



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

FEB 22 2010

Dennis Champion
Occidental of Elk Hills
10800 Stockdale Highway
Bakersfield, CA 93311

Re: Notice of Preliminary Decision - Emission Reduction Credits
Project Number: S-1095500

Dear Mr. Champion:

Enclosed for your review and comment is the District's analysis of Occidental of Elk Hills's application for Emission Reduction Credits (ERCs) resulting from shutdown of tanks S-382-78, '-170, and '-171, at the 4-34S tank farm. The quantity of ERCs proposed for banking is 96 lb-VOC per year.

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. Steve Davidson of Permit Services at (661) 392-5618.

Sincerely,

David Warner
Director of Permit Services

DW: SDD/cm

Enclosures

Seyed Sadredin

Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061
www.valleyair.org

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



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

FEB 22 2010

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 - Emission Reduction Credits
Project Number: S-1095500**

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Occidental of Elk Hills's application for Emission Reduction Credits (ERCs) resulting from shutdown of tanks S-382-78, '-170, and '-171, at the 4-34S tank farm. The quantity of ERCs proposed for banking is 96 lb-VOC per year.

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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San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

FEB 22 2010

Gerardo C. Rios (AIR 3)
Chief, Permits Office
Air Division
U.S. E.P.A. - Region IX
75 Hawthorne Street
San Francisco, CA 94105

Re: Notice of Preliminary Decision - Emission Reduction Credits
Project Number: S-1095500

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of Occidental of Elk Hills's application for Emission Reduction Credits (ERCs) resulting from shutdown of tanks S-382-78, '-170, and '-171, at the 4-34S tank farm. The quantity of ERCs proposed for banking is 96 lb-VOC per year.

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. Steve Davidson of Permit Services at (661) 392-5618.

Sincerely,

David Warner
Director of Permit Services

DW: SDD/cm

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Bakersfield Californian
Bakersfield Californian

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
EMISSION REDUCTION CREDITS**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Emission Reduction Credits to Occidental of Elk Hills for shutdown of tanks S-382-78, '-170, and '-171, at the 4-34S tank farm. The quantity of ERCs proposed for banking is 96 lb-VOC per year.

The analysis of the regulatory basis for this proposed action, Project #S-1095500, 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.**

ERC APPLICATION REVIEW

Facility Name: Occidental of Elk Hills, Inc.
Mailing Address: P.O. Box 1001
Tupman, CA 93276-1001

Contact Name: Dennis Champion
Telephone: (661) 412-5214

Engineer: Steve Davidson
Date: January 28, 2010

Lead: Allan Phillips, Supervising AQE *AP*
Date: FEB 17 2010

Project #: S-1095500

Certificate #: S-3327-1

I. SUMMARY:

Occidental of Elk Hills, Inc. has surrendered Permits to Operate at the 4-34S tank farm (S-382-78, '-170, and '-171) within its Light Oil Western stationary source (S-382). Occidental of Elk Hills has submitted an application to bank the emission reduction credits (ERCs) for the decreased emissions.

Occidental also requested ERCs for the shutdown of several other tanks that were previously issued ERCs. Permits S-382-118, '-273, '-274 '-137, '-322 and '-323, were surrendered and the District issued ERC certificates S-3077-1 and S-3078-1 in project S-1075142 from the emissions reductions from this shutdown. Permits S-382-192, '-194, and '-195 were surrendered for ERC certificate S-3053-1 in project S-1075076. Therefore, emissions reductions from the shut down of the above tanks were previously banked and are ineligible for banking now.

The following emissions reductions generated from the shutdown of only three tanks S-382-78, '-170, and '-171, located at the 4-34S tank farm, are eligible for banking:

VOC (lb/qtr)

ERC #	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr
S-3327-1	24	24	24	24

II. APPLICABLE RULES:

- Rule 2201 New and Modified Stationary Source Review Rule (9/21/06)
- Rule 2301 Emission Reduction Credit Banking (12/17/92)
- Rule 4623 Storage of Organic Liquids (5/19/05)
- Rule 4409 Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities (4/20/05)

III. PROJECT LOCATION:

The location of emission reductions generated by the shutdown of three tanks occurred at Occidental of Elk Hills' Kern County Light Oil Western stationary source (S-382). Tanks S-382-78, '-170, and '-171 are located at the 4-34S tank Setting in SE/4 Section 34, Township 30S, and Range 24E.

IV. METHOD OF GENERATING REDUCTIONS:

Actual Emissions Reductions (AER) were generated by the voluntary shutdown of the three tanks at Occidental of Elk Hills' Kern County Light Oil Western stationary source (S-382).

To validate the requested emission reduction credits (ERC), Occidental of Elk Hills surrendered the Permits to Operate for the three tanks.

Equipment located at the 4-34S Tank Setting (SE/4 Section 34, Township 30S, Range 24E):

- S-382-78: 42,000 GALLON SURGE TANK UNX #1003 (4-34S) CONSISTING OF GAS/LIQUID PRESSURE VESSELS IN A GAS/LIQUID SEPARATION SYSTEM, ONE EMERGENCY STAND-BY GAS/LIQUID SEPARATION SYSTEM, AND WELL TESTER #3; EQUIPMENT SHARED WITH S-382-170 AND -171
- S-382-170: 21,000 GALLON SURGE TANK UNX #1002 (TANK GAUGE SETTING 4-34S) INCLUDING SHARED EQUIPMENT LISTED ON PERMIT S-382-78
- S-382-171: 21,000 GALLON SURGE TANK UNX #1237 (TANK GAUGE SETTING 4-34S) INCLUDING SHARED EQUIPMENT LISTED ON PERMIT S-382-78

V. ERC CALCULATIONS:

A. Emission Factors and Assumptions:

Actual emission reductions (AER) are quantified pursuant to District Rule 2201. Fugitive emissions for tanks served by vapor recovery will be conservatively estimated based on component counts and the emission factors from "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. The spreadsheet included as Attachment B lists the fugitive component count and contains the emissions calculations for the fugitive components for the tanks that qualify for credits. A gas analysis is included as Attachment C.

B. Baseline Period Determination and Data

Per Section 3.8 of Rule 2201, Baseline Period is defined as: a) two consecutive years of operation immediately prior to submission of the complete application; or b) another time period of at least two consecutive years within the five years immediately prior to submission of the complete application as determined by the APCO as more representative of normal operation. Rule 2301 titled "Emissions Reduction Credit Banking" defines Baseline Period as "the same period as defined in Rule 2201".

For this project, the application was submitted on November 30, 2009, the permits were surrendered on June 25, 2009. Therefore, the appropriate baseline period is the last two-year period of operation of the tanks.

C. Historical Actual Emissions

The emissions were compiled from data and calculations included as Attachment B.

lb-VOC

Tank	Daily	Annual	Quarterly
S-382-78	0.1	37	9
S-382-170	0.1	37	9
S-382-171	0.1	37	9
Total	0.3	111	27

D. Actual Emissions Reductions (AER)

Pursuant to Section 3.2 of Rule 2201, AER shall be real, surplus, permanent, quantifiable & enforceable. AER is calculated per subsection 4.12 as follows:

$$\text{AER} = \text{HAE} - \text{PE2}$$

Where: HAE = Historic Actual Emissions
PE2 = Post-Project Potential to Emit

The affected emissions units identified in this evaluation have been permanently shutdown and the permits canceled. Therefore, the post-project potential to emit (PE2) is zero and the AER is equal to the HAE, which is summarized below for VOC:

AER (lb-VOC/qtr)

Tank	Daily	Annual	Quarterly
S-382-78	0.1	37	9
S-382-170	0.1	37	9
S-382-171	0.1	37	9
Total	0.3	111	27

The Air Quality Improvement Deduction (AQID) is 10% of the AER per Rule 2201, Sections 3.5 and 4.12.1, and is summarized as follows:

AQID (lb-VOC/qtr)

1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr
3	3	3	3

E. Bankable Emissions Reductions Credits

To obtain values for bankable reductions, subtract the AQID from the AER. The total bankable emissions reductions are as follows:

Bankable Reductions - VOC (lb/qtr)

1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr
24	24	24	24

VI. COMPLIANCE:

To be eligible for banking, emission reduction credits (ERCs) must be verified as real, enforceable, quantifiable, permanent, and surplus pursuant to District Rules 2201 and 2301. In addition the application must be submitted within a timely manner specified in Rule 2301.

A. Real

Surrendering permits and taking tanks out of service resulted in real emission reductions. The affected processing equipment was permanently shutdown and the Permits to Operate were surrendered to the District, effective

November 30, 2009. The tanks were disconnected and drained of their residual contents; therefore the reductions are real.

B. Enforceable

The Permits to Operate for the affected tanks have been cancelled; therefore the reduction is enforceable.

C. Quantifiable

The AERs were calculated using District CAPCOA recognized "screening value" fugitive emission factors; therefore, the reductions are quantifiable.

D. Permanent

Occidental of Elk Hills has permanently shutdown the affected tanks and surrendered the associated Permits to Operate.

The tank settings were used to gather crude oil production in the field. Originally, primary fluid separation occurred at the tank settings, and fluid was accumulated in the tanks before being pumped to the Dehy Facility. Occidental consolidated and centralized liquid storage facilities through a reduction in the number of field tanks. The primary processing of produced fluids with the tanks at 4-34S Tank Setting no longer occurs, as the fluids are now sent directly to the Dehy for processing.

The source of emissions has therefore been permanently removed and these emissions are not occurring elsewhere. Therefore, the reductions are permanent.

E. Surplus

The shutdown of the affected processing equipment at the stationary source was voluntary. The resulting emission reductions are not mandated by any law, rule, regulation, agreement, or order of the District, State, or Federal Government. The reductions are not attributed to a control measure noticed for workshop or proposed, nor contained in a State Implementation Plan.

Oxy can no longer produce oil into the tanks without first obtaining Authorities to Construct and satisfying all applicable New Source Review requirements. Therefore, the reductions are surplus.

District Rule 4623 (Storage of Organic Liquids)

The tanks were subject to Rule 4623. The operator satisfied the requirements of the rule by maintaining an approved vapor control system that reduced VOC emissions by at least 95%. As Rule 4623 defines a gas leak as a reading in

excess of 10,000 ppmv, and as fugitive emissions were calculated using emissions factors at a screening level value of 10,000 ppmv with no leakers allowed, the calculated reductions are in excess of all rule requirements.

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

This rule establishes leak rate criteria and requirements for inspection and maintenance of components at the above listed facilities, but specifically exempts components subject to Rule 4623. The components serving the tanks in this project are subject to Rule 4623, and, therefore, are not subject to Rule 4409.

F. Timeliness

The application for ERCs were submitted to the District on November 30, 2009.

Pursuant to Rule 2301, Section 4.2.3, an application for ERC must be filed no later than 180 days after the emission reductions have occurred, in which the eligibility of the ERC application for the shutdown of processing equipment is dependent upon the definition of "shutdown" per Rule 2301.

Section 3.11 of Rule 2301 defines "shutdown" as the following: the earlier of the permanent cessation of emissions from an emitting unit or the surrender of operating permits. If prior to the surrender of the operating permits, the APCO determines that the units have been removed or fallen into an inoperable or unmaintained condition such that startup would required an investment exceeding 50% of the current replacement, then the date of shutdown is the date of last emissions.

The dates Oxy requested that the permits be cancelled are shown in the table, below. The ERC application was submitted on November 30, 2009. As displayed in the table, below, only PTOs S-382-78, '-170, and '-171 meet the 180 day limit. Therefore, the application is timely only for PTOs S-382-78, '-170, and '-171.

PTO#	Date PTO Surrendered	Date Application was Submitted	Timely?
4-34S Tank Setting			
S-382-78	6/25/09	11/30/09	Yes
S-382-170	6/25/09	11/30/09	Yes
S-382-171	6/25/09	11/30/09	Yes

VII. RECOMMENDATION:

Issue the requested ERC Banking Certificates to Occidental of Elk Hills, Inc. after completion of the required 30-day public notification period, and review of comments received, for the following amounts:

Bankable Reductions - VOC (lb/qtr)					
ERC #	Tank Group	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
S-3327-1	4-34S Tank Setting (S-382-78, '-170, '-171)	24	24	24	24

Attachments:

- A: Permits to Operate for Shutdown Equipment
- B: VOC Emission Calculations for Oil Production Tanks
- C: Natural Gas Analyses

Attachment A

Permits to Operate for Shutdown Equipment

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-382-78-8

EXPIRATION DATE: 10/31/2012

SECTION: 34 TOWNSHIP: 30S RANGE: 24E

EQUIPMENT DESCRIPTION:

42,000 GALLON SURGE TANK UNX #1003 (4-34S) CONSISTING OF GAS/LIQUID PRESSURE VESSELS IN A GAS/LIQUID SEPARATION SYSTEM, ONE EMERGENCY STAND-BY GAS/LIQUID SEPARATION SYSTEM, AND WELL TESTER #3; EQUIPMENT SHARED WITH S-382-170 AND -171

PERMIT UNIT REQUIREMENTS

1. The tank shall be fully enclosed and shall be equipped with a closed system that collects all VOCs from the storage tank. Collected vapors shall be routed to a gas gathering system that connects to a gas processing plant. The tank and vapor recovery system shall be maintained in Leak-Free condition. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Any tank gauging or sampling device shall be equipped with a Leak-Free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
3. All components (piping, valves, and fittings) associated with the tank, tank vapor control system, GLCC, horizontal separator (V-1) and well tester #3 shall be constructed and maintained in a Leak-Free condition. [District Rule 4623, 5.6.3 and District NSR Rule] Federally Enforceable Through Title V Permit
4. A Leak-Free condition is defined as a condition without a gas leak or liquid leak. 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. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 (amended May 19, 2005) and shall be reported as a deviation. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minutes. [District Rule 4623, 3.11, 3.17, 3.18 and 6.4.8] Federally Enforceable Through Title V Permit
5. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. Components found to be leaking either liquids or gases (VOC concentration >7,500 ppmv, measured in accordance with EPA Method 21) shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3) and District NSR Rule] Federally Enforceable Through Title V Permit
7. 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 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

Facility Name: OCCIDENTAL OF ELK HILLS, INC.
Location: LIGHT OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-382-78-8 MAR 5 2009 11:33AM -- 5FRANK

8. Upon detection of gas leak (VOC concentration >7,500 ppmv, measured in accordance with EPA Method 21), 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 4623, 5.7 (Table 3) and District NSR Rule] Federally Enforceable Through Title V Permit
9. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the specified timeframes, shall not constitute a violation of the District Rule 4623 (amended May 19, 2005). However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified timeframes, shall constitute a violation of the District Rule 4623 (amended May 19, 2005). [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
10. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
11. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623 (amended May 19, 2005), even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date 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 Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed tank and vapor recovery pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 4623 (amended May 19, 2005). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
16. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. This unit does not store organic materials which are liquid at standard conditions and which are used as solvents, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended May 16, 2002) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
18. This permit includes the following equipment: 42,000 gallon tank (#1003), vapor control system, 1 gas-liquid cyclonic cylinder (GLCC), 1 vertical separator, 1 horizontal separator and 1 well tester. [District NSR Rule] Federally Enforceable Through Title V Permit
19. VOC fugitive emissions from the components in gas and light oil service on tank and tank vapor control system serving tanks '-78, '-170, '-171, and '-336 shall not exceed 0.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

20. VOC fugitive emissions from the components in gas and light oil service on well tester #3 shall not exceed 0.04 lb/day. VOC fugitive emissions from the components in gas and light oil service on horizontal separator (V-1) shall not exceed 0.1 lb/day. VOC fugitive emissions from the components in gas and light oil service on GLCC shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Permittee shall maintain with the permit accurate fugitive component counts for tank, tank vapor control system, GLCC, horizontal separator (V-1) and well tester #3 according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Range emission factors. [District NSR Rule] Federally Enforceable Through Title V Permit
22. Test separators, pool separators, and gas scrubbers shall not vent to atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
23. The emergency stand-by system, including the knockout tank and drain tank shall not vent gas. [District NSR Rule] Federally Enforceable Through Title V Permit
24. The gas blanket supply line shall be closed before the Leak-Free (as defined in Rule 4623, amended May 19, 2005) seal on any tank is broken, including opening the tanks for any reason. [District NSR Rule] Federally Enforceable Through Title V Permit
25. Permittee shall keep in their facility at all times a copy of the letter sent to the APCO requesting participation in the Rule 4623 Fixed Roof Tank Preventive Inspection and Maintenance Program, and Tank Interior Cleaning Program, and maintain the records of annual tank inspections, maintenance, and cleaning to document the participation in the program. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Rule 4623 (amended May 19, 2005). [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-382-170-7

EXPIRATION DATE: 10/31/2012

SECTION: 34 TOWNSHIP: 30S RANGE: 24E

EQUIPMENT DESCRIPTION:

21,000 GALLON SURGE TANK UNX #1002 (TANK GAUGE SETTING 4-34S) INCLUDING SHARED EQUIPMENT LISTED ON PERMIT S-382-78

PERMIT UNIT REQUIREMENTS

1. The tank shall be fully enclosed and shall be equipped with a closed system that collects all VOCs from the storage tank. Collected vapors shall be routed to a gas gathering system that connects to a gas processing plant. The tank and vapor recovery system shall be maintained in Leak-Free condition. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Any tank gauging or sampling device shall be equipped with a Leak-Free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
3. All piping, valves, and fittings shall be constructed and maintained in a Leak-Free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
4. A Leak-Free condition is defined as a condition without a gas leak or liquid leak. 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. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 (amended May 19, 2005) and shall be reported as a deviation. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minutes. [District Rule 4623, 3.11, 3.17, 3.18 and 6.4.8] Federally Enforceable Through Title V Permit
5. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. Components found to be leaking either liquids or gases (VOC concentration >7,500 ppmv, measured in accordance with EPA Method 21) shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3) and District NSR Rule] Federally Enforceable Through Title V Permit
8. Upon detection of gas leak (VOC concentration >7,500 ppmv, measured in accordance with EPA Method 21), 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 4623, 5.7 (Table 3) and District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

9. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the specified timeframes, shall not constitute a violation of the District Rule 4623 (amended May 19, 2005). However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified timeframes, shall constitute a violation of the District Rule 4623 (amended May 19, 2005). [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
10. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
11. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623 (amended May 19, 2005), even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date 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 Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed tank and vapor recovery pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 4623 (amended May 19, 2005). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
16. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. This unit does not store organic materials which are liquid at standard conditions and which are used as solvents, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended May 16, 2002) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
18. VOC fugitive emissions from the components in gas and light oil service on tank up to the point where it connects to the vapor control system trunk or manifold line shall not exceed 0.1 lb/ day. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Permittee shall maintain with the permit accurate fugitive component counts for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Range emission factors. [District NSR Rule] Federally Enforceable Through Title V Permit
20. The gas blanket supply line shall be closed before the Leak-Free (as defined in Rule 4623, amended May 19, 2005) seal on any tank is broken, including opening the tanks for any reason. [District NSR Rule] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-382-171-7

EXPIRATION DATE: 10/31/2012

SECTION: 34 TOWNSHIP: 30S RANGE: 24E

EQUIPMENT DESCRIPTION:

21,000 GALLON SURGE TANK UNX #1237 (TANK GAUGE SETTING 4-34S) INCLUDING SHARED EQUIPMENT LISTED ON PERMIT S-382-78

PERMIT UNIT REQUIREMENTS

1. The tank shall be fully enclosed and shall be equipped with a closed system that collects all VOCs from the storage tank. Collected vapors shall be routed to a gas gathering system that connects to a gas processing plant. The tank and vapor recovery system shall be maintained in Leak-Free condition. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Any tank gauging or sampling device shall be equipped with a Leak-Free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
3. All piping, valves, and fittings shall be constructed and maintained in a Leak-Free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
4. A Leak-Free condition is defined as a condition without a gas leak or liquid leak. 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. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 (amended May 19, 2005) and shall be reported as a deviation. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minutes. [District Rule 4623, 3.11, 3.17, 3.18 and 6.4.8] Federally Enforceable Through Title V Permit
5. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
6. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
7. Components found to be leaking either liquids or gases (VOC concentration >7,500 ppmv, measured in accordance with EPA Method 21) shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3) and District NSR Rule] Federally Enforceable Through Title V Permit
8. Upon detection of gas leak (VOC concentration >7,500 ppmv, measured in accordance with EPA Method 21), 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 4623, 5.7 (Table 3) and District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

Attachment B

VOC Emission Calculations for Oil Production Tanks

Occidental of Elk Hills
S-1095500, S-382-78

Fugitive Emissions Using Screening Emission Factors

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

Percentage of components with $\geq 10,000$ ppmv leaks allowed? 0 %
Weight percentage of VOC in the total organic compounds in gas (neglect non-organics)? 19.8 %
Weight percentage of VOC in the total organic compounds in oil (neglect non-organics)? 100 %

Equipment Type	Service	Component Count	Total allowable leaking components	Screening Value: EF, TOC		VOC emissions (lb/day)
				<10,000 ppmv (lb/day/source)	$\geq 10,000$ ppmv (lb/day/source)	
Valves	Gas/Light Liquid	10	0	1.852E-03	7.333E+00	0.00
	Light Crude Oil	11	0	1.005E-03	3.741E+00	0.01
	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	21	0	7.778E-03	7.281E+00	0.03
	Light Crude Oil	4	0	6.931E-03	3.757E-01	0.03
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00
Connectors	Gas/Light Liquid	123	0	6.349E-04	1.370E+00	0.02
	Light Crude Oil	55	0	5.291E-04	1.238E+00	0.03
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00
Flanges	Gas/Light Liquid	12	0	1.482E-03	3.228E+00	0.00
	Light Crude Oil	8	0	1.270E-03	1.376E+01	0.01
	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	3	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 VOC Emissions = 0.1 lb/day

Occidental of Elk Hills

S-1095500, S-382-170

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*

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 Weight percentage of VOC in the total organic compounds in gas (neglect non-organics)? 19.8 %
 Weight percentage of VOC in the total organic compounds in oil (neglect non-organics)? 100 %

Equipment Type	Service	Component Count	Total allowable leaking components	Screening Value EF - TOC		VOC emissions (lb/day)
				< 10,000 ppmv (lb/day/source)	$\geq 10,000$ ppmv (lb/day/source)	
Valves	Gas/Light Liquid	0	0	1.852E-03	7.333E+00	0.00
	Light Crude Oil	14	0	1.005E-03	3.741E+00	0.01
	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	1	0	7.778E-03	7.281E+00	0.00
	Light Crude Oil	4	0	6.931E-03	3.757E-01	0.03
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00
Connectors	Gas/Light Liquid	6	0	6.349E-04	1.370E+00	0.00
	Light Crude Oil	68	0	5.291E-04	1.238E+00	0.04
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00
Flanges	Gas/Light Liquid	6	0	1.482E-03	3.228E+00	0.00
	Light Crude Oil	9	0	1.270E-03	1.376E+01	0.01
	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 VOC Emissions = 0.1 lb/day

Occidental of Elk Hills
S-1095500, S-382-171

Fugitive Emissions Using Screening Emission Factors

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

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

Percentage of components with $\geq 10,000$ ppmv leaks allowed? 0 %
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Weight percentage of VOC in the total organic compounds in oil (neglect non-organics)? 100 %

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				< 10,000 ppmv (lb/day/source)	$\geq 10,000$ ppmv (lb/day/source)	
Valves	Gas/Light Liquid	0	0	1.852E-03	7.333E+00	0.00
	Light Crude Oil	10	0	1.005E-03	3.741E+00	0.01
	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	3	0	7.778E-03	7.281E+00	0.00
	Light Crude Oil	4	0	6.931E-03	3.757E-01	0.03
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00
Connectors	Gas/Light Liquid	21	0	6.349E-04	1.370E+00	0.00
	Light Crude Oil	89	0	5.291E-04	1.238E+00	0.05
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00
Flanges	Gas/Light Liquid	6	0	1.482E-03	3.228E+00	0.00
	Light Crude Oil	8	0	1.270E-03	1.376E+01	0.01
	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 VOC Emissions = 0.1 lb/day

Attachment C
Natural Gas Analyses

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**OCCIDENTAL OF ELK HILLS, INC.
35R LABORATORY SERVICES**

NATURAL GAS ANALYSIS

LOG NUMBER: NF093044
 SAMPLER ID: 4-34S STV
 SAMPLE LOCATION: 4-34S STV TS
 SAMPLE SOURCE: LP Pool Separator Outlet
 SAMPLE TYPE: Snap
 DATE SAMPLED: 11/06/09
 PRESSURE (PSIG): 381
 TEMPERATURE (F):
 SAMPLED BY: AD
 REPORTED BY: RB Initials: _____
 REQUESTED BY: V Chaudry

Gas Chromatographic Analysis

COMPONENTS	NAME (Abbreviated)	MOL %	GPMCF	BBL/MMSCF
OXYGEN *	- O2	0.000		
NITROGEN	- N2	0.148		
CARBON DIOXIDE	- CO2	3.610		
METHANE	- C1	65.547		
ETHANE	- C2	22.034		
PROPANE	- C3	5.807	1.60	38.08
ISO-BUTANE	- IC4	0.309	0.10	2.41
N-BUTANE	- NC4	0.785	0.25	5.89
ISO-PENTANE	- IC5	0.273	0.10	2.38
N-PENTANE	- NC5	0.276	0.10	2.38
HEXANES PLUS	- C6+	1.211	0.52	12.42
	TOTAL:	100.00	2.67	63.56

C4+ (GPMCF)	1.07
Relative Density (Air = 1) :	0.814
Gross Heating Value (BTU/CU FT):	1326
Compressibility Factor, Z :	0.9956

REMARKS: * Excess Air is Edited out of Calculations: O2 = 0.00

1. Data are calculated at 60 F, 14.73 psia, dry, real gas.

N2 = 0.00

2. Reference Methods: ASTM D-1945, ASTM D-3588, GPA-2145, GPA-2261, GPA-2172, GPA-2177.

OCCIDENTAL OF ELK HILLS, INC.
35R LABORATORY SERVICES
NATURAL GAS ANALYSIS
(For Environmental Compliance Purpose)

Log Number:	NQ090533	Line Pressure (PSIG):	35
Lab ID / FCU No.:	18G VRU	Line Temperature (F):	66
Permit Number:	S-382-124	Sampled By:	AD
Sample Location:	18G LACT	Reported By:	RB
Sample Source:	Vapor Recovery Discharge	Requested By:	N Langley, D Champion
Sample Type:	Snap		
Sample Date:	4/2/09		
Sample Time:	10:00 AM		

Compounds		MOL %	Weight %	Weight %	Bbl/MMSCF	CHON	Wt %
Oxygen	O2	0.000	0.00%			Carbon	75.84
Nitrogen	N2	0.148	0.18%			Hydrogen	19.07
Carbon Dioxide	CO2	3.610	6.79%			Oxygen	4.15
Methane	C1	65.547	44.92%	0.4829		Nitrogen	0.94
Ethane	C2	22.034	28.30%	0.3042		Total:	100.00
Propane	C3	5.807	10.94%	0.1176	68.599		
Isobutane	IC4	0.309	0.77%	0.0082	19.415		
Butane	NC4	0.785	1.95%	0.0210	53.287		
IsoPentane	IC5	0.273	0.84%	0.0090	20.301		
Pentane	NC5	0.276	0.85%	0.0091	18.103		
Hexane Plus	C6 +	1.211	4.46%	0.0479	12.538		
	Total:	100.000	100.00%	1.0000	192.243		

Molecular Weight:	
Weight Percent of VOC (C3 Plus):	19.81%
Weight Percent of VOC (C4 Plus):	8.87%
Weight Percent of VOC (C5 Plus):	6.15%

Methane weight % of TOGs only	48.29%
Ethane weight % of TOGs only	30.42%
VOC weight % (C3 Plus) of TOGs only	21.29%

Maximum VOC %	50	WEIGHT %
		PROPANE 10.94
		ISO BUTANE 0.77
		BUTANE 1.95
		ISO PENTANE 0.84
		PENTANE 0.85
		HEXANE PLUS 4.46
		19.81

REMARKS: ASTM D-1945: Analysis of Natural Gas by Gas Chromatography.
ASTM D-3588: Calculating Heat Value, CF, and Rel. Den. of Gaseous Fuels (Dry, 60F, 14.696 psia)
GPA-2145: Physical Constants of Selected Hydrocarbons