses occur in this tank------		36,500
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, Tax (°F)		77.65
daily minimum ambient temperature, Tan (°F)		53.15
daily total solar insulation factor, I (Btu/ft^2-day)		1648.9
atmospheric pressure, Pa (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (Tlx), Pvx (psia	118.6	1.6372
water vapor pressure at daily minimum liquid surface temperature (Tln), Pvn (psia	107.8	1.2062
water vapor pressure at average liquid surface temperature (Tla), Pva (psia)	113.2	1.4117
roof outage, Hro (feet)		0.3115
vapor space volume, Vv (cubic feet)		5133.77
paint factor, alpha		0.68
vapor density, Wv (lb/cubic foot)		0.0081
daily vapor temperature range, delta Tv (degrees Rankine)		49.04
vapor space expansion factor, Ke		0.1139

Results	lb/year	lb/day
Standing Storage Loss	1,736	4.75
Working Loss	2,738	7.50
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	4,473	12.3

Summary Table	
Permit Number	--
Facility Tank I.D.	--
Tank capacity (bbl)	2,000
Tank diameter (ft)	29.9
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	150
Maximum Annual Fluid Throughput (bbl/year)	54,750
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N\A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	12.3
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	4,473

Tank Input Data	
permit number (S-xxxx-xx-xx)	--
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.02
liquid bulk storage temperature, Tb (°F)	135
is this a constant-level tank? **{yes, no}**	no
will flashing losses occur in this tank (only if first-line tank)? **{yes, no}**	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	29.9
capacity of tank (bbl)	2,000
conical or dome roof? **{c, d}**	c
shell height of tank (feet)	16
average liquid height (feet)	9
are the roof and shell the same color? **{yes,no}**	yes
For roof: color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	4
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	3
-----This row only used if shell is different color from roof-----	1

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		133
maximum annual fluid throughput (bbl)	48,545	48,545
-----This row only used if flashing losses occur in this tank-----		100
-----This row only used if flashing losses occur in this tank-----		36,500
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, Tax (°F)		77.65
daily minimum ambient temperature, Tan (°F)		53.15
daily total solar insulation factor, I (Btu/ft^2-day)		1648.9
atmospheric pressure, Pa (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (Tlx), Pvx (psia	118.6	1.6372
water vapor pressure at daily minimum liquid surface temperature (Tln), Pvn (psia	107.8	1.2062
water vapor pressure at average liquid surface temperature (Tla), Pva (psia)	113.2	1.4117
roof outage, Hro (feet)		0.3115
vapor space volume, Vv (cubic feet)		5133.77
paint factor, alpha		0.68
vapor density, Wv (lb/cubic foot)		0.0003
daily vapor temperature range, delta Tv (degrees Rankine)		49.04
vapor space expansion factor, Ke		0.1139

Results	lb/year	lb/day
Standing Storage Loss	69	0.19
Working Loss	97	0.27
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	**167**	**0.5**

Summary Table:	
Permit Number	--
Facility Tank I.D.	--
Tank capacity (bbl)	2,000
Tank diameter (ft)	29.9
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	133
Maximum Annual Fluid Throughput (bbl/year)	48,545
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N\A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	0.5
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	167

Tank Input Data	
permit number (S-xxxx-xx-xx)	--
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.02
liquid bulk storage temperature, Tb (°F)	135
is this a constant-level tank? **{yes, no}**	no
will flashing losses occur in this tank (only if first-line tank)? **{yes, no}**	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	29.9
capacity of tank (bbl)	2,000
conical or dome roof? **{c, d}**	c
shell height of tank (feet)	16
average liquid height (feet)	9
are the roof and shell the same color? **{yes,no}**	yes
For roof: color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	4
condition {1: Good, 2: Poor}	1
------This row only used if shell is different color from roof------	3
------This row only used if shell is different color from roof------	1

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		150
maximum annual fluid throughput (bbl)	54,750	54,750
------This row only used if flashing losses occur in this tank------		100
------This row only used if flashing losses occur in this tank------		36,500
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, Tax (°F)		77.65
daily minimum ambient temperature, Tan (°F)		53.15
daily total solar insulation factor, I (Btu/ft^2-day)		1648.9
atmospheric pressure, Pa (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (Tlx), Pvx (psia	118.6	1.6372
water vapor pressure at daily minimum liquid surface temperature (Tln), Pvn (psia	107.8	1.2062
water vapor pressure at average liquid surface temperature (Tla), Pva (psia)	113.2	1.4117
roof outage, Hro (feet)		0.3115
vapor space volume, Vv (cubic feet)		5133.77
paint factor, alpha		0.68
vapor density, Wv (lb/cubic foot)		0.0003
daily vapor temperature range, delta Tv (degrees Rankine)		49.04
vapor space expansion factor, Ke		0.1139

Results	lb/year	lb/day
Standing Storage Loss	69	0.19
Working Loss	110	0.30
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	179	0.5

Summary Table	
Permit Number	--
Facility Tank I.D.	--
Tank capacity (bbl)	2,000
Tank diameter (ft)	29.9
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	150
Maximum Annual Fluid Throughput (bbl/year)	54,750
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N\A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	0.5
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	179

Tank Input Data	
permit number (S-xxxx-xx-xx)	--
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.02
liquid bulk storage temperature, Tb (°F)	135
is this a constant-level tank? **{yes, no}**	no
will flashing losses occur in this tank (only if first-line tank)? **{yes, no}**	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	29.9
capacity of tank (bbl)	2,000
conical or dome roof? **{c, d}**	c
shell height of tank (feet)	16
average liquid height (feet)	9
are the roof and shell the same color? **{yes,no}**	yes
For roof: color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	4
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	3
-----This row only used if shell is different color from roof-----	1

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		500
maximum annual fluid throughput (bbl)	182,500	182,500
-----This row only used if flashing losses occur in this tank-----		100
-----This row only used if flashing losses occur in this tank-----		36,500
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, Tax (°F)		77.65
daily minimum ambient temperature, Tan (°F)		53.15
daily total solar insulation factor, I (Btu/ft^2-day)		1648.9
atmospheric pressure, Pa (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (Tlx), Pvx (psia	118.6	1.6372
water vapor pressure at daily minimum liquid surface temperature (Tln), Pvn (psia	107.8	1.2062
water vapor pressure at average liquid surface temperature (Tla), Pva (psia)	113.2	1.4117
roof outage, Hro (feet)		0.3115
vapor space volume, Vv (cubic feet)		5133.77
paint factor, alpha		0.68
vapor density, Wv (lb/cubic foot)		0.0003
daily vapor temperature range, delta Tv (degrees Rankine)		49.04
vapor space expansion factor, Ke		0.1139

Results	lb/year	lb/day
Standing Storage Loss	69	0.19
Working Loss	365	1.00
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	**434**	**1.2**

Summary Table	
Permit Number	--
Facility Tank I.D.	--
Tank capacity (bbl)	2,000
Tank diameter (ft)	29.9
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	500
Maximum Annual Fluid Throughput (bbl/year)	182,500
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N\A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	1.2
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	434

ATTACHMENT VI
Emissions Profiles

Application Emissions

Permit #: S-1326-333-2	**Last Updated**
Facility: VINTAGE PRODUCTION CALIFORNIA	11/02/2011 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	4561.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	12.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	22.0
Q2:	0.0	0.0	0.0	0.0	22.0
Q3:	0.0	0.0	0.0	0.0	22.0
Q4:	0.0	0.0	0.0	0.0	22.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

ATTACHMENT VII
BACT Guideline

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.3.1*

Last Update 10/1/2002

Petroleum and Petrochemical Production - Fixed Roof Organic Liquid Storage or Processing Tank, < 5,000 bbl Tank capacity **

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	PV-vent set to within 10% of maximum allowable pressure	99% control (Waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of noncondensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available); or equal).	

** Converted from Determinations 7.1.11 (10/01/02).

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 s 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**

ATTACHMENT VIII
BACT Analysis

Top Down BACT Analysis

VOC emissions may occur when the produced fluids from the crude oil production wells enter the oil storage tanks.

Step 1 - Identify All Possible Control Technologies

BACT Guideline 7.3.1 lists the controls that are considered potentially applicable to fixed-roof organic liquid storage or processing tank <5,000 bbl tank capacity. The VOC control measures are summarized below.

Technologically feasible:

99% control (waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of uncondensed vapors to gas pipeline or reinjection to formation (if appropriate wells are available).

Achieved in Practice:

PV relief valve set to within 10% of maximum allowable pressure.

Step 2 - Eliminate Technologically Infeasible Options

All of the above identified control options are technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. 99% control (waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of uncondensed vapors to gas pipeline or reinjection to formation (if appropriate wells are available).
2. PV relief valve set to within 10% of maximum allowable pressure.

Step 4 - Cost Effectiveness Analysis

Applicant has submitted the capital cost for a vapor control system to address the technologically feasible control option is $126,775.

The annualized capital cost is

$AP = (P) \{[(i) (1 + i)^n]/[(1 + i)^n - 1]\}$, where
AP = Equivalent Annual Capital Cost of Control Equip.
P = Present value of the control equipment, including installation cost. $51,000

i = interest rate (use 10% per policy)
n = equipment life (assume 10 years per policy)

$AP = (P) \{[(0.1)(1 + 0.1)^{10}]/[(1 + 0.1)^{10} - 1]\}$
AP= (P) x (0.16274) = ($126,775) (0.1627) = $20,626/year

For calculation of the amount of VOCs removed from the (emissions unit) with the vapor control system, 100% control is assumed. The VOCs removed annually are

Maintenance Cost = $20,800/yr

Total annualized cost = $41,426

Tons/yr = 4561 lb/yr/2000 lb/ton = 2.3 tons/yr

Annualized cost = $41,426/yr/2.3 tons/yr
= $18,011/ton

This exceeds the cost effectiveness threshold for VOCs of $17,500/ton. Therefore the vapor control system is not cost effective.

Step 5 - Select BACT

PV relief valve set to within 10% of maximum allowable pressure of the tank

Vintage
Cost Effective Analysis
S-1326-333

Total Emissions	4,516	lbs/yr
% Reduction	99%	
Reduction	4,471	lbs/yr
Reduction	**2.24**	**tpy**
Total Capital Cost		
VRU - Compressor	$40,000	
Piping and Installation	$40,000	
Flare	$31,775	
Separator	$15,000	
Annualized Capital Cost	$20,626	
Annual Mainenance Cost	$12,000	$1,000/month Contract
Electricity usage	$7,200	$600/month
Annual Seal Replacement	$1,600	
Total Annualized Cost	**$41,426**	
Cost per Ton	**$18,531**	
VOC Cost/Ton Limit	$17,500	
Exceeds limit, not cost effective		

ATTACHMENT IX
Title V Compliance Certification Form and Statewide Compliance Statement

September 20, 2011

Mr. Leonard Scandura
Permit Services Manager
San Joaquin Valley Unified
Air Pollution Control District
34946 Flyover Ct.
Bakersfield, CA 93308

Subject: **Project Number 1000XXX**
Compliance Certification

Dear Mr. Scandura:

I hereby certify that all major Stationary Sources owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in California, which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitations and standards.

Signature

William J. Hill
Title

RECEIVED
SEP 20 2011
SJVAPCD
Southern Region

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

[X] SIGNIFICANT PERMIT MODIFICATION
[ ] MINOR PERMIT MODIFICATION
[ ] ADMINISTRATIVE AMENDMENT

COMPANY NAME: VINTAGE PRODUCTION CA	FACILITY ID: S - 1326
1. Type of Organization:[X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name:	
3. Agent to the Owner: Jerry Frost	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

(WJH) Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).

(WJH) Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

(WJH) Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

(WJH) Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

[signature] 9/19/2011

Signature of Responsible Official — Date

William J. Hill

Name of Responsible Official (please print)

Operations Manager

Title of Responsible Official (please print)

ATTACHMENT X
HRA

San Joaquin Valley Air Pollution Control District
Risk Management Review

RECEIVED
NOV 22 2011
SJVAPCD
Southern Region

To: Richard Edgehill, AQE – Permit Services

From: Cherie Clark, AQT – Technical Services

Date: November 17, 2011

Facility Name: Vintage Production California, LLC

Location: Bakersfield, CA

Application #: S-1326-333-1

Project #: S-1114061

A. RMR SUMMARY

RMR Summary			
Categories	**Fixed Roof Stock Tank (Unit 333-1)**	**Project Totals**	**Facility Totals**
Prioritization Score	0.006	0.006	0.068
Acute Hazard Index	N/A	N/A	N/A
Chronic Hazard Index	N/A	N/A	N/A
Maximum Individual Cancer Risk (10^{-6})	N/A	N/A	N/A
T-BACT Required?	**No**		
Special Permit Conditions?	**No**		

[1] Project passed on prioritization. No further analysis 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 # 1-0

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on November 2, 2011, to perform a Risk Management Review for a proposed modification to a 2000 bbl fixed-roof crude oil storage tank. The modification consisted of increasing the throughput limit to be increased from 150 bbl/day to 500 bbl/day and that the tvp limit be decreased from 0.5 psia to 0.21 psia.

Analysis Parameters Unit 333-1			
Source Type	Area	**Location Type**	Rural
Emission Rate (lb/hr)	0.5208	**Closest Receptor (m)**	1,609
Emission Rate (lb/yr)	4,561	**Type of Receptor**	Residential/ Business
Pollutant Type	VOC	**Hours of Operation**	8,760

The prioritization score is less than 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 this 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.

III. 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

ATTACHMENT XI
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1326-333-2 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE21 **TOWNSHIP:** 27S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
MODIFICATION OF ONE 2000 BBL FIXED-ROOF CRUDE OIL STOCK TANK (SOUTH UNIT TANK FARM NO. 2): INCREASE THROUGHPUT AND REDUCE TVP LIMIT

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Crude oil throughput shall not exceed 500 barrels per day based on a monthly average. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.21 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. True vapor pressure and API gravity of liquids introduced, stored or held in the tank shall be measured within 60 days of startup and at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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

DRAFT

DAVID WARNER, Director of Permit Services
S-1326-333-2 : Nov 7 2011 1:24PM – EDGEHILR : Joint Inspection NOT Required

6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Operator shall submit the records of TVP and API gravity testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 & 4623] Federally Enforceable Through Title V Permit
11. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070, 2201 and 4623] Federally Enforceable Through Title V Permit