San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

APR 23 2012

Mark Pishinsky
Venoco Inc
1518 Mill Rock Way, Suite 100
Bakersfield, CA 93311

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1120688

Dear Mr. Pishinsky:

Enclosed for your review and comment is the District's analysis of Venoco Inc's application for an Authority to Construct for three new crude oil production facilities each consisting of permit exempt two-phase separators, one 500 bbl crude oil wash tank, one 500 bbl crude oil storage tank, two 500 bbl produced water tanks, and vapor control system with flare, at the light oil production stationary source within the western Kern County fields.

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

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Richard Edgehill of Permit Services at (661) 392-5617.

Sincerely,

David Warner
Director of Permit Services

DW: RUE/cm

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
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www.valleyair.org

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

APR 23 2012

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

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1120688

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Venoco Inc's application for an Authority to Construct for three new crude oil production facilities each consisting of permit exempt two-phase separators, one 500 bbl crude oil wash tank, one 500 bbl crude oil storage tank, two 500 bbl produced water tanks, and vapor control system with flare, at the light oil production stationary source within the western Kern County fields.

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

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Venoco Inc for three new crude oil production facilities each consisting of permit exempt two-phase separators, one 500 bbl crude oil wash tank, one 500 bbl crude oil storage tank, two 500 bbl produced water tanks, and vapor control system with flare, at the light oil production stationary source within the western Kern County fields.

The analysis of the regulatory basis for this proposed action, Project #S-1120688, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.**

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Three New Crude Oil Production Facilities with Vapor Controlled Tanks and Flare

Facility Name:	Venoco Inc	Date:	April 5, 2012
Mailing Address:	1518 Mill Rock Way, Suite 100 Bakersfield, CA 93311	Engineer:	Richard Edgehill
		Lead Engineer:	Steve Leonard
Contact Person:	Mark Pishinsky and Doug McCormick (Insight Environmental Consultants)		
Telephone:	(661) 617-8939 (MP) (661) 282-2200,(DM) (661) 381-8975 cell (DM)		
Application #(s):	S-8136-1-0 through '-15-0		
Project #:	1120688		
Deemed Complete:	March 14, 2012		

I. Proposal

Venoco Inc (Venoco) is requesting Authorities to Construct for three new crude oil production facilities each consisting of permit exempt two-phase separators, one 500 bbl crude oil wash tank, one 500 bbl crude oil storage tank, and two 500 bbl produced water tanks. All of the tanks at each facility will be served by a vapor control system (VCS) venting to 33.3 MMBtu/hr produced gas flare for destruction of VOCs.

The project triggers BACT and public notice. Offsets are not required.

Facility S-8136 is a new non-major source and therefore Rule 2520 is not applicable.

II. Applicable Rules

District Rule 2020	Exemptions (12/20/07)
District Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
District Rule 4001	New Source Performance Standards, Subpart Kb (Amended 4/14/99) This subpart does not apply to vessels with a design capacity ≤ 1,589.874 m^3 (≤ 420,000 gallons) used for petroleum or condensate stored, processed, or treated prior to custody transfer. The capacity of these tanks is ≤ 420,000 gallons, and they store crude oil prior to custody transfer; therefore, **this subpart does not apply** to the tanks in this project.
District Rule 4101	Visible Emissions (2/17/05)
District Rule 4102	Nuisance (12/17/92)
District Rule 4311	Flares (6/18/09)
District Rule 4409	Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities (4/30/05) - **not applicable** – API gravity is less than 30 deg

District Rule 4623 Storage of Organic Liquids (5/19/05)
District 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 new crude oil production facilities are located within the light oil western stationary source at the following Sections, Township and Range:

Equipment Locations				
Well Pad	ATCs	Section	Township	Range
BLM-19	S-8136-1-0 through '-5-0	SW 19	31S	22E
BLM-29	S-8136-6-0 through '-10-0	NE 29	31S	22E
BLM-33	S-8136-11-0 through '-15-0	NE 33	31S	22E

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.

A project location map is included in **Attachment I**.

IV. Process Description

Venoco is requesting ATCs for three crude oil production facilities, each consisting of one 500 bbl wash tank, one 500 bbl stock tank, and two 500 bbl produced water tanks. The tanks will be equipped with vapor control system served by a 33.3 MMBtu/hr produced gas flare. The flares will combust a combined flow rate of 0.8 MMscf/day (SLC). Each facility will also include a permit exempt group separator, test separator, and flare scrubber (please see the Rule 2020 compliance section for more discussion on this).

Facility plot plans and process flow diagrams are included in **Attachment II**.

V. Equipment Listing

BLM-19

S-8136-1-0: 500 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY THE VAPOR CONTROL SYSTEM VENTED TO FLARE S-8136-5 (BLM 19)

S-8136-2-0: 500 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8136-1 (BLM 19)

S-8136-3-0: 500 BBL FIXED ROOF PRODUCED WATER TANK SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-8136-1 (BLM 19)

S-8136-4-0: 500 BBL FIXED ROOF PRODUCED WATER TANK SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-8136-1 (BLM 19)

S-8136-5-0: 33.3 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE SERVING VAPOR CONTROL SYSTEM LISTED ON PERMIT S-8136-1 (BLM 19)

BLM-29

S-8136-6-0: 500 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY THE VAPOR CONTROL SYSTEM VENTED TO FLARE S-8136-10 (BLM 29)

S-8136-7-0: 500 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8136-6 (BLM 29)

S-8136-8-0: 500 BBL FIXED ROOF PRODUCED WATER TANK SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-8136-6 (BLM 29)

S-8136-9-0: 500 BBL FIXED ROOF PRODUCED WATER TANK SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-8136-6 (BLM 29)

S-8136-10-0: 33.3 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE SERVING VAPOR CONTROL SYSTEM LISTED ON PERMIT S-8136-6 (BLM 29)

BLM-33

S-8136-11-0: 500 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY THE VAPOR CONTROL SYSTEM VENTED TO FLARE S-8136-15 (BLM 33)

S-8136-12-0: 500 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8136-11 (BLM 33)

S-8136-13-0: 500 BBL FIXED ROOF PRODUCED WATER TANK SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-8136-11 (BLM 33)

S-8136-14-0: 500 BBL FIXED ROOF PRODUCED WATER TANK SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-8136-11 (BLM 33)

S-8136-15-0: 33.3 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE SERVING VAPOR CONTROL SYSTEM LISTED ON PERMIT S-8136-11 (BLM 33)

VI. Emission Control Technology Evaluation

Fugitive Emissions

At each of the new facilities tank vapors are captured and routed to a produced gas flare for incineration. As fugitive emissions from the tanks and vapor control system were estimated using component counts and CARB/CAPCOA screening value emissions factors, leaks exceeding 10,000 ppmv are a violation of the permit and must be repaired promptly and

diligently as required by a fugitive emissions components I&M Program. With the "no leak" permit condition and I&M program, the vapor control efficiency is expected to be at least 99%.

Produced Gas Flares

The flares are a commercial, engineered design that is expected to meet the FYI 83 ernissions limits for NOx of 0.068 lb/MMBtu , VOC 0.063 lb/MMBtu, PM10 0.008 lb/MMBtu, and CO of 0.37 lb/MMBtu. The BACT requirement for PM10 implies smokeless operation.

The sulfur content of the flared gas is restricted to 1 gr S/100 scf (0.00285 lb SOx/MMBtu) by permit condition. The flare is equipped with a produced gas pilot and purge and an ignition system with intermittant spark. Purge gas is provided at 45 scfh (applicant 3/27/12 email). Manufacturer's information on the flare is provided in **Attachment III**.

VII. General Calculations

A. Assumptions

- The equipment operates 8760 hours per year (applicant)
- The tank heater, separator, and produced water tanks are exempt from perrnit (please see compliance section) and therefore no emissions calculations are performed.
- Only fugitive VOCs emitted from components in gas service are calculated. Components handling produced fluids with an API gravity less than 30° are not counted pursuant to District policy SSP 2015
- Fugitives components associated with the tanks are from the tank up to the vapor control system trunk line.

Fugitive Emissions Component Counts (Gas Service only)

	Valves	Pump Seals	Others	Connectors	Flanges	Open Ended Lines
each tank	5	0	25	15	25	0
vapor control system and flare	20	0	20	30	60	0

Produced Gas Flares (S-8136-5, '-10, and '-15)

- Combined gas flow for flares S-8136-5, '-10, and '-15 is 0.8 MMscf/day (292 MMscf/yr).
- Sulfur (as H_2S) content of the flared gas will not exceed 1 gr S/100 scf.
- Higher heating value of the flared gas is 1000 Btu/scf (laboratory analysis, **Attachment III**).
- Emissions from combustion of pilot gas are neglected

B. Emission Factors

Tanks and vapor control system

Fugitive component emissions are calculated using screening value emissions factors of CARB/CAPCOA "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" (please see **Attachment IV**).

Pollutant	Emission Factor (lb/MMBtu)	Source
NOx	0.068	AP-42/FYI-83
SOx	0.00285	District standard for natural gas
PM10	0.008	AP-42/FYI-83-BACT
CO	0.37	AP-42/FYI-83
VOC	0.0063	AP-42/FYI-83

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since all of the equipment is new, PE1 = 0 for all pollutants.

2. Post Project Potential to Emit (PE2)

Tanks S-8136-1 through '-4, '-6 through '-9, '11 through '-14 (each)
5 x 0.001852 lb/day valve + 25 x 0.007778 lb/day other + 15 x 0.0006349 lb/day connector + 25 x 0.001482 lb/day flange

= 0.25 lb/day, 91 lb/yr.

VCS S-8136-1, '-6, '-11 (each)
20 x 0.001852 lb/day valve + 20 x 0.007778 lb/day other + 30 x 0.0006349 lb/day connector + 60 x 0.001482 lb/day flange

= 0.30 lb/day (110) lb/yr.

Flare Combustion Emissions

NOx: (0.068 lbs/MMBtu)(0.8 MMscf/day)(1000 MMBtu/MMscf) = 54.4 lb/day (19,856 lb/yr)
SO_x: (0.00285 lb/MMBtu)(0.8 MMscf/day)(1000 MMBtu/MMscf) = 2.3 lb/day(840 lb/yr)
PM10: (0.008 lb/MMBtu)(0.8 MMscf/day)(1000 MMBtu/MMscf) = 6.4 lb/day (2226 lb/yr)
CO: (0.37 lbs/MMBtu)(0.8 MMscf/day)(1000 MMBtu/MMscf) = 296.0 lb/day (108,040 lb/yr)
VOC: (0.063 lbs/MMBtu)(0.8 MMscf/day)(1000 MMBtu/MMscf) = 50.4 lb/day (18,396 lb/yr)

PE2										
Permit Unit	NO_X		SO_X		PM_{10}		CO		VOC	
	lb/day	lb/yr	lb/day	lb/yr	lb/day	lb/yr	lb/day	lb/yr	lb/day	lb/yr
S-8136-1 (tank and VCS)	0	0	0	0	0	0	0	0	0.6	201
S-8136-2	0	0	0	0	0	0	0	0	0.3	91
S-8136-3	0	0	0	0	0	0	0	0	0.3	91
S-8136-4	0	0	0	0	0	0	0	0	0.3	91
S-8136-5 (flare)	54.4	19,856	2.3	840	6.4	2226	296.0	108,040	50.4	18,396
S-8136-6 (tank and VCS)	0	0	0	0	0	0	0	0	0.6	201
S-8136-7	0	0	0	0	0	0	0	0	0.3	91
S-8136-8	0	0	0	0	0	0	0	0	0.3	91
S-8136-9	0	0	0	0	0	0	0	0	0.3	91
S-8136-10* (flare)										
S-8136-11 (tank and VCS)	0	0	0	0	0	0	0	0	0.6	201
S-8136-12	0	0	0	0	0	0	0	0	0.3	91
S-8136-13	0	0	0	0	0	0	0	0	0.3	91
S-8136-14	0	0	0	0	0	0	0	0	0.3	91
S-8136-15* (flare)										
Total	**54.4**	**19,856**	**2.3**	**840**	**6.4**	**2226**	**296.0**	**108,040**	**54.9**	**19,818**

*SLC for units '-5, '-10, and '-15

Greenhouse Gas (GHG) Emissions (District Policy APR 2015)

Flares S-8136-5, '-10, and '-15

CO2: 0.8 MMscf/day x 1000 MMBtu/MMscf x day/24 hr x 116.7 lb/MMBtu

= 3890.00 lb-CO2e/hour

CH_4: 0.8 MMscf/day x 1000 MMBtu/MMscf x day/24 hr x 0.011 lb/MMBtu x 21 lb-CO2e per lb-CH4

=7.70 lb-CO2e/hour

N_2O: 0.8 MMscf/day x 1000 MMBtu/MMscf x day/24 hr x 0.00022 lb/MMBtu x 296 lb-CO2e per lb-N2O

= 2.17 lb-CO2e/hour

Total = 3890.00 + 7.70 + 2.17 = 3899.87 lb-CO2e/hour

3899.87 lb-CO2e/hour x 8760 hr/year ÷ 2,000 lb/ton = 17,081 tons-CO2e/year

17,081 short tons-CO2e/year x 0.9072 metric tons/short ton x 3 flares

= 46,488 metric tons/yr > 230 tons-CO2e/year

As the flare emissions alone are greater than 230 mton CO2e/yr, GHG emissions for the project are significant (do not round to zero). Applicant has proposed Best Performance Standards for the tanks and flare.

Emissions profiles are included in **Attachment V**.

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

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

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

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

Pursuant to 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.

Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
Permit Units	NO_X	SO_X	PM_{10}	CO	VOC
S-8136-1 (tank and VCS)	0	0	0	0	201
S-8136-2	0	0	0	0	91
S-8136-3	0	0	0	0	91
S-8136-4	0	0	0	0	91
S-8136-5 (flare)	19,856	840	2226	108,040	18,396
S-8136-6 (tank and VCS)	0	0	0	0	201
S-8136-7	0	0	0	0	91
S-8136-8	0	0	0	0	91
S-8136-9	0	0	0	0	91
S-8136-10* (flare)					
S-8136-11 (tank and VCS)	0	0	0	0	201
S-8136-12	0	0	0	0	91
S-8136-13	0	0	0	0	91
S-8136-14	0	0	0	0	91
S-8136-15* (flare)					
Post Project SSPE (SSPE2)	19,856	840	2226	108,040	19,818

*SLC for units '-5, '-10, and '-15

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 3.24.2 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	PM_{10}	CO	VOC
Pre-Project SSPE (SSPE1)	0	0	0	0	0
Post Project SSPE (SSPE2)*	19,856	840	2226	108,040	18,396
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No

*fugitive emissions not included in major source determination

As seen in the table above, this new facility is not a Major Source.

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.

S-8136-1 through '-15:

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

7. SB 288 Major Modification

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

Since this facility is not a major source for any of the pollutants addressed in this project, this project does not constitute an SB288 major modification.

8. Federal Major Modification

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification. Additionally, since the facility is not a major source for PM_{10} (140,000 lb/year), it is not a major source for PM2.5 (200,000 lb/year).

9. Quarterly Net Emissions Change (QNEC)

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

Since the emissions units are new QNEC = PE2/4.

VIII. Compliance

Rule 2020 Exemptions

The project includes unvented pressure vessels V-401, V-402, V-403 i.e. " tank, reservoir, or container that is capable of maintaining working pressures sufficient to prevent organic liquid loss or VOC loss to the atmosphere at all times."

Rule 2020 section 6.14 states that fugitive emissions sources and pressure vessels that are associated with an emissions unit for which a written permit is required, shall be included as part of such emissions unit. The '-1, '-5, and '-10 vapor control systems include the pressure vessel (V-401, V-402, V-403) fugitive emissions. A separate permit for the fugitive source or pressure vessel is not required.

Compliance is expected.

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 for the following*:

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 a Major Modification.

*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 crude oil processing (wash, stock, produced water) tanks each with a PE less than 2 lb/day for VOC. Therefore BACT is not triggered. The new produced gas flares have PEs greater than 2 lb/day for NOx, SOx, PM10, CO, and VOC. BACT is triggered for NO_X, SO_X, PM_{10}, and VOC only since the PEs are greater than 2 lbs/day. However BACT is not triggered for CO since the SSPE2 for CO is not greater than 200,000 lbs/year, as demonstrated in Section VII.C.5 above.

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

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

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

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

d. Major Modification

As discussed in Section VII.C.7 above, this project does not constitute a Major Modification; therefore BACT is not triggered.

2. BACT Guideline

BACT Guideline 1.4.2 applies to Waste Gas Flare – Incinerating Produced Gas (see **Attachment V**)

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

NOx, SOx, PM10, VOC: Air assisted when steam unavailable
SOx: Flared gas sulfur content not exceeding 1 gr S/100 scf (equivalent to precombustion scrubbing), pilot light fired only on natural gas (Achieved-in-Practice)

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)	19,856	840	2,226	108,040	19,818
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	No	No

2. Quantity of Offsets Required

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

C. Public Notification

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 major source, public noticing is not required for this project for New Major Source purposes.

As demonstrated in VII.C.7, this project does not constitute a SB 288 or Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is not 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 The PE2 for the flares is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
NO_X	54.4	100 lb/day	No
SO_X	2.3	100 lb/day	No
PM_{10}	6.4	100 lb/day	No
CO	296.0	100 lb/day	Yes
VOC	54.9	100 lb/day	No

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

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	0	19,856	20,000 lb/year	No
SO_X	0	840	54,750 lb/year	No
PM_{10}	0	2,226	29,200 lb/year	No
CO	0	108,040	200,000 lb/year	No
VOC	0	19,818	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	SSPE1 (lb/year)	SSPE2 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	0	19,856	19,856	20,000 lb/year	No
SO_x	0	840	840	20,000 lb/year	No
PM_{10}	0	2,226	2,226	20,000 lb/year	No
CO	0	108,040	108,040	20,000 lb/year	Yes
VOC	0	19,818	19,818	20,000 lb/year	No

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

2. Public Notice Action

As discussed above, this project will result in emissions triggering public noticing requirements listed above. Therefore, public notice will not be required for this project.

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-8136-1 through '-4, '-6 through '-9, '11 through '-14 (tank)

VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201] N

S-8136-1, '-5, and '-10 (tank and VCS)

The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201] N

VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201] N

VOC emission rate from vapor control system shall not exceed 0.3 lb/day. [District Rule 2201] N

S-8136-5, '-10, and '-15

Combined flare gas heat input from flares S-8136-5, '-10, and '-15 shall not exceed 800 MMBtu/day. [District Rule 2201] N

Emissions shall not exceed any of the following limits: 0.068 lbNOx/MMBtu, 0.008 lbPM10/MMBtu, 0.37 lbCO/MMBtu or 0.063 lbVOC/MMBtu. [District Rule 2201] N

The sulfur content of the gas being incinerated shall not exceed 1.0 grain total Sulfur per 100 scf of gas. [District Rule 2201] N

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

S-8136-1 through '-4, '-6 through '-9, '11 through '-14 (tank)

Fugitive emissions monitoring is required by Rules 2201 and 4623 to ensure that leak-free conditions are maintained and is discussed below.

All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] N

S-8136-5, '-10, and '-15 (flares)

Permittee shall determine sulfur content of flared gas weekly for eight consecutive weeks upon startup. After demonstrating compliance for eight consecutive weeks testing may be conducted on a quarterly basis. Weekly gas analysis shall be performed using Draeger tubes and quarterly analysis using ASTM method D3246 or double GC for H2S and mercaptans. Sulfur content of waste gas shall be measured within one day of restarting unit if the unit has not been in use for more than 7 days. [District Rules 1081 and 2201] N

The higher heating value of the flared gas shall be monitored at least quarterly or upon change of source of flared gas. [District Rules 1070 and 2201] N

3. Recordkeeping

S-8136-1 through '-4, '-6 through '-9, '11 through '-14 (tank)

Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] N

Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623] N

S-8136-5, '-10, and '-15 (flares)

Permittee shall keep accurate records of daily and annual flared gas flow rate and heat input in MMBtu/day. [District Rule 2201] N

Records of the gas sulfur content and required gas flow measurements shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] N

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

4. Reporting

There are no reporting requirements for 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 **Attachment VIII** of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO_X, CO, and SO_X. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_X, CO, or SO_X.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

flares	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass	X	X	X	Pass
SO_x	Pass	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass	Pass
$PM_{2.5}$	X	X	X	Pass[1]	Pass[1]

*Results were taken from the attached PSD spreadsheet.
[1]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

This project is not expected to cause or make worse a violation of an air quality standard.

District Rule 4101 Visible Emissions

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

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

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

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

Therefore, compliance with District Rule 4101 requirements is expected.

Rule 4102 Nuisance

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.

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 VIII**), the total facility prioritization score including this project was less than one. Therefore, no further analysis was required.

District Rule 4311 Flares

This rule limits VOC and NOx emissions from flares. Facility S-8136 has a potential to emit less than 10 tons/yr NOx and 10 tons/yr VOCs. Therefore the facility is exempt from all requirements of the rule except the record-keeping requirements of Section 6.2.4. Section 6.2.4 states that "beginning January 1, 2007 facilities claiming an exemption pursuant to Section 4.3 shall record annual throughput, material usage, or other information necessary to demonstrate an exemption under that section." Facility will keep records of annual volumes of gas combusted in the flares to ensure that NOx and VOC emissions remain below 10 tons/yr. The following condition is included on the ATC:

Permittee shall keep accurate records of annual throughput, material usage, or other information necessary to demonstrate that facility emissions are less than 10 tons NO/yr and 10 tons VOC/yr for exemption from Rule 4311. [District Rule 4311] N

Therefore compliance is expected.

Rule 4623, *Storage of Organic Liquids*

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

S-8136-1 through '-4, '-6 through '-9, '11 through '-14 (tank)

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

The following conditions are included on the ATC:

This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623] N

All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] N

A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201and 4623] N

All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] N

Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] N

Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule s 2201 and 4623] N

Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule s 2201 and 4623] N

Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]N

Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623] N

Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623] N

If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components

are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623] N

Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule s 2201 and 4623] N

Applicant has requested to implement the Voluntary Tank Preventive Inspection and Maintenance, and Tank Interior Cleaning Program requirements of Section 6.6 of the rule. The following conditions are included on the ATCs:

Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623] N

Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623] N

Compliance with the requirements of this rule is expected.

District Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO_2, on a dry basis averaged over 15 consecutive minutes. The flare will combust gas with a sulfur content not exceeding 1 gr S/100 scf.

Therefore, compliance with District Rule 4801 requirements is expected.

California 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.

Project specific impacts on global climate change were evaluated consistent with the adopted District policy – *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The District's engineering evaluation (this document – **Attachment IX)** demonstrates that the project includes Best Performance Standards (BPS) for each class and category of greenhouse gas emissions unit. 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)).

California Health & Safety Code 42301.6 (School Notice)

This facility is not located within 1,000 feet of a school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authorities to Construct S-8136-1-0 through '-15-0 subject to the permit conditions on the attached draft Authorities to Construct in **Attachment X**.

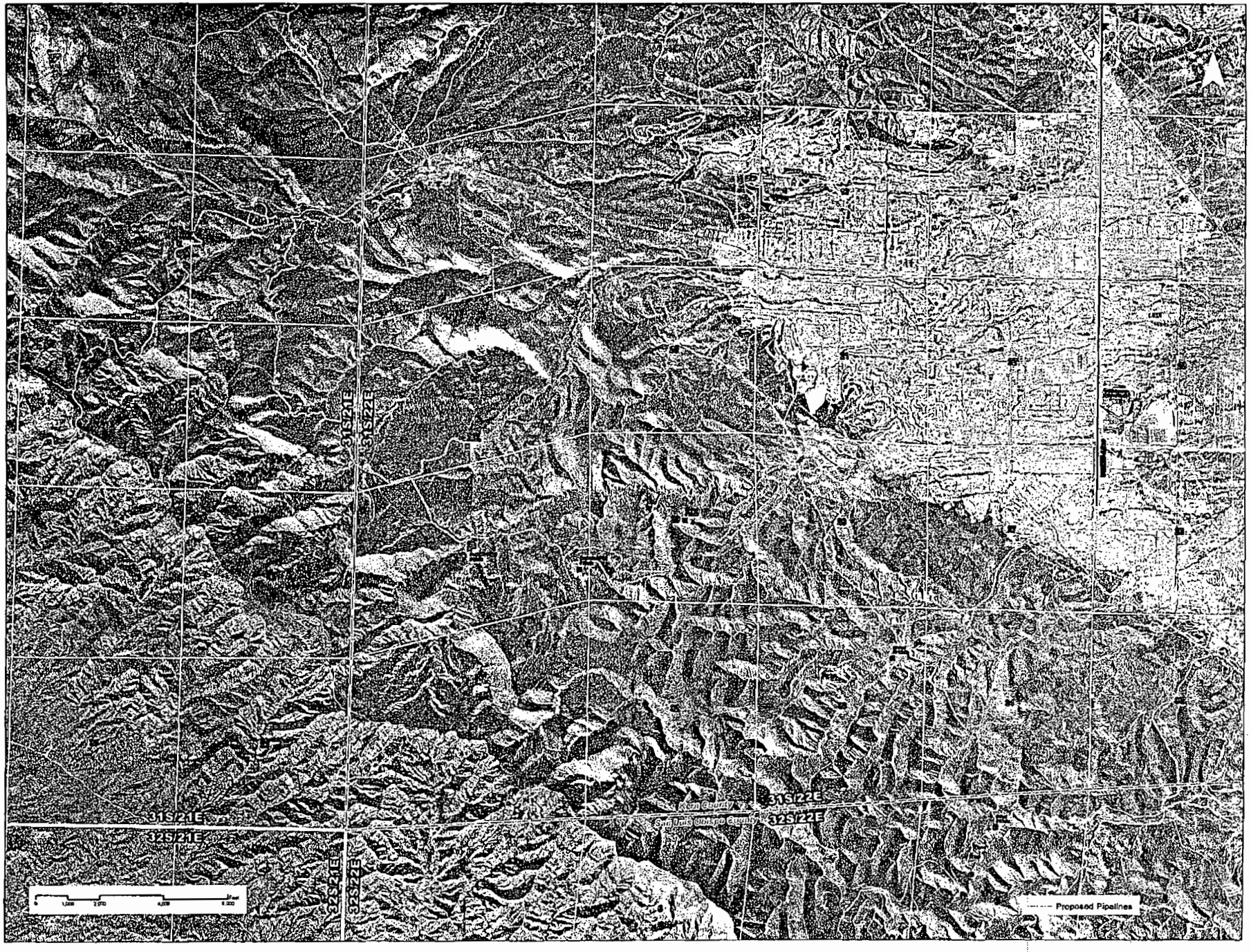
X. BILLING INFORMATION

Permit Number	Fee Schedule	Fee Description	Annual Fee
S-8136-1	3020-5S-C	21,000 gallons	$63.00
S-8136-2	3020-5S-C	21,000 gallons	$63.00
S-8136-3	3020-5S-C	21,000 gallons	$63.00
S-8136-4	3020-5S-C	21,000 gallons	$63.00
S-8136-5	3020-02-H	33.33 MMBtu/hr	$1030.00
S-8136-6	3020-5S-C	21,000 gallons	$63.00
S-8136-7	3020-5S-C	21,000 gallons	$63.00
S-8136-8	3020-5S-C	21,000 gallons	$63.00
S-8136-9	3020-5S-C	21,000 gallons	$63.00
S-8136-10	3020-02-H	33.33 MMBtu/hr	$1030.00
S-8136-11	3020-5S-C	21,000 gallons	$63.00
S-8136-12	3020-5S-C	21,000 gallons	$63.00
S-8136-13	3020-5S-C	21,000 gallons	$63.00
S-8136-14	3020-5S-C	21,000 gallons	$63.00
S-8136-15	3020-02-H	33.33 MMBtu/hr	$1030.00

Attachments

Attachment I: Project Location Map
Attachment II: Facility Plots Plans and Process Flow Diagrams
Attachment III: Manufacturer's Information on Flare amd Representative Flared Gas Analysis
Attachment IV: Fugitive Emissions
Attachment V: Emissions Profile
Attachment VI: BACT Guideline
Attachment VII: BACT Analysis
Attachment VIII: HRA
Attachment IX: Best Performance Standards for Tanks and Flare
Attachment X: Draft ATCs

Attachment I
Project Location Map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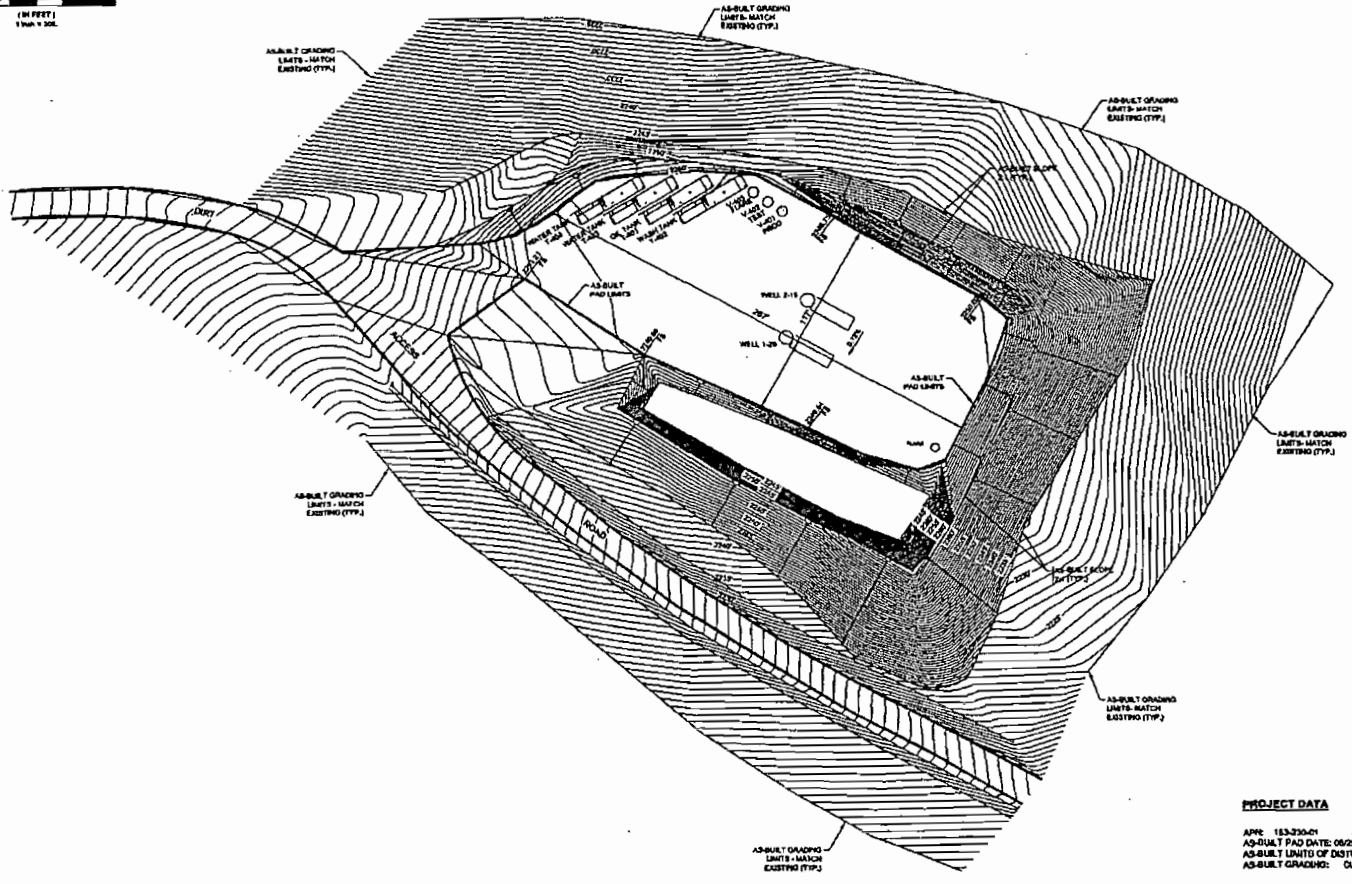
31S/22E
32S/21E
32S/22E
Kern County
San Luis Obispo County
Proposed Pipelines



PROJECT DATA

APN: 153-230-01
AS-BUILT PAD DATE: 06/29/2011
AS-BUILT LIMITS OF DISTURBANCE: 4.55 AC
AS-BUILT GRADING: CUT= 15,776 YARDS FILL= 15,460 YARDS

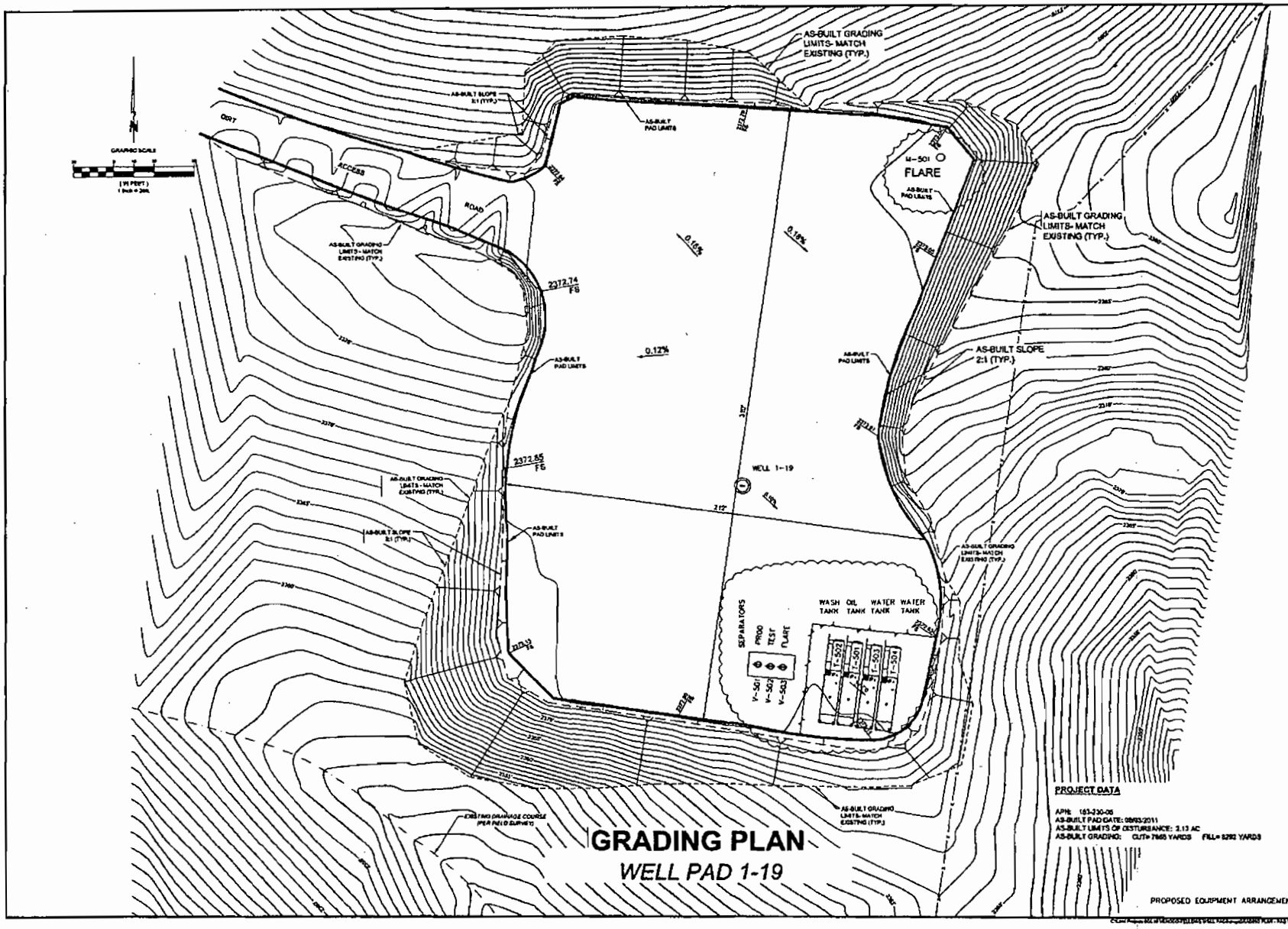
"AS-BUILT"

LANDMARK
SURVEYING & ENGINEERING
GEOMATICS • GPS • GIS • MAPPING

VENOCO, INC.
AS-BUILT PLAN
WELL PAD 1-29
COUNTY OF KERN

JOB No.:	604.16
FILE:	FELLOWS WELLS
DATE:	07/14/2011
DRAWN BY:	JVV
CHECKED BY:	
SCALE:	1"=30'
SHEET	1

1 OF 3 SHEETS



GRADING PLAN

WELL PAD 1-19

PROJECT DATA

APN: 163-230-06
AS-BUILT PAD DATE: 08/03/2011
AS-BUILT LIMITS OF DISTURBANCE: 3.13 AC
AS-BUILT GRADING: CUT= 7165 YARDS FILL= 5292 YARDS

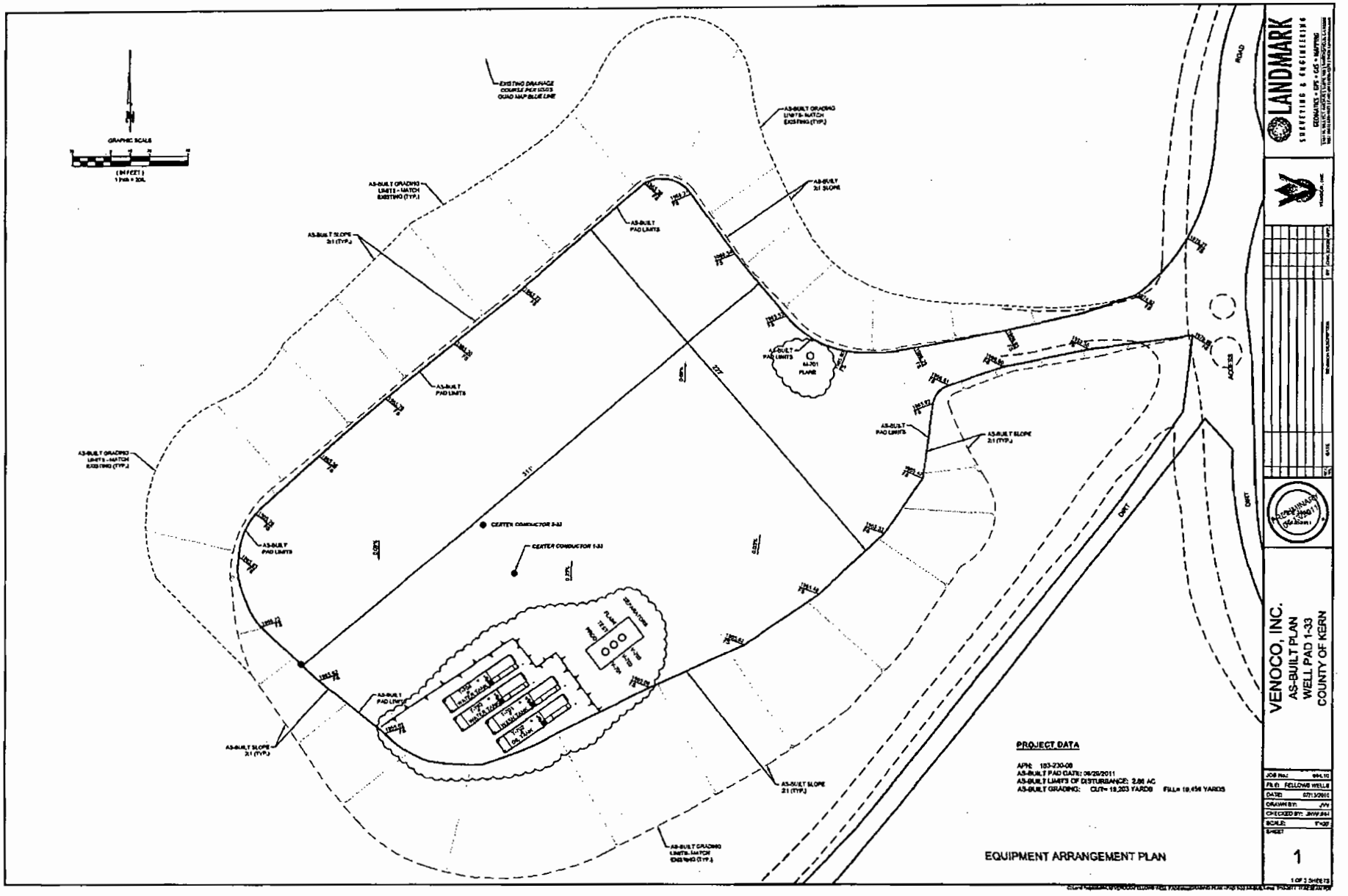
PROPOSED EQUIPMENT ARRANGEMENT

LANDMARK
SURVEYORS & ENGINEERING

VENOCO, INC.
AS-BUILT PLAN
WELL PAD 1-19
COUNTY OF KERN

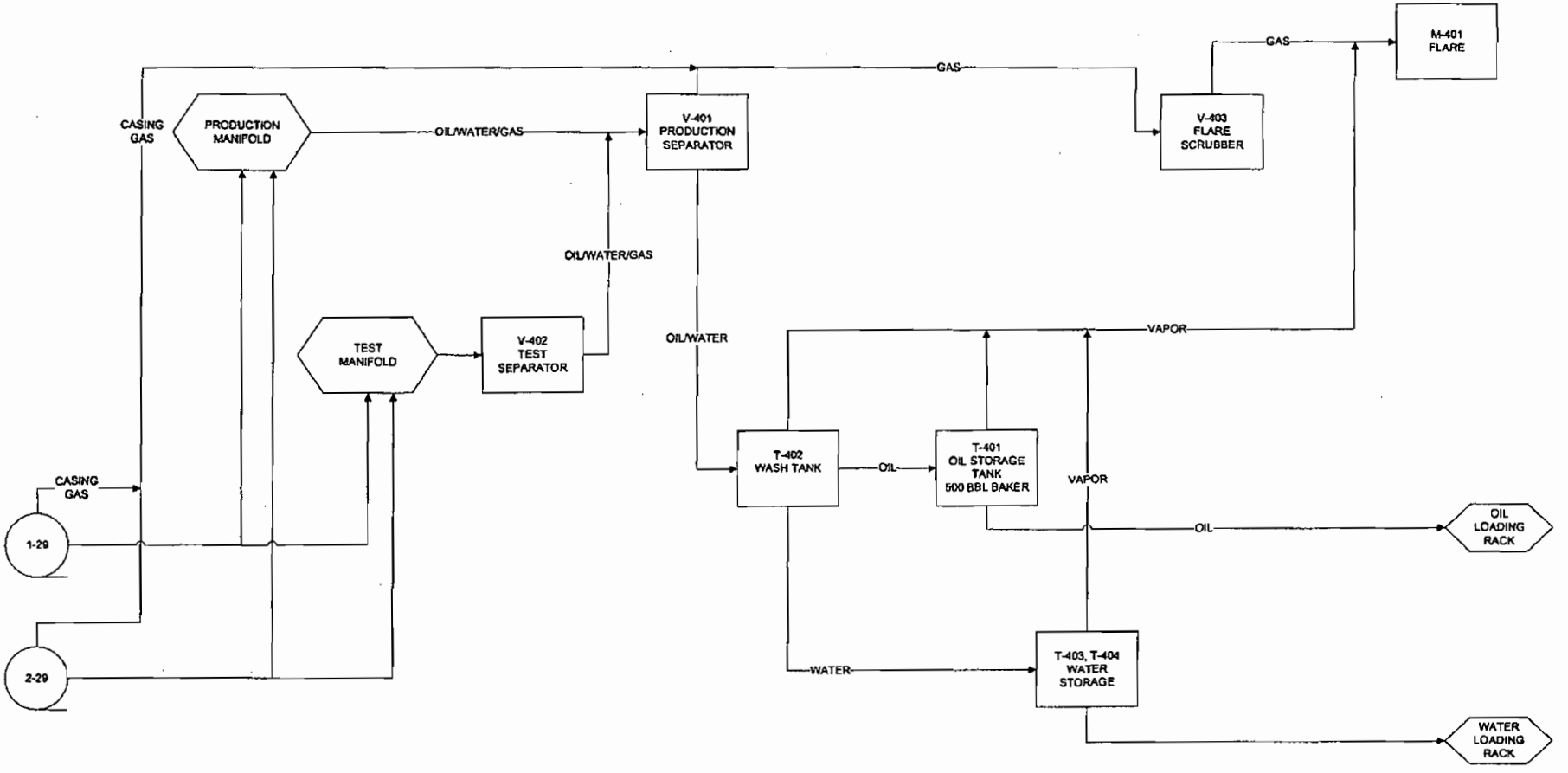
JOB No.:	094.10
FILE:	FELLOWS WELL 5
DATE:	09-04-2011
DRAWN BY:	MAS
CHECKED BY:	JOHNSON
SCALE:	1"=50'
SHEET	1

1 OF 1 SHEETS


GRAPHIC SCALE
(IN FEET)
1 inch = 200
EXISTING DRAINAGE COURSE PER USGS QUAD MAP BLUE LINE
AS-BUILT GRADING LIMITS - MATCH EXISTING (TYP.)
AS-BUILT 2:1 SLOPE
AS-BUILT PAD LIMITS
AS-BUILT SLOPE 2:1 (TYP.)
CENTER CONDUCTOR 2-33
CENTER CONDUCTOR 1-33
SEPARATOR
PLANT
PROJECT DATA
APN: 153-230-08
AS-BUILT PAD DATE: 06/29/2011
AS-BUILT LIMITS OF DISTURBANCE: 2.86 AC
AS-BUILT GRADING: CUT= 18,203 YARDS FILL= 18,456 YARDS
EQUIPMENT ARRANGEMENT PLAN
LANDMARK
SURVEYING & ENGINEERING
VENOCO, INC.
AS-BUILT PLAN
WELL PAD 1-33
COUNTY OF KERN
JOB No.: 994.10
FILE: FELLOWS WELL#
DATE: 07/13/2011
DRAWN BY: JVV
CHECKED BY: JMW/RH
SCALE: 1"=20'
SHEET
1
1 OF 2 SHEETS

Attachment II
Facility Plot Plans and Process Flow Diagrams

SEVIER WELLSITE 29
PROCESS FLOW DIAGRAM



Attachment III
Manufacturers Information on Flare and Representative Flared Gas Analysis

MACTRONIC
A DIVISION OF FLARE INDUSTRIES

AUSTIN • HOUSTON • ABU DHABI • LONDON • CANADA
REGIONAL OFFICE – 8109 EDGAR INDUSTRIAL DRIVE
RED DEER, ALBERTA, CANADA T4P 3R2
T - (403) 342-1822, F - (403) 340-8560, FLAREINDUSTRIES.COM

ENGINEERING PROPOSAL

VENOCO INC.
USA

PROJECT

VENOCO CAREAGA FIELD FLARE
4" x 20' AIR ASSIST
USA

Prepared for:	*Joel Toreja*
Phone No.:	(805) 745-2132
Fax No.:	
Email:	jtoreja@venocoinc.com
Additional Contact:	Mark Thatcher Global Technical Sales Manager T +1 (512) 836-9473 F +1 (512) 836-3025 mthatcher@flareIndustries.com
Prepared by:	Sacha Chiasson – Applications Engineer
Date:	June 6th, 2011
Quote No.:	11-0323

1.0 COMMERCIAL SUMMARY

1.1 SCOPE OF WORK

ITEM	QTY	DESCRIPTION	PRICE
1	1	The **Mactronic** Air Assist Flare Burner quoted will provide reliable high efficiency operation from the minimum required purge rate of 45 scfh to the **maximum design flow rate of 1.5 mmscfd.** The minimum purge rate will prevent air entrainment thus any possible flashback within the Flare System, as well as prevent any internal combustion and damage from occurring within the end of the Flare Tip. The Air Assist maximum smokeless design flow will depend on the site specific gas process conditions. The Blower will be capable of delivering 300 scfm air @ 6.0" WC. • One (1) 4" dia by 20' overall height Guy Supported Flare Stack. • 5' long **Mactronic**Air Injected Flare Tip (**316SS**) and Blower support Bracket. • Slip Stream Ignition Chamber (**316LSS**). • **After fabrication structure is to be sandblasted to SSPC-SP6.** • Prime with one (1) coat of Cloverdale Rustex Primer 71024. • Finish Paint with one (1) coat of Cloverdale Industrial Enamel 74851 Medium Grey or equal as per Mactronic standard. • **Mill Test Certificates are available for all Process Piping materials.** • Foundation and Anchor Rods by others. • No Radiography, Ultrasonic / Magnetic Particle / Dye Penetration Examination, Post Weld Heat Treatment or Hydrostatic Testing allowed for in pricing unless otherwise specified.	

2	1	**G60 Series Ignition System complete with the following:**
		• One (1) Mactronic G60 Ignitor c/w Pilot Gas Assist.
		• High Voltage Ignitor (10000V DC)(316L / A-106-B)
		• 20' Ignitor Retractability Package Model C-500
		  • Pilot Carrier
		  • Flexible Pilot Hose
		  • Power Harness
		  • Track, winch and pulley
			Use Model B-302 (Solar/12V DC)
			- c/w Solar Panel
			- Battery Box, 12 Volt Gel Cell Battery,
			- Solar Regulator
			- Standard NEMA 3 Enclosure suitable for non-hazardous area.
			- Price Increase of $1,140.00

3	1	**B-300 120 V AC Control Panel System:**
		• Main Control Panel:
		  • Mounted Remote from the Flare
		  • Standard NEMA 3 Enclosure suitable for area.
		  • Control panel mounting Stand.	

- Manual & Automatic Ignition Modes
- One (1) Fisher 67 CFR Pilot Regulator, Gauge and Ball Valve Assembly

4	2	**Mactronic Operation Manuals:** • Additional Manuals - $375 minimum each	
		Total for Items 1 – 4:	**$29,890 (including add-on for B-302 control panel)**

1.2 SPARE PARTS LIST

Mactronic G60 Ignitor 2 Years Operational Spare Parts List can be provided upon request.

1.3 VALIDITY

The prices in this quotation are firm and fixed for 30 days.

1.4 DELIVERY

Approval Drawings:	1 week after Receipt of Order (issued for information and inlet height / orientation Approval.)
Fabricating the Project:	3 Weeks after Receipt of the Approved Drawings
Time Required for Project:	4 Weeks After receipt of order + Client Review

The quoted delivery is based upon our current production schedule/ shop load. An updated delivery schedule will be available at time of order.

This is a Standard Equipment Delivery Schedule based on shop space available at the time of this quotation. Delivery to be confirmed upon receipt of order. If a revised delivery schedule of a shorter duration is required, please indicate so.

Customer changes that are made after the receipt of Approved Drawings for Fabrication may impact the Delivery Schedule.

1.5 SHIPPING TERMS

Ex-work: Red Deer, AB

1.6 TERMS OF PAYMENT

100% Upon notification of readiness for shipment, net 30.

1.7 INSTALLATION - COMMISSIONING

Available upon Request.

2.0 TECHNICAL SUMMARY

2.1 UTILITIES

Purge Gas: 4" – 45 SCFH (Air Assist)
Electrical: 1ϕ / 60Hz / 120V AC (Controls)

2.2 DOCUMENTATION

Flare Industries will provide the following documentation along with the equipment on this project:

- ☐ Piping and instrumentation diagram (P&ID)
- ☒ Mechanical general arrangement
- ☐ Ladder Logic Diagrams
- ☐ Control Enclosures Drawings
- ☒ Operating & maintenance manuals (upon shipment)
- ☐ Manufacturing Record Books (MRB)

2.3 QUALITY / NON-DESTRUCTIVE TESTING

- ☒ Visual inspection
- ☒ Dimensional check
- ☒ Factory acceptance test (ignition system only)
- ☒ Dry film thickness
- ☐ Radiography extent:
- ☐ Dye penetrant examination extent:
- ☐ Ultrasonic testing extent:
- ☐ Magnetic particle examination extent:
- ☐ Hydro-testing extent:
- ☐ Pneumatic testing extent:
- ☐ Hardness/Impact Testing
- ☐ PMI

2.4 NOTES

- The Mactronic **'Mac Ignitor'** Head and **'Mac Ignitor'** Head Retractability Package are Patented Items. The G60 Series High Voltage Ignitor is retractable to ground level for service and routine maintenance.
- The High Voltage Ignitors are designed to operate through the Control Panel on a continuous basis.

- The Mactronic Control Panels quoted Model B-300 (120V AC) comes with a Hand / Off / Auto Key Switch that allows for automatic or manual operation.

Mactronic Quality Standards Include:

- Mactronic is a Canadian Standard Association (CSA) certified Panel Assembly Shop.

No Radiography, Ultrasonic / Magnetic Particle / Dye Penetration Examination, Post Weld Heat Treatment or Hydrostatic Testing allowed for in pricing unless otherwise specified. Pricing for NDE can be quoted upon request.

Please specify type of testing and any third party inspection that is required.

Two (2) sets of Installation, Operation and Maintenance Manuals are included in our pricing and one (1) Electronic copy of all Drawings and Final Documents will be provided. Drawings shall be submitted in PDF format only, no Auto Cad drawings shall be provided.

This quotation is based on the information you have supplied and any deviation from this information may require equipment and / or price alterations.

ZALCO LABORATORIES, INC.
4309 Armour Avenue, Bakersfield, CA 93308 (661) 395-0539 FAX (661) 395-3069 www.zalcolabs.com
1103 East Clark Avenue, Suite F-5, Santa Maria, CA 93455 (805) 938-5341 FAX (805) 938-5892

Venoco Inc
6267 Carpinteria Ave, Suite 100
Carpinteria CA 93013

Laboratory No: 1202180-01
Date Received: 02/13/12
Date Analyzed: 02/14/12

Attention: Zach Schock

Sample Description: Well BLM 1-19
Sampled: 02/13/2012 @ 11:00 AM by Robert Swan

TOTAL SULFUR ANALYSIS, ASTM D3246, ASTM D 1945-03

Constituent:	Result	Units
Hydrogen Sulfide	5.1	ppm
Total Sulfur	0.31	grs S/100 SCF

Chromatographic Analysis, ASTM D 1945-03, ASTM D 3588-98, GPA 2145-09, GPA 2261-00

Constituent:	Mole %	Weight %	GPM	GPM Fractions	CHONS%
					Carbon, C
Oxygen	0.421	0.62			70.37
Nitrogen	1.577	2.05			
					Hydrogen, H
Carbon Dioxide	4.617	9.42			20.11
Carbon Monoxide	0.000	0.00			
Hydrogen Sulfide	0.001	0.00			Oxygen, O
Methane	80.615	59.94			7.47
Ethane	4.179	5.82			
Propane	4.396	8.98	1.21	(C3....C3) = 1.21	Nitrogen, N
IsoButane	0.654	1.76	0.21		2.05
n-Butane	1.633	4.40	0.51	(C3....C4) = 1.94	
IsoPentane	0.485	1.62	0.18		Sulfur, S
n-Pentane	0.460	1.54	0.17	(C3....C5) = 2.28	0.00
Hexanes	0.963	3.85	0.41	(C3....C6+) = 2.69	
Totals:	100.00	100.00	2.69	8.12	100.00

Flammable Gases:		93.384	
Gas Properties calculated @ STP:	degrees F.	60	
Measurement Base Pressure @ STP:	psia	14.696	H/C Ratio: 0.29

Gas State	Dry Btu / Cu. Ft	Btu / lb	Saturated Btu / Cu. Ft
Gross, Ideal Gas	1156.94	20347.42	1136.81
Net, Ideal Gas	1048.68	18443.35	1030.43
Gross, Real Gas	1160.93		1140.73
Net, Real Gas	1052.30		1033.99

Relative Gas Density; [Air=1] Ideal:	0.7450		"F" Factor, DSCF/MMBtu @ 60F	8602.5	9490.6
Specific Gravity, [Air=1] Real gas:	0.7471		"F" Factor, DSCF/MMBtu @ 68F	8733.5	9635.1
Real Gas Density, Lb/Cu.Ft.:	0.0571		"F" Factor, DSCF/MMBtu @ 70F	8766.7	9671.7
Specific Volume, Cu.Ft./Lb:	17.5266		"FC" Factor, DSCF CO2/MMBtu @ 60F	1093.6	1206.4
Relative Liquid Density @ 60F/60F:	0.3705		"FC" Factor, DSCF CO2/MMBtu @ 68F	1110.2	1224.8
Compressibility, 'z':	0.9966				
Fuel kg per kg-mole Molecular wt avg	21.577				

GPM: Gallons per 1000 cubic feet

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Venoco Inc
6267 Carpinteria Ave, Suite 100
Carpinteria CA 93013

Laboratory No: 1202180-04
Date Received: 02/13/12
Date Analyzed: 02/14/12

Attention: Zach Schock

Sample Description: Well BLM 2-19
Sampled: 02/13/2012 @ 11:00 AM by Robert Swan

TOTAL SULFUR ANALYSIS, ASTM D3246, ASTM D 1945-03

Constituent:	Result	Units
Hydrogen Sulfide	2.0	ppm
Total Sulfur	0.12	grs S/100 SCF

Chromatographic Analysis, ASTM D 1945-03, ASTM D 3588-98, GPA 2145-09, GPA 2261-00

Constituent:	Mole %	Weight %	GPM	GPM Fractions	CHONS%
					Carbon, C
Oxygen	0.090	0.12			72.10
Nitrogen	0.455	0.52			
					Hydrogen, H
Carbon Dioxide	6.097	10.96			19.29
Carbon Monoxide	0.000	0.00			
Hydrogen Sulfide	0.000	0.00			Oxygen, O
Methane	72.988	47.83			8.09
Ethane	4.867	5.98			
Propane	8.066	14.53	2.22	(C3....C3) = 2.22	Nitrogen, N
IsoButane	1.096	2.60	0.36		0.52
n-Butane	3.394	8.06	1.07	(C3....C4) = 3.65	
IsoPentane	0.887	2.61	0.32		Sulfur, S
n-Pentane	0.799	2.35	0.29	(C3....C5) = 4.26	0.00
Hexanes	1.261	4.44	0.54	(C3....C6+) = 4.80	
Totals:	100.00	100.00	4.80	14.92	100.00

Flammable Gases:		93.358	
Gas Properties calculated @ STP:	degrees F.	60	
Measurement Base Pressure @ STP:	psia	14.696	**H/C Ratio: 0.27**

	Dry		Saturated
Gas State	**Btu / Cu. Ft**	**Btu / lb**	**Btu / Cu. Ft**
Gross, Ideal Gas	1300.09	20152.38	1277.47
Net, Ideal Gas	1182.25	18325.67	1161.68
Gross, Real Gas	**1306.16**		1283.44
Net, Real Gas	1187.77		1167.10

Relative Gas Density; [Air=1] Ideal:	0.8453	"F" Factor, DSCF/MMBtu @ 60F	8645.3	9507.1
Specific Gravity, [Air=1] Real gas:	0.8488	"F" Factor, DSCF/MMBtu @ 68F	8777.0	9651.9
Real Gas Density, Lb/Cu.Ft.:	0.0648	"F" Factor, DSCF/MMBtu @ 70F	8810.3	9688.5
Specific Volume, Cu.Ft./Lb:	15.4285	"FC" Factor, DSCF CO2/MMBtu @ 60F	1131.3	1244.0
Relative Liquid Density @ 60F/60F:	0.3968	"FC" Factor, DSCF CO2/MMBtu @ 68F	1148.5	1263.0
Compressibility, 'z':	0.9954			
Fuel kg per kg-mole Molecular wt avg	24.481			

GPM: Gallons per 1000 cubic feet

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Venoco Inc
6267 Carpinteria Ave, Suite 100
Carpinteria CA 93013

Laboratory No: 1201420-01
Date Received: 01/31/12
Date Analyzed: 01/31/12

Attention: Zach Schock

Sample Description: BLM 1-29
Sampled: 01/31/2012 @ 12:00 PM by Robert Swan

TOTAL SULFUR ANALYSIS, ASTM D3246, GPA-B16/D4810

Constituent:	Result	Units
Hydrogen Sulfide	3.1	ppm
Total Sulfur	0.19	grs S/100 SCF

Chromatographic Analysis, ASTM D-1945-03, ASTM D-3588-98, GPA 2145-9, GPA 2261-00

Constituent:	Mole %	Weight %	GPM	GPM Fractions	CHONS%
					Carbon, C
Oxygen	0.038	0.05			74.86
Nitrogen	0.432	0.51			
					Hydrogen, H
Carbon Dioxide	3.011	5.59			20.51
Carbon Monoxide	0.000	0.00			
Hydrogen Sulfide	0.000	0.00			Oxygen, O
Methane	73.891	49.97			4.11
Ethane	8.489	10.76			
Propane	7.224	13.43	1.99	(C3....C3) = 1.99	Nitrogen, N
IsoButane	0.863	2.11	0.28		0.51
n-Butane	3.009	7.37	0.95	(C3....C4) = 3.22	
IsoPentane	0.683	2.08	0.25		Sulfur, S
n-Pentane	0.729	2.22	0.26	(C3....C5) = 3.73	0.00
Hexanes	1.629	5.92	0.70	(C3....C6+) = 4.43	
Totals:	100.00	100.00	4.43	13.36	100.00

Flammable Gases:		96.518	
Gas Properties calculated @ STP:	degrees F.	60	
Measurement Base Pressure @ STP:	psia	14.696	H/C Ratio: 0.27

Gas State	Dry Btu / Cu. Ft	Dry Btu / lb	Saturated Btu / Cu. Ft
Gross, Ideal Gas	1338.56	21410.88	1315.27
Net, Ideal Gas	1217.12	19468.37	1195.95
Gross, Real Gas	**1344.75**		1321.35
Net, Real Gas	1222.75		1201.48

Relative Gas Density; [Air=1] Ideal:	0.8192	"F" Factor, DSCF/MMBtu @ 60F	8620.4	9480.5
Specific Gravity, [Air=1] Real gas:	0.8225	"F" Factor, DSCF/MMBtu @ 68F	8751.7	9624.9
Real Gas Density, Lb/Cu.Ft.:	0.0628	"F" Factor, DSCF/MMBtu @ 70F	8784.9	9661.5
Specific Volume, Cu.Ft./Lb:	15.9216	"FC" Factor, DSCF CO2/MMBtu @ 60F	1105.6	1215.9
Relative Liquid Density @ 60F/60F:	0.3804	"FC" Factor, DSCF CO2/MMBtu @ 68F	1122.4	1234.4
Compressibility, 'z':	0.9954			
Fuel kg per kg-mole Molecular wt avg	23.724			

GPM: Gallons per 1000 cubic feet

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Venoco Inc
6267 Carpinteria Ave, Suite 100
Carpinteria CA 93013

Laboratory No: 1202020-03
Date Received: 02/01/12
Date Analyzed: 02/01/12

Attention: Zach Schock

Sample Description: Gas BLM 2-29
Sampled: 02/01/2012 @ 14:00 PM by Client

TOTAL SULFUR ANALYSIS, ASTM D3246, GPA-B16/D4810

Constituent:	Result	Units
Hydrogen Sulfide	10.8	ppm
Total Sulfur	0.65	grs S/100 SCF

Chromatographic Analysis, ASTM D-1945-03, ASTM D-3588-98, GPA 2145-94, GPA 2261-00

Constituent:	Mole %	Weight %	GPM	GPM Fractions	CHONS%
					Carbon, C
Oxygen	0.148	0.18			71.25
Nitrogen	0.806	0.87			
					Hydrogen, H
Carbon Dioxide	7.537	12.72			18.45
Carbon Monoxide	0.000	0.00			
Hydrogen Sulfide	0.001	0.00			Oxygen, O
Methane	68.663	42.25			9.44
Ethane	4.358	5.03			
Propane	9.794	16.57	2.69	(C3....C3) = 2.69	Nitrogen, N
IsoButane	1.017	2.27	0.33		0.87
n-Butane	3.952	8.81	1.24	(C3....C4) = 4.27	
IsoPentane	0.985	2.73	0.36		Sulfur, S
n-Pentane	0.897	2.48	0.32	(C3....C5) = 4.95	0.00
Hexanes	1.843	6.09	0.79	(C3....C6+) = 5.75	
Totals:	100.00	100.00	5.75	17.67	100.00

Flammable Gases:		91.508	
Gas Properties calculated @ STP:	degrees F.	60	
Measurement Base Pressure @ STP:	psia	14.696	**H/C Ratio:** 0.26

Gas State	Dry Btu / Cu. Ft	Dry Btu / lb	Saturated Btu / Cu. Ft
Gross, Ideal Gas	1342.05	19536.10	1318.69
Net, Ideal Gas	1222.00	17788.53	1200.73
Gross, Real Gas	**1349.11**		1325.64
Net, Real Gas	1228.43		1207.05

Relative Gas Density; [Air=1] Ideal:	0.9001	"F" Factor, DSCF/MMBtu @ 60F	8669.8	9521.5
Specific Gravity, [Air=1] Real gas:	0.9043	"F" Factor, DSCF/MMBtu @ 68F	8801.8	9666.5
Real Gas Density, Lb/Cu.Ft.:	0.0691	"F" Factor, DSCF/MMBtu @ 70F	8835.2	9703.2
Specific Volume, Cu.Ft./Lb:	14.4805	"FC" Factor, DSCF CO2/MMBtu @ 60F	1153.1	1266.4
Relative Liquid Density @ 60F/60F:	0.4149	"FC" Factor, DSCF CO2/MMBtu @ 68F	1170.6	1285.6
Compressibility, 'z':	0.9948			
Fuel kg per kg-mole Molecular wt avg	26.068			

GPM: Gallons per 1000 cubic feet

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Venoco Inc
6267 Carpinteria Ave, Suite 100
Carpinteria CA 93013

Laboratory No: 1201176-01
Date Received: 01/13/12
Date Analyzed: 01/13/12

Attention: Zack Shock

Sample Description: BLM 1-33
Sampled: 01/13/2012 @ 12:00 PM by James Kennedy

TOTAL SULFUR ANALYSIS, ASTM D3246, GPA-B16/D4810

Constituent:	Result	Units
Hydrogen Sulfide	2.7	ppm
Total Sulfur	0.16	grs S/100 SCF

Chromatographic Analysis, ASTM D-1945-03, ASTM D-3588-98, GPA 2145-94, GPA 2261-00

Constituent:	Mole %	Weight %	GPM	GPM Fractions	CHONS%
					Carbon, C
Oxygen	0.265	0.32			74.73
Nitrogen	1.338	1.42			
					Hydrogen, H
Carbon Dioxide	3.254	5.43			19.57
Carbon Monoxide	0.000	0.00			
Hydrogen Sulfide	0.000	0.00			Oxygen, O
Methane	66.509	40.49			4.27
Ethane	9.259	10.56			
Propane	9.425	15.77	2.59	(C3....C3) = 2.59	Nitrogen, N
IsoButane	0.986	2.18	0.32		1.42
n-Butane	4.037	8.90	1.27	(C3....C4) = 4.19	
IsoPentane	1.138	3.12	0.42		Sulfur, S
n-Pentane	1.110	3.04	0.40	(C3....C5) = 5.00	0.00
Hexanes	2.680	8.76	1.15	(C3....C6+) = 6.15	
Totals:	100.00	100.00	6.15	17.93	100.00

Flammable Gases:		95.143	
Gas Properties calculated @ STP:	degrees F.	60	
Measurement Base Pressure @ STP:	psia	14.696	H/C Ratio: 0.26

	Dry		Saturated
Gas State	Btu / Cu. Ft	Btu / lb	Btu / Cu. Ft
Gross, Ideal Gas	1453.96	20937.54	1428.66
Net, Ideal Gas	1325.23	19083.82	1302.17
Gross, Real Gas	1462.37		1436.92
Net, Real Gas	1332.89		1309.70

Relative Gas Density; [Air=1] Ideal:	0.9099		"F" Factor, DSCF/MMBtu @ 60F	8647.6	9487.6
Specific Gravity, [Air=1] Real gas:	0.9146		"F" Factor, DSCF/MMBtu @ 68F	8779.3	9632.0
Real Gas Density, Lb/Cu.Ft.:	0.0698		"F" Factor, DSCF/MMBtu @ 70F	8812.6	9668.6
Specific Volume, Cu.Ft./Lb:	14.3174		"FC" Factor, DSCF CO2/MMBtu @ 60F	1128.5	1238.2
Relative Liquid Density @ 60F/60F:	0.4056		"FC" Factor, DSCF CO2/MMBtu @ 68F	1145.7	1257.0
Compressibility, 'z':	0.9942				
Fuel kg per kg-mole Molecular wt avg	26.352				

GPM: Gallons per 1000 cubic feet

Attachment IV
Fugitive Emissions Calculations

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

Fugitive Emissions Using Screening Emission Factors

California Implementation Guidelines for Estimating Mass Emissions
of Fugitive Hydrocarbon Leaks at Petroleum Facilities
Table IV-2c. Oil and Gas Production
Screening Value Ranges Emission Factors

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

Equipment Type	Service	Component Count	Total allowable leaking components	Screening Value EF TOC <10,000 ppmv (lb/day/source)	TOC ≥10,000 ppmv (lb/day/source)	TOC emissions (lb/day)
Valves	Gas/Light Liquid	20	0	1.852E-03	7.333E+00	0.04
	Light Crude Oil	0	0	1.005E-03	3.741E+00	0.00
	Heavy Crude Oil	0	0	7.408E-04	N/A*	0.00
Pump Seals	Gas/Light Liquid	0	0	5.270E-02	4.709E+00	0.00
	Light Crude Oil	0	0	1.402E-02	4.709E+00	0.00
	Heavy Crude Oil	0	0	N/A	N/A	N/A
Others	Gas/Light Liquid	20	0	7.778E-03	7.281E+00	0.16
	Light Crude Oil	0	0	6.931E-03	3.757E-01	0.00
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00
Connectors	Gas/Light Liquid	30	0	6.349E-04	1.370E+00	0.02
	Light Crude Oil	0	0	5.291E-04	1.238E+00	0.00
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00
Flanges	Gas/Light Liquid	60	0	1.482E-03	3.228E+00	0.09
	Light Crude Oil	0	0	1.270E-03	1.376E+01	0.00
	Heavy Crude Oil	0	0	1.217E-03	N/A*	0.00
Open-ended Lines	Gas/Light Liquid	0	0	1.270E-03	2.905E+00	0.00
	Light Crude Oil	0	0	9.524E-04	1.175E+00	0.00
	Heavy Crude Oil	0	0	7.937E-04	3.762E+00	0.00

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

Total Organic Compound (TOC) Emissions = **0.30 lb/day**

110 lb/yr

Methane Wt % of TOC from Gas Analyses =	24.96 %
CO2 wt % relative to TOC from Gas Analyses =	41.54 %
CO2 Equivalency factor for Methane =	23
Metric Ton =	2204.6 lb

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

Methane CO2 (eqv) =	0.286	ton/yr
CO2 =	0.021	ton/yr
Total CO2 (eqv) from proposed modification =	**0.306**	**ton/yr**

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

Fugitive Emissions Using Screening Emission Factors

California Implementation Guidelines for Estimating Mass Emissions
of Fugitive Hydrocarbon Leaks at Petroleum Facilities
Table IV-2c. Oil and Gas Production
Screening Value Ranges Emission Factors

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

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

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

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

91 lb/yr

Methane Wt % of TOC from Gas Analyses =	24.96 %
CO2 wt % relative to TOC from Gas Analyses =	41.54 %
CO2 Equivalency factor for Methane =	23
Metric Ton =	2204.6 lb

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

Methane CO2 (eqv) =	0.238	ton/yr
CO2 =	0.017	ton/yr
Total CO2 (eqv) from proposed modification =	**0.255**	**ton/yr**

Attachment V
Emissions Profile

Permit #: S-8136-1-0	**Last Updated**
Facility: VENOCO, INC.	03/23/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	201.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	50.0
Q2:	0.0	0.0	0.0	0.0	50.0
Q3:	0.0	0.0	0.0	0.0	50.0
Q4:	0.0	0.0	0.0	0.0	51.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-8136-2-0	**Last Updated**
Facility: VENOCO, INC.	03/23/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	91.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	22.0
Q2:	0.0	0.0	0.0	0.0	23.0
Q3:	0.0	0.0	0.0	0.0	23.0
Q4:	0.0	0.0	0.0	0.0	23.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-8136-3-0	Last Updated
Facility: VENOCO, INC.	03/23/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	91.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	22.0
Q2:	0.0	0.0	0.0	0.0	23.0
Q3:	0.0	0.0	0.0	0.0	23.0
Q4:	0.0	0.0	0.0	0.0	23.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-8136-4-0	**Last Updated**
Facility: VENOCO, INC.	03/23/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	91.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	22.0
Q2:	0.0	0.0	0.0	0.0	23.0
Q3:	0.0	0.0	0.0	0.0	23.0
Q4:	0.0	0.0	0.0	0.0	23.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-8136-5-0	**Last Updated**
Facility: VENOCO, INC.	03/23/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	19856.0	840.0	2226.0	108040.0	18396.0
Daily Emis. Limit (lb/Day)	54.4	2.3	6.4	296.0	50.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	4964.0	210.0	556.0	27210.0	4599.0
Q2:	4964.0	210.0	556.0	27210.0	4599.0
Q3:	4964.0	210.0	557.0	27210.0	4599.0
Q4:	4964.0	210.0	557.0	27210.0	4599.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-8136-6-0	Last Updated
Facility: VENOCO, INC.	03/23/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	201.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	50.0
Q2:	0.0	0.0	0.0	0.0	50.0
Q3:	0.0	0.0	0.0	0.0	50.0
Q4:	0.0	0.0	0.0	0.0	51.0
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-8136-7-0	**Last Updated**
Facility: VENOCO, INC.	04/04/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	91.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	22.0
Q2:	0.0	0.0	0.0	0.0	23.0
Q3:	0.0	0.0	0.0	0.0	23.0
Q4:	0.0	0.0	0.0	0.0	23.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-8136-8-0	**Last Updated**
Facility: VENOCO, INC.	04/04/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	91.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	22.0
Q2:	0.0	0.0	0.0	0.0	23.0
Q3:	0.0	0.0	0.0	0.0	23.0
Q4:	0.0	0.0	0.0	0.0	23.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-8136-9-0	**Last Updated**
Facility: VENOCO, INC.	04/04/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	91.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	22.0
Q2:	0.0	0.0	0.0	0.0	23.0
Q3:	0.0	0.0	0.0	0.0	23.0
Q4:	0.0	0.0	0.0	0.0	23.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-8136-10-0	**Last Updated**
Facility: VENOCO, INC.	03/23/2012 EDGEHILR

Equipment Pre-Baselined: NO

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

Application Emissions

Permit #: S-8136-11-0	**Last Updated**
Facility: VENOCO, INC.	03/23/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	201.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	50.0
Q2:	0.0	0.0	0.0	0.0	50.0
Q3:	0.0	0.0	0.0	0.0	50.0
Q4:	0.0	0.0	0.0	0.0	51.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-8136-12-0	Last Updated
Facility: VENOCO, INC.	04/04/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	91.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	22.0
Q2:	0.0	0.0	0.0	0.0	23.0
Q3:	0.0	0.0	0.0	0.0	23.0
Q4:	0.0	0.0	0.0	0.0	23.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-8136-13-0	**Last Updated**
Facility: VENOCO, INC.	04/04/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	91.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	22.0
Q2:	0.0	0.0	0.0	0.0	23.0
Q3:	0.0	0.0	0.0	0.0	23.0
Q4:	0.0	0.0	0.0	0.0	23.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-8136-14-0	**Last Updated**
Facility: VENOCO, INC.	04/04/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	91.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	22.0
Q2:	0.0	0.0	0.0	0.0	23.0
Q3:	0.0	0.0	0.0	0.0	23.0
Q4:	0.0	0.0	0.0	0.0	23.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-8136-15-0	Last Updated
Facility: VENOCO, INC.	03/23/2012 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	0.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
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 VI
BACT Guideline 1.4.2

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 1.4.2*

Last Update 12/31/1998

Waste Gas Flare - Incinerating Produced Gas

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		
NOx	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		
PM10	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable Pilot Light fired solely on LPG or natural gas.		
SOx	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable Pilot Light fired solely on LPG or natural gas.	Precombustion SOx scrubbing system (non-emergency flares only.)	
VOC	Steam assisted or Air-assisted or Coanda effect burner, 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 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 VII
BACT Analysis

Top Down BACT Analysis for NOx, PM10, and VOC emissions:

Step 1 - Identify All Control Technologies

Steam assisted or air-assisted or Coanda effect burner, when steam unavailable (Achieved in Practice)

Step 2 - Eliminate Technologically Infeasible Options

None eliminated.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Steam assisted or air-assisted or Coanda effect burner, when steam unavailable (Achieved in Practice)

Step 4 - Cost Effectiveness Analysis

Applicant has proposed the one remaining option from Step 1, air-assisted when steam unavailable. Therefore, a cost analysis is not required.

Step 5 - Select BACT

Venoco is proposing air-assisted when steam unavailable and therefore BACT is satisfied.

Top Down BACT Analysis for SOx

Step 1 - Identify All Control Technologies

Steam assisted or air-assisted or Coanda effect burner, when steam unavailable (Achieved in Practice)

Pilot light fired solely on LPG or natural gas (Achieved in Practice)

Precombustion SOx scrubbing system (non-emergency flares only)-Technologically feasible

Step 2 - Eliminate Technologically Infeasible Options

None eliminated.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Steam assisted or air-assisted or Coanda effect burner, when steam unavailable (Achieved in Practice)

Pilot light fired solely on LPG or natural gas (Achieved in Practice)

Precombustion SOx scrubbing system (nonemergency flares only)-Technologically feasible.

Step 4 - Cost Effectiveness Analysis

Applicant has proposed all of the above options from Step 1, air-assisted when steam unavailable, flared gas sulfur content not exceeding 1 gr S/100 scf (equivalent to pre-combustion scrubbing, pilot fired on produced gas with a sulfur content not exceeding 1 gr S/100 scf (equivalent to natural gas- fired pilot). Therefore, a cost analysis is not required.

Step 5 - Select BACT

Venoco is proposing air-assisted when steam unavailable, flared gas sulfur content not exceeding 1 gr S/100 scf (equivalent to precombustion scrubbing), pilot light fired only on natural gas and therefore BACT is satisfied.

Attachment VIII
HRA

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Richard Edgehill, AQE – Permit Services
From:	Esteban Gutierrez, AQS– Technical Services
Date:	March 30, 2012
Facility Name:	Venoco, Inc.
Location:	Light oil Western
Application #(s):	S-8136-1-0 thru 15-0
Project #:	S-1120688

A. RMR SUMMARY

RMR Summary				
Categories	**Tanks (1-0 thru 4-0)**	**Flare (Unit 5-0)**	**Tanks (6-0 thru 9-0)**	**Flare (Unit 10-0)**
Prioritization Score	0.00	0.001	0.00	0.001
Acute Hazard Index	N/A[1]	N/A[1]	N/A[1]	N/A[1]
Chronic Hazard Index	N/A[1]	N/A[1]	N/A[1]	N/A[1]
Maximum Individual Cancer Risk (10^{-6})	N/A[1]	N/A[1]	N/A[1]	N/A[1]
T-BACT Required?	**No**	**No**	**No**	**No**
Special Permit Conditions?	**No**	**No**	**No**	**No**

RMR Summary				
Categories	**Tanks (11-0 thru 14-0)**	**Flare (Unit 15-0)**	**Project Totals**	**Facility Totals**
Prioritization Score	0.00	0.001	0.003	0.003
Acute Hazard Index	N/A[1]	N/A[1]	N/A[1]	0.00
Chronic Hazard Index	N/A[1]	N/A[1]	N/A[1]	0.00
Maximum Individual Cancer Risk (10^{-6})	N/A[1]	N/A[1]	N/A[1]	0.00
T-BACT Required?	**No**	**No**		
Special Permit Conditions?	**No**	**No**		

[1]Acute and Chronic Hazard Index and Maximum Individual Cancer Risk were not calculated since the total facility prioritization score was less than 1.0.

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 thru 15-0

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on March 15, 2004, to perform an Ambient Air Quality Analysis and a Risk Management Review for the installation of three crude oil facilities, each consisting of 4 tanks venting to its own flare. The three locations are as follows; SW ¼ section 19, T31S, R22E (Units 1-0 thru 5-0), NE ¼ section 29, T31S, R22E (units 6-0 thru 10-0), NE ¼ section 33, T31S, R22E (units 11-0 thru 15-0).

II. Analysis

Toxic emissions for this proposed unit were calculated using oil field fugitive emissions for the proposed tanks and Ventura County emission factors for external combustion of natural gas for flares. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905, March 2, 2001), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEARTs database. The prioritization score for this proposed unit was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary.

The following parameters were used for the review:

Analysis Parameters Unit 1-0 thru 4-0, 6-0 thru 9-0, & 11-0 thru14-0 each			
Throughput (VOC/yr)	91	**Max Hours per Year**	8760
Closest Receptor (m)	>3048		

Analysis Parameters Unit 5-0, 10-0, 15-0 each			
Throughput (MMBtu/hr)	1.5	**Max Hours per Year**	8760
Closest Receptor (m)	>3048		

AAQA. In addition to the RMR, Technical Services performed modeling for the criteria pollutant PM_{10} using AERMOD. The emission rates used are in the following table:

Permit Units	NO_X	SO_X	PM_{10}	CO	VOC
S-8136-5 (flare)	19,856	840	2226	108,040	18,396
S-8136-10* (flare)					
S-8136-15* (flare)					

*SLC for all three flares

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass	X	X	X	Pass
SO_x	Pass	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass	Pass
$PM_{2.5}$	X	X	X	Pass[1]	Pass[1]

*Results were taken from the attached PSD spreadsheet.
[1]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

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.

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

IV. Attachments

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

Attachment IX
Best Performance Standards

Draft BPS Policy for VOC Control/Gas Disposal Oil and gas Production, Processing, and Refining

The flares S-8136-5, '-10, and '-15 are to be used only if disposal wells, a sales gas line, combustion sources creating useful work i.e. steam generator or permit exempt heater are not available. The flares must have a destruction efficiency > 98% and be steam assist or air assist if steam is unavailable, or Coanda effect and equipped with non-automatic or electronic or ballistic ignition. The draft policy follows.

The following condition is included on the ATCs:

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

Front Line Organic Liquid Storage Tanks

Front-line Fixed Roof Tanks < 5,000 bbl

Minimize GHG emissions by equipping fixed roof tanks with PV-vent set to within 10% of maximum allowable pressure. The tanks are equipped with leak-free vapor control with an expected control efficiency of 99%.

San Joaquin Valley
Unified Air Pollution Control District

Best Performance Standard (BPS) x.x.xx

Date: 05/31/2011

Class	**VOC Control/Gas Disposal**	
Category	**Oil and Gas Production, Processing, and Refining**	
Best Performance Standard (in order of recommendation)	1) -Incineration in existing engine, boiler, etc that creates useful work – provided that equipment is available and practically capable of incinerating vapors (see equipment specific BPS for standards and requirements for new fired equipment) and currently burning fossil fuel; or, -Transfer to Sales Gas Line – provided that access to sales gas line infrastructure is available; or, -Reinjection to Formation – provided that access to a disposal well is available.	
	The following options supersede the BPS requirements above if: a) equipment listed above is not available; b) gas cannot safely be transferred to equipment listed above; c) used to control emergency gas releases: 2) -Incineration in new Thermal Oxidizer – see equipment specific Thermal Oxidizer BPS for standards and requirements for new equipment; or, -Incineration in New Flare with >98% TOC destruction efficiency, steam assist, air assist when steam is not available, or Coanda effect and equipped with non-continuous automatic electronic or ballistic ignition; or, -Incineration in Existing Thermal Oxidizer or Flare	
Percentage Achieved GHG Emission Reduction Relative to Baseline Emissions	**Gas-Fired Equipment**	**100%**
	Transfer to Sales Gas Line	**100%**
	Reinjection to Formation	**100%**
	New Thermal Oxidizer	**100%**
	New Flare	**1.5%**
	Existing Thermal Oxidizer or Flare	**0%**
District Project Number	S-1103964	
Evaluating Engineer	Kristopher Rickards	
Lead Engineer	Leonard Scandura, P.E.	
Public Notice: Start Date	May 31, 2011	
Public Notice: End Date	June 30, 2011	
Determination Effective Date	TBD	

San Joaquin Valley
Unified Air Pollution Control District

Best Performance Standard (BPS) x.x.xx

Date: 1/20/2011

Class	Front-line Organic Liquid Storage Tanks
Category	Subcategories: 1) Fixed Roof Tanks < 5,000 bbl 2) Fixed Roof Tanks ≥ 5,000 bbl
Best Performance Standard	1) Front-line Fixed Roof Tanks < 5,000 bbl Minimize GHG emissions by equipping fixed roof tanks <5,000 bbl with PV-vent set to within 10% of maximum allowable pressure 2) Front-line Fixed Roof Tanks ≥ 5,000 bbl Minimize GHG emissions of fixed roof tanks ≥ 5,000 bbl by controlling the emissions by 99% by weight
Percentage Achieved GHG Emission Reduction Relative to Baseline Emissions	1) Front-line Fixed Roof Tanks < 5,000 bbl 0% 2) Front-line Fixed Roof Tanks ≥ 5,000 bbl 0%

District Project Number	C-1100392
Evaluating Engineer	Dolores Gough
Lead Engineer	Leonard Scandura
Public Participation: Public Notice: start date	September 28, 2010
Public Participation: Public Notice: ending date	October 15, 2010
Determination Effective Date	TBD

Attachment X
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-1-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: SW 19 **TOWNSHIP:** 31S **RANGE:** R22E

EQUIPMENT DESCRIPTION:
500 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY VAPOR CONTROL SYSTEM VENTED TO FLARE S-8136-5 (BLM 19)

CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rule 4623]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
5. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201]
6. VOC emission rate from vapor control system shall not exceed 0.3 lb/day. [District Rule 2201]
7. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]

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-8136-1-0 : Apr 4 2012 9:04AM -- EDGEHILR : Joint Inspection Required with EDGEHILR

8. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

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

10. 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]

11. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

13. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623]

14. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

15. Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]

16. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]

17. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

18. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

19. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]

20. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]

21. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]

CONDITIONS CONTINUE ON NEXT PAGE

22. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]

23. ATC shall be implemented concurrently with or subsequent to ATC S-8136-5-0. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-2-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: SW 19 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
500 BBL FIXED ROOF STOCK TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8136-1 (BLM-19)

CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rule 4623]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
5. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201]
6. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

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-8136-2-0: Apr 4 2012 9:04AM – EDGEHILR : Joint Inspection Required with EDGEHILR

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). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]
9. 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]
10. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]
12. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623]
13. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]
14. Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]
15. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]
16. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]
17. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]
18. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]
19. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]
20. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]
21. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

22. ATC shall be implemented concurrently with or subsequent to ATC S-8136-1-0. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-3-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: SW 19 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
500 BBL FIXED ROOF PRODUCED WATER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8136-1 (BLM-19)

CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rule 4623]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
5. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201]
6. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

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-8136-3-0: Apr 4 2012 9:04AM -- EDGEHILR : Joint Inspection Required with EDGEHILR

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). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]

9. 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]

10. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

12. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623]

13. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

14. Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]

15. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]

16. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

17. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

18. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]

19. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]

20. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]

21. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

22. ATC shall be implemented concurrently with or subsequent to ATC S-8136-1-0. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-4-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: SW 19 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
500 BBL FIXED ROOF PRODUCED WATER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8136-1 (BLM-19)

CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rule 4623]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
5. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201]
6. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

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-8136-4-0: Apr 4 2012 9:04AM – EDGEHILR : Joint Inspection Required with EDGEHILR

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). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]
9. 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]
10. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]
12. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623]
13. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]
14. Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]
15. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]
16. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]
17. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]
18. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]
19. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]
20. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]
21. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

22. ATC shall be implemented concurrently with or subsequent to ATC S-8136-1-0. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-5-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: SW 19 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
33.3 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE SERVING VAPOR CONTROL SYSTEM LISTED ON PERMIT S-8136-1 (BLM 19)

CONDITIONS

1. The flare is to be used only if disposal wells, a sales gas line, combustion sources creating useful work i.e. steam generator and/or permit exempt heater are not available. The flare shall have a destruction efficiency > 98% and be steam assist or air assist if steam is unavailable, or Coanda effect and equipped with non-continuous automatic electronic or ballistic ignition. [Public Resources Code 21000-21177: California Environmental Quality Act, District Rule 4102, and CH&SC 41700]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1/4 or 5% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. Flare shall be equipped with produced gas volume flow meter. [District Rule 2201]
6. Combined flare gas heat input from flares S-8136-5, '-10, and '-15 shall not exceed 800 MMBtu/day. [District Rule 2201]
7. Emissions shall not exceed any of the following limits: 0.068 lb NOx/MMBtu, 0.008 lb PM10/MMBtu, 0.37 lb CO/MMBtu or 0.063 lb VOC/MMBtu. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director/APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-8136-5-0 : Apr 4 2012 9:19AM – EDGEHILR : Joint Inspection Required with EDGEHILR

8. The sulfur content of the gas being incinerated shall not exceed 1.0 grain total Sulfur per 100 scf of gas. [District Rule 2201]
9. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 2201]
10. The outlet shall be equipped with an automatic ignition system. [District Rule 2201]
11. 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 2201]
12. Permittee shall determine sulfur content of flared gas weekly for eight consecutive weeks upon startup. After demonstrating compliance for eight consecutive weeks testing may be conducted on a quarterly basis. Weekly gas analysis shall be performed using Draeger tubes and quarterly analysis using ASTM method D3246 or double GC for H2S and mercaptans. Sulfur content of waste gas shall be measured within one day of restarting unit if the unit has not been in use for more than 7 days. [District Rules 1081 and 2201]
13. The higher heating value of the flared gas shall be monitored at least quarterly or upon change of source of flared gas. [District Rules 1070 and 2201]
14. Permittee shall keep accurate records of daily and annual flared gas flow rate and heat input in MMBtu/day and MMBtu/yr. [District Rule 2201]
15. Records of the gas sulfur content and required gas flow measurements shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
16. Permittee shall keep accurate records of annual throughput, material usage, or other information necessary to demonstrate that facility emissions are less than 10 tons NOx/yr and 10 tons VOC/yr for exemption from Rule 4311. [District Rule 4311]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-6-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: NE 29 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
500 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY THE VAPOR CONTROL SYSTEM VENTED TO FLARE S-8136-10 (BLM-29)

CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rule 4623]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
5. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201]
6. VOC emission rate from vapor control system shall not exceed 0.3 lb/day. [District Rule 2201]
7. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]

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
6-8136-6-0 : Apr 4 2012 9:05AM – EDGEHILR : Joint Inspection Required with EDGEHILR

8. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

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

10. 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]

11. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

13. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623]

14. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

15. Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]

16. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]

17. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

18. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

19. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]

20. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]

21. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]

CONDITIONS CONTINUE ON NEXT PAGE

22. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]

23. ATC shall be implemented concurrently with or subsequent to ATCs S-8136-10-0. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-7-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: NE 29 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
500 BBL FIXED ROOF CRUDE OIL STOCK TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8136-6 (BLM-29)

CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rule 4623]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
5. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201]
6. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

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-8136-7-0 : Apr 4 2012 8:05AM – EDGEHILR : Joint Inspection Required with EDGEHILR

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). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]

9. 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]

10. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

12. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623]

13. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

14. Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]

15. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]

16. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

17. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

18. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]

19. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]

20. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]

21. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

22. ATC shall be implemented concurrently with or subsequent to ATC S-8136-6-0. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-8-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: NE 29 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
500 BBL FIXED ROOF PRODUCED WATER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8136-6 (BLM-29)

CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rule 4623]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
5. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201]
6. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-8136-8-0 : Apr 4 2012 9:05AM – EDGEHILR : Joint Inspection Required with EDGEHILR

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). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]

9. 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]

10. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

12. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623]

13. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

14. Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]

15. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]

16. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

17. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

18. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]

19. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]

20. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]

21. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

22. ATC shall be implemented concurrently with or subsequent to ATC S-8136-6-0. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-9-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: NE 29 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
500 BBL FIXED ROOF PRODUCED WATER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8136-6 (BLM-29)

CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rule 4623]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
5. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201]
6. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-8136-9-0 : Apr 4 2012 9:05AM -- EDGEHILR : Joint Inspection Required with EDGEHILR

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). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]
9. 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]
10. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]
12. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623]
13. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]
14. Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]
15. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]
16. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]
17. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]
18. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]
19. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]
20. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]
21. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

22. ATC shall be implemented concurrently with or subsequent to ATC S-8136-6-0. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-10-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: NE 29 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
33.3 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE SERVING VAPOR CONTROL SYSTEM LISTED ON PERMIT S-8136-6 (BLM 29)

CONDITIONS

1. The flare is to be used only if disposal wells, a sales gas line, combustion sources creating useful work i.e. steam generator and/or permit exempt heater are not available. The flare shall have a destruction efficiency > 98% and be steam assist or air assist if steam is unavailable, or Coanda effect and equipped with non-continuous automatic electronic or ballistic ignition. [Public Resources Code 21000-21177: California Environmental Quality Act, District Rule 4102, and CH&SC 41700]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1/4 or 5% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. Flare shall be equipped with produced gas volume flow meter. [District Rule 2201]
6. Combined flare gas heat input from flares S-8136-5, '-10, and '-15 shall not exceed 800 MMBtu/day. [District Rule 2201]
7. Emissions shall not exceed any of the following limits: 0.068 lb NOx/MMBtu, 0.008 lb PM10/MMBtu, 0.37 lb CO/MMBtu or 0.063 lb VOC/MMBtu. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-8136-10-0 : Apr 4 2012 8:20AM – EDGEHILR : Joint Inspection Required with EDGEHILR

8. The sulfur content of the gas being incinerated shall not exceed 1.0 grain total Sulfur per 100 scf of gas. [District Rule 2201]
9. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 2201]
10. The outlet shall be equipped with an automatic ignition system. [District Rule 2201]
11. 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 2201]
12. Permittee shall determine sulfur content of flared gas weekly for eight consecutive weeks upon startup. After demonstrating compliance for eight consecutive weeks testing may be conducted on a quarterly basis. Weekly gas analysis shall be performed using Draeger tubes and quarterly analysis using ASTM method D3246 or double GC for H2S and mercaptans. Sulfur content of waste gas shall be measured within one day of restarting unit if the unit has not been in use for more than 7 days. [District Rules 1081 and 2201]
13. The higher heating value of the flared gas shall be monitored at least quarterly or upon change of source of flared gas. [District Rules 1070 and 2201]
14. Permittee shall keep accurate records of daily and annual flared gas flow rate and heat input in MMBtu/day and MMBtu/yr. [District Rule 2201]
15. Records of the gas sulfur content and required gas flow measurements shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
16. Permittee shall keep accurate records of annual throughput, material usage, or other information necessary to demonstrate that facility emissions are less than 10 tons NOx/yr and 10 tons VOC/yr for exemption from Rule 4311. [District Rule 4311]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-11-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: NE 33 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
500 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY THE VAPOR CONTROL SYSTEM VENTED FLARE S-8136-15 (BLM 33)

CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rule 4623]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
5. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201]
6. VOC emission rate from vapor control system shall not exceed 0.3 lb/day. [District Rule 2201]
7. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]

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-8136-11-0 : Apr 4 2012 9:05AM – EDGEHILR : Joint Inspection Required with EDGEHILR

8. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

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

10. 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]

11. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

13. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623]

14. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

15. Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]

16. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]

17. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

18. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

19. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]

20. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]

21. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]

CONDITIONS CONTINUE ON NEXT PAGE

22. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]

23. ATC shall be implemented concurrently with or subsequent to ATC S-8136-15-0. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-12-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: NE 33 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
500 BBL FIXED ROOF STOCK TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8136-11 (BLM-33)

CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rule 4623]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
5. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201]
6. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director/APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-8136-12-0 : Apr 4 2012 9:05AM – EDGEHILR : Joint Inspection Required with EDGEHILR

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). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]

9. 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]

10. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

12. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623]

13. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

14. Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]

15. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]

16. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

17. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

18. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]

19. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]

20. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]

21. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

22. ATC shall be implemented concurrently with or subsequent to ATC S-8136-11-0. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-13-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: NE 33 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
500 BBL FIXED ROOF PRODUCED WATER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8136-11 (BLM-33)

CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rule 4623]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
5. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201]
6. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-8136-13-0 : Apr 4 2012 9:05AM – EDGEHILR : Joint Inspection Required with EDGEHILR

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). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]

9. 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]

10. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

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19. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]

20. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]

21. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

22. ATC shall be implemented concurrently with or subsequent to ATC S-8136-11-0. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-14-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: NE 33 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
500 BBL FIXED ROOF PRODUCED WATER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-8136-11 (BLM-33)

CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rule 4623]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
5. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.3 lb/day. [District Rule 2201]
6. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-8136-14-0 : Apr 4 2012 8:05AM – EDGEHILR : Joint Inspection Required with EDGEHILR

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). The ppmv readings, as methane above background, shall be taken using a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201]

9. 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]

10. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

12. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623]

13. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]

14. Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]

15. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]

16. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]

17. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]

18. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]

19. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]

20. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]

21. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

22. ATC shall be implemented concurrently with or subsequent to ATC S-8136-11-0. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-8136-15-0 **ISSUANCE DATE:** DRAFT

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
BAKERSFIELD, CA

SECTION: NE 33 **TOWNSHIP:** 31S **RANGE:** R22E

EQUIPMENT DESCRIPTION:
33.3 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE SERVING VAPOR CONTROL SYSTEM LISTED ON PERMIT S-8136-11 (BLM 33)

CONDITIONS

1. The flare is to be used only if disposal wells, a sales gas line, combustion sources creating useful work i.e. steam generator and/or permit exempt heater are not available. The flare shall have a destruction efficiency > 98% and be steam assist or air assist if steam is unavailable, or Coanda effect and equipped with non-continuous automatic electronic or ballistic ignition. [Public Resources Code 21000-21177: California Environmental Quality Act, District Rule 4102, and CH&SC 41700]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1/4 or 5% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. Flare shall be equipped with produced gas volume flow meter. [District Rule 2201]
6. Combined flare gas heat input from flares S-8136-5, '-10, and '-15 shall not exceed 800 MMBtu/day. [District Rule 2201]
7. Emissions shall not exceed any of the following limits: 0.068 lb NOx/MMBtu, 0.008 lb PM10/MMBtu, 0.37 lb CO/MMBtu or 0.063 lb VOC/MMBtu. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director/ APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-8136-15-0 : Apr 4 2012 9:21AM -- EDGEHILR : Joint Inspection Required with EDGEHILR

8. The sulfur content of the gas being incinerated shall not exceed 1.0 grain total Sulfur per 100 scf of gas. [District Rule 2201]
9. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 2201]
10. The outlet shall be equipped with an automatic ignition system. [District Rule 2201]
11. 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 2201]
12. Permittee shall determine sulfur content of flared gas weekly for eight consecutive weeks upon startup. After demonstrating compliance for eight consecutive weeks testing may be conducted on a quarterly basis. Weekly gas analysis shall be performed using Draeger tubes and quarterly analysis using ASTM method D3246 or double GC for H2S and mercaptans. Sulfur content of waste gas shall be measured within one day of restarting unit if the unit has not been in use for more than 7 days. [District Rules 1081 and 2201]
13. The higher heating value of the flared gas shall be monitored at least quarterly or upon change of source of flared gas. [District Rules 1070 and 2201]
14. Permittee shall keep accurate records of daily and annual flared gas flow rate and heat input in MMBtu/day and MMBtu/yr. [District Rule 2201]
15. Records of the gas sulfur content and required gas flow measurements shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
16. Permittee shall keep accurate records of annual throughput, material usage, or other information necessary to demonstrate that facility emissions are less than 10 tons NOx/yr and 10 tons VOC/yr for exemption from Rule 4311. [District Rule 4311]