



MAR 19 2012

Mr. Joey Barulich
Vintage Production California LLC,
9600 Ming Avenue, Suite 300
Bakersfield, CA 93311

**Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # S-1737
Project # S-1120071**

Dear Mr. Barulich:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Vintage Production California LLC, Light Oil Central stationary source, CA. The project is to lower the rating of the flare and authorize its operation at various unspecified locations within the same stationary source (S-1737).

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the Authorities to Construct will be issued to the facility with Certificates of Conformity. Prior to operating with modifications authorized by the Authorities 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.

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

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

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)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

Mr. Joey Barulich
Page 2

Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "David Warner", with a long horizontal flourish extending to the right.

David Warner
Director of Permit Services

Enclosures

c: Dolores Gough, Permit Services



MAR 19 2012

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

**Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # S-1737
Project # S-1120071**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Vintage Production California LLC, Light Oil Central stationary source, CA, which has been issued a Title V permit. Vintage Production California LLC, is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The project is to lower the rating of the flare and authorize its operation at various unspecified locations within the same stationary source (S-1737).

Enclosed is the engineering evaluation of this application, along with the current Title V permit, and proposed Authorities to Construct # S-1737-168-2 and '-180-0 with Certificates 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.

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Mr. Gerardo C. Rios
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David Warner
Director of Permit Services

Enclosures

c: Dolores Gough, Permit Services



MAR 19 2012

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

Re: **Notice of Preliminary Decision - ATC / Certificate of Conformity**
Facility # S-1737
Project # S-1120071

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Vintage Production California LLC, Light Oil Central stationary source, CA. The project is to lower the rating of the flare and authorize its operation at various unspecified locations within the same stationary source (S-1737).

The public notice will be published approximately three days from the date of this letter. Please submit your written comments 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, 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

Enclosures

c: Dolores Gough, Permit Services

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**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 issuance of Authority To Construct to Vintage Production California LLC, for its light oil operation at Light Oil Central stationary source, California. The project is to lower the rating of the flare and authorize its operation at various unspecified locations within the same stationary source (S-1737).

The District's analysis of the legal and factual basis for these proposed actions, Project #S-1120071, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. 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.**

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

Gas Flare for Oil Production

Facility Name: Vintage Production California, LLC Date: 3/5/2012
Mailing Address: 9600 Ming Ave., Suite 300 Engineer: Dolores Gough
Bakersfield, CA 93311 Lead Engineer: Rich Karrs
Contact Person: Joey Barulich
Telephone: (661) 869-8075
Fax: (661) 869-8151
E-Mail: Joey_barulich@oxy.com
Application #(s): S-1737-168-2 and '-180-0
Project #: S-1120071
Deemed Complete: 1/23/2012

RWK
3-5-12

I. Proposal

Vintage Production California LLC (VPC) has requested Authority to Construct (ATC) permits to allow the flare currently listed on S-1737-168 to operate as a general purpose flare for use in well testing, tank and well vent control and emergency situations at various unspecified locations within the same stationary source (S-1737). The flare is assigned a separate permit number (S-1737-180).

With this project the rating of the flare will be lowered from 75 MMBtu/hr to 49 MMBtu/hr. There is no proposed increase to the volume of gas that will be incinerated, which equates to approximately 33 MMBtu/hr.

VPC received their Title V Permit on September 23, 1999. This modification can be classified as a Title V minor 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 permit.

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 4101	Visible Emissions (2/17/05)

Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4301	Fuel Burning Equipment (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 (4/20/05)
Rule 4623	Storage of Organic Liquids (5/19/05)
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 operated at various unspecified locations within VPC's Light Oil Central stationary source (S-1737). VPC will not operate this equipment within 1,000 feet of a K-12 school, nor relocate it to a location outside of the source.

IV. Process Description

VPC operates crude oil and natural gas production equipment. The flare is currently used for incineration of produced field gas and for safety purposes in the event that flow in the sales gas line is interrupted. In addition to its current use, the flare will now be authorized to be used in well testing, tank and well vapor control and emergency situations.

V. Equipment Listing

Pre-Project Equipment Description:

S-1737-168-1: 126,000 GALLON FIXED ROOF CRUDE OIL GAUGE STORAGE TANK, 3-PHASE SEPARATOR, TWO HEATER TREATERS (EACH WITH BURNER(S) RATED AT 5 MMBTU/HR OR LESS), TWO 2-PHASE SEPARATORS SERVED BY VAPOR RECOVERY SYSTEM SHARED WITH TANKS S-1737-169, '-170, AND '-171. VAPOR RECOVERY SYSTEM CONSISTS OF COMPRESSOR AND ASSOCIATED PIPING DISCHARGING TO 1.8 MMSCFD AIR-ASSISTED FLARE OR GAS SALES PIPELINE

Proposed Modification:

S-1737-168-2: MODIFICATION OF 126,000 GALLON FIXED ROOF CRUDE OIL GAUGE STORAGE TANK, 3-PHASE SEPARATOR, TWO HEATER TREATERS (EACH WITH BURNER(S) RATED AT 5 MMBTU/HR OR LESS), TWO 2-PHASE SEPARATORS SERVED BY VAPOR RECOVERY SYSTEM SHARED WITH TANKS S-1737-169, '-170, AND '-171. VAPOR RECOVERY SYSTEM CONSISTS OF COMPRESSOR AND ASSOCIATED PIPING DISCHARGING TO 1.8 MMSCFD AIR-ASSISTED FLARE OR GAS SALES PIPELINE: DESIGNATE FLARE SEPARATELY AS PERMIT UNIT S-1737-180-0

Post Project Equipment Description:

S-1737-168-2: 126,000 GALLON FIXED ROOF CRUDE OIL GAUGE STORAGE TANK, 3-PHASE SEPARATOR, TWO HEATER TREATERS (EACH WITH BURNER(S) RATED AT 5 MMBTU/HR OR LESS), TWO 2-PHASE SEPARATORS SERVED BY VAPOR RECOVERY SYSTEM SHARED WITH TANKS S-1737-169, '-170, AND '-171. VAPOR RECOVERY SYSTEM CONSISTS OF COMPRESSOR AND ASSOCIATED PIPING DISCHARGING TO FLARE S-1737-180-0 AND/OR SALES GAS LINE

S-1737-180-0: 49 MMBTU/HR FLARE APPROVED FOR USE IN WELL TESTING, TANK AND WELL VENT CONTROL, EQUIPMENT SHUTDOWN, EMERGENCIES AND OTHER SITUATIONS REQUIRING A SAFETY FLARE AT VARIOUS UNSPECIFIED LOCATIONS

VI. Emission Control Technology Evaluation

The subject flare has the potential to emit NO_x, SO_x, PM₁₀, CO, and VOC emissions due to the incineration of produced gas generated by oil production activities.

The flare is designed to incinerate produced gas in a safe manner and without creating a nuisance. To ensure that combustible gases are incinerated, the flare's outlet is equipped with an automatic ignition system, or operates with a pilot flame present at all times when gases are vented through the flare.

The sulfur content of the flare gas is expected to not exceed 0.25 gr/100 scf.

VII. General Calculations

A. Assumptions

- Daily maximum of 700,000 ft³/day produced gas will be combusted in the flare.
- Produced gas heating value is 1,140 BTU/scf (per applicant)

B. Emission Factors

The emission factors are taken from the current PTO S-1737-168-1, which were from EPA AP-42, section 13.5. Pursuant to District FYI- 83 the 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. Since the subject flare is located at an oil exploration and production operation; these emission factors are applicable to the subject flare.

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
PM ₁₀	0.008	Current PTO
SOx (as SO ₂)*	0.0006	Mass balance

*SOx = (0.25 gr-S/100 scf)(10⁶scf fuel/MMSCF)(lb/7000 gr)(MMSCF/1,140 MMBtu)(64 lb-SO₂/32 lb-S) = **0.0006 lb/MMBtu**

C. Calculations

1. Pre-Project Potential to Emit (PE1)

S-1737-168-1: The PE1 emissions are fugitives and from the flare.

Fugitive emissions (from PAS, Project S-1060118):

VOC = 1.1 lb/day (402 lb/yr)

Flare emissions calculations:

Heat Input/day = 700,000 scf/day x 1,140 Btu/scf = 798 MMBtu/day
Daily PE₂ = Heat Input (MMBtu/day) x Emission Factor (lb/MMBtu)

Heat Input/yr = 798 MMBtu/day x 365 day/yr = 291,270 MMBtu/yr
Annual PE₂ = Heat Input (MMBtu/yr) x Emission Factor (lb/MMBtu)

Daily PE1			
Pollutant	Heat Input (MMBtu/day)	Emission Factor (lb/MMBtu)	Daily PE1 (lb/day)
NOx	798	0.068	54.3
SOx	798	0.0006	0.5
PM10	798	0.008	6.4
CO	798	0.37	295.3
VOC	798	0.063	50.3

Annual PE1			
Pollutant	Heat Input (MMBtu/yr)	Emission Factor (lb/MMBtu)	Annual PE1 (lb/yr)
NOx	291,270	0.068	19,806
SOx	291,270	0.0006	175
PM10	291,270	0.008	2,330
CO	291,270	0.37	107,770
VOC	291,270	0.063	18,350

Total Emissions:

Pre-Project Emissions (PE1)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-1737-168-1	19,806	175	2,330	107,770	18,752

S-1737-180-0: (new permit for the flare listed in '-168 above)

PE1 = PE from the existing flare. The new permit number is just administrative.

2. Post Project Potential to Emit (PE2)

S-1737-168-2: The PE2 will include only the fugitive emissions as listed in VII(C)(1) above. The emissions from the flare are transferred to S-1737-180-0 (flare).

S-1737-180-0: The PE2 emissions for the flare are transferred from S-1737-168-1 and summarized below:

Post-Project Emissions (PE2)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
Daily (lb/day)	54.3	0.5	6.4	295.3	50.3
Annual (lb/yr)	19,806	175	2,330	107,770	18,350

Greenhouse Gas Emissions (GHG):

No greenhouse gas emissions increase is expected since the project does not involve any new emissions unit and no increase in fuel usage is proposed with this project.

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.

The SSPE1 emissions are from Project S-1111515, the last project to be finalized, but adjusted to reflect corrected emissions from '-168-1.

Pre Project Stationary Source Potential to Emit [SSPE1] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
Pre Project SSPE (SSPE1)	70,056	3,728	13,552	164,092	57,509

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.

The SSPE2 is calculated by adding the PE2 from the new emissions unit to the SSPE1. However, in this project the emissions from the newly permitted flare is already included in the emissions calculations for '-168; therefore, SSPE1 = SSPE2.

Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-1737-180-0*	19,806	175	2,330	107,770	18,350
SSPE1	70,056	3,728	13,552	164,092	57,509
Post Project SSPE (SSPE2)	70,056	3,728	13,552	164,092	57,509

* Emissions are already included in Unit S-1737-168.

5. Major Source Determination

Pursuant to Section 3.24 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.”

Major Source Determination (lb/year)					
	NO_x	SO_x	PM₁₀	CO	VOC
Pre-Project SSPE (SSPE1)	70,056	3,728	13,552	164,092	57,509
Post Project SSPE (SSPE2)	70,056	3,728	13,552	164,092	57,509
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	No	Yes

As seen in the table above, the facility is an existing Major Source for NO_x and VOC and will remain a major source for these pollutants with 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.

As shown in Section VII.C.5 above, the facility is not a Major Source for SO_x, PM₁₀ and CO. Therefore, Baseline Emissions (BE) for these pollutants are equal to the Pre-Project Potential to Emit (PE1). VPC is a major source for NO_x and VOC.

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 equipment is an air-assisted flare and meets the achieved-in-practice BACT (Guideline 1.4.2). Therefore, Baseline Emissions (BE) for NOx and VOC are equal to the Pre-Project Potential to Emit (PE1).

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 NOx and VOC, 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	19,806	50,000	No
SO _x	175	80,000	No
PM ₁₀	2,330	30,000	No
VOC	18,752	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.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission increases are counted. Emission decreases may not cancel out the increases for this determination.

Step 1

Since the flare is an existing emissions unit, the increase in emissions is calculated as follows.

$$\text{Emission Increase} = \text{PAE} - \text{BAE} - \text{UBC}$$

Where: PAE = Projected Actual Emissions (assume PE2 per VPC)
 BAE = Baseline Actual Emissions (calculated below)
 UBC = Unused baseline capacity (assume zero)

Baseline Actual Emissions (BAE) for NOx and VOC:

For federal major modification determination purposes, the BAE is calculated using VPC's actual emissions in the two years preceding this application (2010 and 2011). The average annual historical gas that was flared provided by VPC are:

2010: 1,721,000 scf/yr
 2011: 4,858,000 scf/yr
 Average: 3,289,500 scf/yr

$$\text{Heat Input/yr} = 3,289,500 \text{ scf/yr} \times 1,140 \text{ Btu/scf} = 3,750.03 \text{ MMBtu/yr}$$

$$\text{BAE for NOx (lb/yr)} = 3,750.03 \text{ MMBtu/yr} \times 0.068 \text{ lb/MMBtu} = 255 \text{ lb/yr}$$

$$\text{BAE for VOC (lb/yr)} = 3,750.03 \text{ MMBtu/yr} \times 0.063 \text{ lb/MMBtu} = 236 \text{ lb/yr}$$

$$\text{Emissions Increase (lb/yr)} = \text{PAE} - \text{BAE} - \text{UBC}$$

$$\text{NOx} = 19,806 \text{ lb/yr} - 255 \text{ lb/yr} - 0 = 19,551 \text{ lb/yr}$$

$$\text{VOC} = 18,350 \text{ lb/yr} - 236 \text{ lb/yr} - 0 = 18,114 \text{ lb/yr}$$

In summary, the project's combined total emission increases as calculated above are compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)**	Thresholds (lb/yr)	Federal Major Modification?
NO _x *	19,551	0	Yes
VOC*	18,114	0	Yes
PM ₁₀	<30,000	30,000	No
PM _{2.5}	<20,000	20,000	No
SO _x	<80,000	80,000	No

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since there is an increase in NO_x and VOC emissions, this project constitutes a Federal Major Modification, and no further analysis is required.

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 E**.

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 seen in Section VII.C.2 of this evaluation, the applicant is proposing to permit an existing flare with a PE greater than 2 lb/day for NO_x, PM₁₀, CO and VOC. Since the flare is not a new emissions unit, BACT is not triggered for new emissions unit purposes.

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

$$\text{AIPE} = \text{PE2} - \text{HAPE}$$

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)

$$\text{HAPE} = \text{PE1} \times (\text{EF2}/\text{EF1})$$

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

$$\text{AIPE} = \text{PE2} - (\text{PE1} * (\text{EF2} / \text{EF1}))$$

As shown in Section VII.C.1 & 2 above, EF1 = EF2. The PE1 and PE2 were just transferred between the two subject units; therefore, it can be concluded that AIPE is less than 2 lb/day for all the pollutants. BACT therefore is not triggered.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project does constitute a Federal Major Modification for NO_x and VOC emissions; therefore, BACT is triggered for NO_x and VOC for federal modification purposes.

2. BACT Guideline

BACT Guideline 1.4.2, applies to the Waste Gas Flare – Incinerating Produced Gas (See **Appendix C**)

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 C**), BACT has been satisfied with the following:

NO_x: Air-assisted
VOC: Air-assisted

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 of 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 Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
Post Project SSPE (SSPE2)	70,056	3,728	13,552	164,092	57,509
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	Yes	No	No	No	Yes

2. Quantity of Offsets Required

As seen above, the facility is an existing Major Source for NO_x and VOC and the SSPE2 is greater than the offset thresholds; 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 NO_x and VOC 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)

As discussed in VII.C.6 above, BE = PE1 since the flare is a Clean Emissions Unit.

$$\begin{aligned}\Sigma PE2 (NO_x) &= 0 + 19,806 = 19,806 \text{ lb/yr} \\ \Sigma BE (NO_x) &= 19,806 + 0 = 19,806 \text{ lb/yr}\end{aligned}$$

$$\begin{aligned}\Sigma PE2 (VOC) &= (402 + 18,350) + 0 = 18,752 \text{ lb/yr} \\ \Sigma BE (VOC) &= 402 + 18,350 = 18,752\end{aligned}$$

$$ICCE = 0 \text{ lb/year}$$

Based on the PE2 and BE (equal to PE1) shown above, the amount of offsets is zero; therefore, 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 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. This is not a new facility; however, as demonstrated in VII.C.7, this project is a Federal Major Modification; therefore, public noticing for 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. There are no new emissions units associated with this project; therefore public noticing is not required for this project for Potential to Emit Purposes.

c. Offset Threshold

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

Offset Threshold				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	70,056	70,056	20,000 lb/year	No
SO _x	3,728	3,728	54,750 lb/year	No
PM ₁₀	13,552	13,552	29,200 lb/year	No
CO	164,092	164,092	200,000 lb/year	No
VOC	57,509	57,509	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 Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. $SSIPE = SSPE2 - SSPE1$. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	70,056	70,056	0	20,000 lb/year	No
SO _x	3,728	3,728	0	20,000 lb/year	No
PM ₁₀	13,552	13,552	0	20,000 lb/year	No
CO	164,092	164,092	0	20,000 lb/year	No
VOC	57,509	57,509	0	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore, public noticing for SSIPE purposes is not required.

2. Public Notice Action

As discussed above, public noticing is required for this project for Federal Modification purposes. 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 ATCs for this equipment.

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, 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-1737-168-2: The following conditions will be retained on the new ATC:

- Fugitive VOC emissions from all components associated with this tank shall not exceed 0.14 lb/day as 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). [District Rule 2201]
- Fugitive VOC emissions from all components associated with the vapor recovery system (shared with S-1737-169, '-170, and '-171) including vapor collection piping, vapor compressor, heater treaters, flare gas line, separator vessels and scrubbers shall not exceed 0.98 lb/day as 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). [District Rule 2201]

S-1737-180-0: The following conditions will be moved to the flare ATC:

- Emission rates from this unit shall not exceed any of the following limits: NO_x (as NO₂) - 0.068 lb/MMBtu; VOC - 0.063 lb/MMBtu; CO - 0.37 lb/MMBtu; or PM₁₀ - 0.008 lb/MMBtu. [District Rule 2201]
- Sulfur content of the gas combusted in the flare shall not exceed 0.25 gr-S/100scf. [District Rule 2201]
- Gas consumption of the flare shall not exceed 700,000 scf/day. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

The following condition will be on the ATC for the flare:

- Upon transfer of location or change in the method of operation of the flare (excluding emergencies) of the flare, gas shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2201]

2. Monitoring

The following condition will be on the ATC for the flare:

- The flare shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2201]

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition(s) will be on the ATCs:

S-1737-168-2:

- Permittee shall keep accurate records of each organic liquid stored in the tank, including its type and API gravity. [District Rules 1070, 2201 and 4409]
- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201 & 4623]

S-1737-180-0:

- Permittee shall maintain accurate daily records of volume, type, higher heating value, and sulfur content of gas flared. [District Rules 2201 & 1070]
- Permittee shall maintain accurate records of location and duration of operation at each stationary source. [District Rules 2201 and 4409]

- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201 & 4409]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) 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 Technical Services Division of the SJVAPCD conducted the required analysis. Refer to **Appendix D** of this document for the AAQA summary sheet.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

	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 ²	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 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).

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

G. Compliance Certification

Pursuant to Section 4.15.2, the owner of the proposed new Major Source or federal major modification shall demonstrate to the satisfaction of the APCO that all major stationary sources owned or operated by such person (or 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 limitations and standards.

VPC provided verification that all major Stationary Sources owned or operated by VPC in California are in compliance or on a schedule for compliance with all applicable emission limitations and standards (Appendix G).

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant is requesting authorization to operate the subject flare at various unspecified locations within the same stationary source.

The flare is used to incinerate produced gases from well or tank testing and during emergency situations. Alternative sites would involve the relocation and/or construction of the various structures for the oilfield operation that the flare supports. This would be impractical and would 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. The proposed modification is a Significant Modification to the Title V Permit pursuant to Section 3.20 of this rule:

In accordance with Rule 2520, 3.20, these modifications do not meet the minor modification criteria as follows:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
 - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and

6. Do not seek to consolidate overlapping applicable requirements.

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. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment/significant modification application.

Rule 4101 Visible Emissions

The purpose of this rule is to prohibit the emissions of visible air contaminants to the atmosphere. The provisions of this rule apply to any source operation which emits or may emit air contaminants.

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity).

None of the units in this project are expected to have visible emissions greater than 20% opacity or Ringelmann 1. The following conditions will be retained or placed on the ATCs to ensure compliance with this rule.

S-1737-180:

- Flare shall operate in a smokeless manner (0% opacity) except for three minutes in any one hour. [District Rule 2201] Y
- A trained observer, as defined in EPA Method 22, shall check visible emissions at least once every two weeks for a period of 15 minutes. If visible emissions are detected at any time during this period, the observation period shall be extended to two hours. A record containing the results of these observations shall be maintained, which also includes company name, process unit, observer's name and affiliation, date, estimated wind speed and direction, sky condition, and the observer's location relative to the source and sun. [District Rules 2080 and 4101]

Rule 4102 Nuisance

The purpose of this rule is to protect the health and safety of the public. This rule applies to any source operation which emits or may emit air contaminants or other materials.

Section 4.0 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)

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. As the flare is being relocated potentially closer to a receptor, a health risk assessment is necessary.

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 (**Appendix D**), the total facility prioritization score including this project was greater than one. Therefore, a health risk assessment was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-1737-180-0	1.16 per million	Yes

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is required for this project because the HRA indicates that the risk is above the District's thresholds for triggering T-BACT requirements.

For this project T-BACT is triggered for NO_x and VOC. T-BACT is satisfied with BACT for NO_x and VOC (**see Appendix C**), which is the use of air assisted flare.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 10 in a million). As outlined by the HRA Summary, the emissions increases for this project was determined to be less than significant. The following special condition specifies how close the flare may be located to a receptor.

- The flare shall always operate at least 500 feet away from the closest receptor.
- The flare shall always operate at least 500 feet away from the facility's fenceline.

Rule 4201 Particulate Matter Concentration

The purpose of this rule is to protect the ambient air quality by establishing a particulate matter emission standard. This rule applies to any source operation which emits or may

emit dust, fumes, or total suspended particulate matter. This rule requires that a person shall not release or discharge into the atmosphere from any single source operation, dust, fumes, or total suspended particulate matter emissions in excess of 0.1 grain per cubic foot of gas at dry standard conditions.

F-factor for the fuel gas = 8,652 dscf/MMBtu (VPC Project S-1104605)
The particulate emission rate for the flare is 0.008 lb PM10/MMBtu

$$0.008 \text{ lb-PM}_{10}/\text{MMBtu} \times \text{MMBtu}/8652 \text{ dscf} \times 7,000 \text{ gr/lb} = 0.006 \text{ gr/dscf} < 0.1 \text{ gr/dscf}$$

It is expected that the particulate matter emissions will not exceed 0.1 grains per cubic foot of gas at dry standard conditions.

Rule 4301 Fuel Burning Equipment

The purpose of this rule is to limit the emission of air contaminants from fuel burning equipment. This rule limits the concentration of combustion contaminants and specifies maximum emission rates for sulfur dioxide, nitrogen oxide and combustion contaminant emissions. The provisions of this rule apply to any fuel burning equipment except air pollution control equipment which is exempted pursuant to Section 4.0.

The flare is not a fuel burning equipment as defined in Section 3.1 of Rule 4301; therefore, the requirements of this rule are not applicable. Furthermore, this flare primarily serves as an air pollution control equipment by using a combustion process to destroy air contaminants. Therefore, it is exempt from the provisions of this rule pursuant to section 4.1.

Rule 4311 Flares

The purpose of this rule is to limit the emissions of volatile organic compounds (VOC), oxides of nitrogen (NOx), and sulfur oxides (SOx) from the operation of flares.

Sections 5.1 through Section 5.11 specify requirements for flares that are subject to the rule. To ensure compliance with the applicable provisions of the rule, the following conditions will be included in the proposed ATCs:

- The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311]
- The outlet shall be equipped with an automatic ignition system, or shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rules 2201 and 4311]
- Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent

device, capable of continuously detecting at least one pilot flame or the flare flame is present, shall be installed and operated. [District Rule 4311]

- Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311]

Section 5.8 Flame Minimization Plan: Effective after July 1, 2011, flaring is prohibited unless it is consistent with an approved Flame Minimization Plan. Section 5.10 states that after July 1, 2011, the operator subject to flare minimization requirements shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7 of this rule. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare.

The applicant has an approved Flare Minimization Plan and is in compliance with this section of the rule.

Rule 4409 Components at light crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities

The purpose of this rule is to limit VOC emissions from leaking components at light crude oil production facilities, natural gas production facilities, and natural gas processing facilities. This rule applies to components containing or contacting VOC streams at light crude oil production facilities, natural gas production facilities, and natural gas processing facilities.

Conditions associated with this rule will be retained or added on the new ATCs to ensure compliance with this rule.

Rule 4623 Storage of Organic Compounds

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.

The tank ('-168-2) in this project has a capacity greater than 1,100 gallons and store crude oil; therefore, this rule is applicable. All the conditions associated with this rule will be retained in the new ATC to ensure continued compliance with this rule.

Rule 4801 Sulfur Compounds (December 17, 1992)

The purpose of this rule is to limit the emissions of sulfur compounds and shall apply to any discharge to the atmosphere of sulfur compounds, which would exist as a liquid or a gas at standard conditions. Current emissions of sulfur compounds as SO₂ do not exceed 0.2% by volume. Continued compliance is expected

California Health & Safety Code 42301.6 (School Notice)

The flare will not be 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)

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.

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-1737-168-2 and '-180-0 subject to the permit conditions on the attached draft Authority to Construct in **Appendix B**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1737-168-2	3020-05-E	126,000 gal	\$246.00
S-1737-180-0	3020-02-H	49 MMBtu/hr	\$1,030.00

Appendices

- A: Current PTO
- B: Draft ATC(s)
- C: BACT Guideline and Analysis
- D: HRA Summary & AAQ Analysis
- E: Quarterly Net Emissions Change
- F: Emission Profile(s)
- G: Compliance Certifications

APPENDIX C

BACT Guideline and Analysis

San Joaquin Valley
Unified Air Pollution Control District

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 contained 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**

Top Down BACT Analysis for NOx and VOC Emissions:

Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 1.4.1 (11/09/1995), identifies achieved in practice and technologically feasible BACT for "Waste Gas Flare – 15.3 MMBtu/hr, Serving a Tank Vapor System" as follows:

1. Steam-assisted or air-assisted when steam unavailable – achieved in practice

Step 2 - Eliminate Technologically Infeasible Options

The above listed technology is technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. Steam-assisted or air-assisted when steam unavailable – achieved in practice

Step 4 - Cost Effectiveness Analysis

Only one control technology is identified and this technology is achieved in practice; therefore, a cost effectiveness analysis not necessary.

Step 5 - Select BACT for NOx and VOC

The use of air-assisted when steam is unavailable is selected as BACT for NOx and VOC emissions.

APPENDIX D

HRA Summary and AAQ Analysis

**San Joaquin Valley Air Pollution Control District
Risk Management Review
REVISED**

To: Dolores Gough – Permit Services
 From: Cheryl Lawler – Technical Services
 Date: February 27, 2012
 Facility Name: Vintage Production
 Location: Various Unspecified Locations
 Application #(s): S-1737-168-2 (*190-0 flare*)
 Project #: S-1120071

A. RMR SUMMARY

RMR Summary			
Categories	Flare ¹⁹⁰ (Unit 168-2)	Project Totals	Facility Totals
Prioritization Score	4.12	4.12	>1
Acute Hazard Index	0.00	0.00	0.04
Chronic Hazard Index	0.05	0.05	0.06
Maximum Individual Cancer Risk	1.16E-06	1.16E-06	2.06E-06
T-BACT Required?	Yes		
Special Permit Conditions?	Yes		

Proposed Permit Conditions

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

Unit 168-2

1. The flare shall always operate at least 500 feet away from the closest receptor.
2. The flare shall always operate at least 500 feet away from the facility's fenceline.

B. RMR REPORT

I. Project Description

Technical Services received a request on February 15, 2012, to re-run a Risk Management Review (RMR) and Ambient Air Quality Analysis (AAQA) for an existing tank vapor control flare to operate at various unspecified locations within the facility's boundaries. The RMR and AAQA are being re-run because of revised emission rates for PM₁₀, SO_x and VOC calculated and submitted by the processing engineer. No other changes were made as part of this RMR and AAQA.

II. Analysis

For the Risk Management Review, toxic emissions from the project were calculated using District approved emission factors for well gas flares. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905-1, March 2, 2001), risks from the proposed project were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEART's database. The project's prioritization score was greater than 1.0 (see RMR Summary Table); therefore, a refined Health Risk Assessment was required and performed for the project. AERMOD was used with flare parameters outlined below and concatenated 5-year meteorological data from Bakersfield to determine maximum dispersion factors at the nearest residential and business receptors. The dispersion factors were input into the HARP model to calculate the Chronic and Acute Hazard Indices and the Carcinogenic Risk.

The following parameters were used for the review:

Analysis Parameters			
Source Type	Flare	Closest Receptor (m)	152.4
Release Height (m)	6.1	Closest Receptor Type	Residence & Business
Stack Diameter (m)	1.01*	Project Location Type	Rural
Gas Exit Temperature (K)	1273*	Stack Gas Velocity (m/s)	20*

*Based on EPA guidance and default values for flares.

Technical Services also performed modeling for criteria pollutants CO, NO_x, SO_x, PM₁₀, and PM_{2.5}, as well as the RMR. Emission rates used for criteria pollutant modeling were 12.3 lb/hr CO, 2.26 lb/hr NO_x, 0.025 lb/hr SO_x, 0.267 lb/hr PM₁₀, and 0.267 PM_{2.5}.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*
Values are in $\mu\text{g}/\text{m}^3$

Flare	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 criteria modeling runs indicate the emissions from the proposed equipment will not cause or significantly contribute to a violation of a State or National AAQS.

The acute and chronic indices are below 1.0; and the maximum individual cancer risk associated with the project is **1.16E-06**, which is greater than the 1 in a million threshold. In accordance with the District's Risk Management Policy, the unit is approved **with** 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.

APPENDIX E

Quarterly Net Emissions Change (QNEC)

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.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$$\begin{aligned} \text{PE2}_{\text{quarterly}} &= \text{PE2}_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 4,600 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 1,150 \text{ lb PM}_{10}/\text{qtr} \end{aligned}$$

$$\begin{aligned} \text{PE1}_{\text{quarterly}} &= \text{PE1}_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 4,600 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 1,150 \text{ lb PM}_{10}/\text{qtr} \end{aligned}$$

S-1737-168-2:

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	0	4,952	- 4,952
SO _x	0	44	- 44
PM ₁₀	0	583	- 583
CO	0	26,943	- 26,943
VOC	100	4,688	-4,588

S-1737-180-0:

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	4,952	0	4,952
SO _x	44	0	44
PM ₁₀	583	0	583
CO	26,943	0	26,943
VOC	4,588	0	4,588

APPENDIX F

Emissions Profile

Permit #: S-1737-168-2	Last Updated
Facility: VINTAGE PRODUCTION CALIFORNIA	03/01/2012 GOUGHD

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	402.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	1.1
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-4952.0	-44.0	-583.0	-26943.0	-4588.0
Q2:	-4952.0	-44.0	-583.0	-26943.0	-4588.0
Q3:	-4952.0	-44.0	-583.0	-26943.0	-4588.0
Q4:	-4952.0	-44.0	-583.0	-26943.0	-4588.0
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-1737-180-0	Last Updated
Facility: VINTAGE	03/01/2012 GOUGHD
PRODUCTION CALIFORNIA	

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	19806.0	175.0	2330.0	107770.0	18350.0
Daily Emis. Limit (lb/Day)	54.3	0.5	6.4	295.3	50.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	4952.0	44.0	583.0	26943.0	4588.0
Q2:	4952.0	44.0	583.0	26943.0	4588.0
Q3:	4952.0	44.0	583.0	26943.0	4588.0
Q4:	4952.0	44.0	583.0	26943.0	4588.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

APPENDIX G

Compliance Certifications

RECEIVED
FEB 27 2012
SJVAPCD
Southern Region

CERTIFICATION

Vintage Production California LLC hereby certifies as follows:

1. Vintage Production California LLC (VPC) owns or operates certain major stationary sources in the State of California. Such sources are comprised of a vast number of emission points. As used in this certification, the term "major stationary source" shall, with respect to VPC stationary sources in the SJVUAPCD, have the meaning ascribed thereto in SJVUAPCD Rule 2201, Section 3.23, and shall, with respect to all of VPC's other stationary sources in the State of California, have the meaning ascribed thereto in section 302(J) of the Clean Air Act (42 U.S.C. Section 7602 (J)).

2. Subject to paragraphs 3 and 4 below, all major stationary sources owned or operated by VPC in the State of California are either in compliance, or on an approved schedule of compliance, with all applicable emission limitations and standards under the Clean Air Act and all of the State Implementation Plan approved by the Environmental Protection Agency.

3. This certification is made on information and belief and is based upon a review of VPC's major stationary sources in the State of California by those employees of VPC who have operational responsibility for compliance. In conducting such reviews, VPC and its employees have acted in good faith and have exercised best efforts to identify any exceedance of the emission limitations and standards referred to in paragraph 2 thereof.

4. This certification shall speak as of the time and date of its execution.

CERTIFICATION

By: Denny Brown Date: 2-27-12
Denny Brown

Title: Operations Lead Time: 10:45 AM

RECEIVED

JAN - 5 2012

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)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME: Vintage Production California LLC	FACILITY ID: S- 1327
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Vintage Production California LLC	
3. Agent to the Owner: Joey Barulich	

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

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

Denny Brown
Signature of Responsible Official

1-6-12
Date

Denny Brown
Name of Responsible Official (please print)

Operations Manager
Title of Responsible Official (please print)

APPENDIX A

Current PTO

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1737-168-1

EXPIRATION DATE: 02/28/2014

SECTION: SE36 **TOWNSHIP:** 26S **RANGE:** 24E

EQUIPMENT DESCRIPTION:

126,000 GALLON FIXED ROOF CRUDE OIL GAUGE STORAGE TANK, 3-PHASE SEPARATOR, TWO HEATER TREATERS (EACH WITH BURNER(S) RATED AT 5 MMBTU/HR OR LESS), TWO 2-PHASE SEPARATORS SERVED BY VAPOR RECOVERY SYSTEM SHARED WITH TANKS S-1737-169, '-170, AND '-171. VAPOR RECOVERY SYSTEM CONSISTS OF COMPRESSOR AND ASSOCIATED PIPING DISCHARGING TO 1.8 MMSCFD AIR-ASSISTED FLARE OR GAS SALES PIPELINE

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fully enclosed fixed roof and shall be maintained in a leak-free condition. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Gases from the tanks, heater treaters, and all separators shall be flared or routed to a sales pipeline. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The API gravity of any organic liquid stored or processed in this tank shall be less than 30ø. [District Rules 2201 and 4409] Federally Enforceable Through Title V Permit
4. The storage tank shall be fully enclosed and shall be maintained in a leak-free condition. The storage tank shall be connected to an APCO-approved vapor recovery system consisting of a closed system that collects all VOCs from the storage tank(s) and a VOC control device. The vapor recovery system shall be maintained in leak-free condition. Collected vapor shall be directed to a gas pipeline distribution system or to an approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in Section 6.4.6 of District Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. 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), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with 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 of more than 3 drops per minute. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Fugitive VOC emissions from all components associated with the vapor recovery system (shared with S-1737-169, '-170, and '-171) including vapor collection piping, vapor compressor, heater treaters, flare gas line, separator vessels and scrubbers shall not exceed 0.98 lb/day as 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). [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Fugitive VOC emissions from all components associated with this tank shall not exceed 0.14 lb/day as 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). [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall maintain accurate fugitive component count and resultant emissions 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). These records shall be retained on-site for a period of at least five years, and shall be made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Heater treaters shall only be fired on PUC-quality natural gas or LPG. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The permittee shall tune the unit (two heaters) at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year; and this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. [District Rule 4307, 5.2.1.1] Federally Enforceable Through Title V Permit
13. Emissions from the flare shall not exceed any of the following limits: 0.068 lb-NO_x/MMBtu (as NO₂), 0.008 lb-PM₁₀/MMBtu, 0.37 lb-CO/MMBtu, or 0.063 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Flare gas inlet line shall be equipped with operational volumetric totalizing flowrate indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Gas consumption of the flare shall not exceed 700,000 scf per day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Sulfur content of gas combusted in the flare shall not exceed 0.25 gr/100 scf as sulfur. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
17. The sulfur content of gas combusted in the flare shall be tested at least annually by sample collection and independent laboratory analysis using ASTM D1072, D3246, D4084, double GC for H₂S and mercaptans, or other method approved by the APCO. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The flare shall be operated with no visible emissions (0% opacity) except for a period or periods not aggregating to more than three minutes in any one hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
19. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
20. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rules 2201 and 4311, 5.3] Federally Enforceable Through Title V Permit
21. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present, shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
22. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
23. Permittee shall maintain records of sulfur content of the gas flared and the daily gas consumption of the flare. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The permittee shall keep accurate records of each organic liquid stored in the tank, including its type and API gravity. [District Rules 1070, 2201 and 4409] Federally Enforceable Through Title V Permit
25. On and after July 1, 2015, the heater treaters in this unit shall comply with the applicable emission requirements of Section 5.1, Table 1 in District Rule 4307. [District Rule 4307, 5.2.3] Federally Enforceable Through Title V Permit
26. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

APPENDIX B

Draft ATC(s)

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1737-168-2

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

LOCATION: LIGHT OIL CENTRAL
KERN COUNTY, CA

SECTION: SE36 TOWNSHIP: 26S RANGE: 24E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 126,000 GALLON FIXED ROOF CRUDE OIL GAUGE STORAGE TANK, 3-PHASE SEPARATOR, TWO HEATER TREATERS (EACH WITH BURNER(S) RATED AT 5 MMBTU/HR OR LESS), TWO 2-PHASE SEPARATORS SERVED BY VAPOR RECOVERY SYSTEM SHARED WITH TANKS S-1737-169, '-170, AND '-171. VAPOR RECOVERY SYSTEM CONSISTS OF COMPRESSOR AND ASSOCIATED PIPING DISCHARGING TO 1.8 MMSCFD AIR-ASSISTED FLARE OR GAS SALES PIPELINE: DESIGNATE FLARE SEPARATELY AS PERMIT UNIT S-1737-180-0

CONDITIONS

1. {1829} The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a fully enclosed fixed roof and shall be maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Gases from the tanks, heater treaters, and all separators shall be flared or routed to a sales pipeline. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The API gravity of any organic liquid stored or processed in this tank shall be less than 30ø. [District Rules 2201 and 4409] 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-1737-168-2 : Mar 5 2012 12:53PM -- GOUHHD : Joint Inspection NOT Required

5. The storage tank shall be fully enclosed and shall be maintained in a leak-free condition. The storage tank shall be connected to an APCO-approved vapor recovery system consisting of a closed system that collects all VOCs from the storage tank(s) and a VOC control device. The vapor recovery system shall be maintained in leak-free condition. Collected vapor shall be directed to a gas pipeline distribution system or to an approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in Section 6.4.6 of District Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. 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), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with 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 of more than 3 drops per minute. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Fugitive VOC emissions from all components associated with the vapor recovery system (shared with S-1737-169, '-170, and '-171) including vapor collection piping, vapor compressor, heater treaters, flare gas line, separator vessels and scrubbers shall not exceed 0.98 lb/day as 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). [District Rule 2201] Federally Enforceable Through Title V Permit
10. Fugitive VOC emissions from all components associated with this tank shall not exceed 0.14 lb/day as 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). [District Rule 2201] Federally Enforceable Through Title V Permit
11. Permittee shall maintain accurate fugitive component count and resultant emissions 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). These records shall be retained on-site for a period of at least five years, and shall be made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Heater treaters shall only be fired on PUC-quality natural gas or LPG. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The permittee shall tune the unit (two heaters)at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year; and this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. [District Rule 4307] Federally Enforceable Through Title V Permit
14. The permittee shall keep accurate records of each organic liquid stored in the tank, including its type and API gravity. [District Rules 1070, 2201 and 4409] Federally Enforceable Through Title V Permit
15. On and after July 1, 2015, the heater treaters in this unit shall comply with the applicable emission requirements of Section 5.1, Table 1 in District Rule 4307. [District Rule 4307] Federally Enforceable Through Title V Permit
16. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1737-180-0

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

LOCATION: LIGHT OIL CENTRAL
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:

49 MMBTU/HR FLARE APPROVED FOR USE IN WELL TESTING, TANK AND WELL VENT CONTROL, EQUIPMENT SHUTDOWN, EMERGENCIES AND OTHER SITUATIONS REQUIRING A SAFETY FLARE AT VARIOUS UNSPECIFIED LOCATIONS

CONDITIONS

1. {1829} The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. Flare shall not be located within 1000 feet of any K-12 school. [CH&SC 42301.6]
3. Flare shall always operate at least 500 feet away from the closest receptor. [District Rule 4102]
4. Flare shall always operate at least 500 feet away from the facility's fenceline. [District Rule 4102]
5. Permittee shall notify the District Compliance Division of each location at which the flare is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
7. Flare shall operate in a smokeless manner (0% opacity) except for three minutes in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Flare gas inlet line shall be equipped with operational volumetric totalizing flowrate indicator. [District Rule 2201] 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

DAVID WARNER, Director of Permit Services

S-1737-180-0 : Mar 5 2012 12:53PM - GOUGHD : Joint Inspection NOT Required

9. Gas flowrate to flare (not including pilot gas) shall not exceed 700,000 cubic feet per day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emission rates from this unit shall not exceed any of the following limits: NO_x (as NO₂) - 0.068 lb/MMBtu; VOC (as methane) - 0.063 lb/MMBtu; CO - 0.37 lb/MMBtu or PM₁₀ - 0.008 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Gas sulfur content shall not exceed 0.25 gr/100 scf. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
12. Gas shall be tested quarterly for sulfur content. Upon transfer of location or change in the method of operation of the flare (excluding emergencies), gas shall be tested weekly for sulfur content. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The sulfur content of the gas being flared shall be determined using ASTM D1072, D3031, D4084, D3246, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201] Federally Enforceable Through Title V Permit
15. A trained observer, as defined in EPA Method 22, shall check visible emissions at least once every two weeks for a period of 15 minutes. If visible emissions are detected at any time during this period, the observation period shall be extended to two hours. A record containing the results of these observations shall be maintained, which also includes company name, process unit, observer's name and affiliation, date, estimated wind speed and direction, sky condition, and the observer's location relative to the source and sun. [District Rules 2080 and 4101] Federally Enforceable Through Title V Permit
16. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
17. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311] Federally Enforceable Through Title V Permit
18. Permittee shall obtain an ATC to modify any permit unit which authorizes this flare as a control device prior to this flare operating as a control device for that permit unit. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present, shall be installed and operated. [District Rule 4311] Federally Enforceable Through Title V Permit
20. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311] Federally Enforceable Through Title V Permit
21. Open flares (air-assisted, steam assisted or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311] Federally Enforceable Through Title V Permit
22. The flare shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2201] Federally Enforceable Through Title V Permit
23. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2080] Federally Enforceable Through Title V Permit
24. Permittee shall maintain accurate daily records of volume, type, higher heating value, and sulfur content of gas flared [District Rule 2201 & 1070] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

25. Permittee shall maintain accurate records of location and duration of operation at each stationary source. [District Rule 2201, 4311 & 4409] Federally Enforceable Through Title V Permit
26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 2201, 4311 & 4409] Federally Enforceable Through Title V Permit

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