



MAR 22 2012

Armando Gonzalez
Occidental of Elk Hills Inc
10800 Stockdale Highway
Bakersfield, CA 93311

**Re: Proposed Authority to Construct / Certificate of Conformity (Minor Mod)
District Facility # S-382
Project # S-1114924**

Dear Mr. Gonzalez:

Enclosed for your review is the District's analysis of your application for Authority to Construct for the facility identified above. You have requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The applicant proposes to install a pressure separator knockout vessel.

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

If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

Enclosures
cc: Jesse A. Garcia, Permit Services

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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



MAR 22 2012

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

Re: **Proposed Authority to Construct / Certificate of Conformity (Minor Mod)**
District Facility # S-382
Project # S-1114924

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for Occidental of Elk Hills Inc, located at 10G Dehydration Train Tank Setting, within the SE/4 of Section 10, Township 31S, Range 24E in Occidental of Elk Hills Inc's Kern County Light Oil Western stationary source, which has been issued a Title V permit. Occidental of Elk Hills Inc is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The applicant proposes to install a pressure separator knockout vessel.

Enclosed is the engineering evaluation of this application, a copy of the current Title V permit, and proposed Authority to Construct # S-382-136-19 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

Enclosures
cc: Jesse A. Garcia, Permit Services

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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

III. Project Location

The equipment will be located at the 10G Dehydration Train Tank Setting, within the SE/4 of Section 10, Township 31S, Range 24E in OEHI's Kern County Light Oil Western stationary source. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

The 10G Dehydration Train and lease automatic custody transfer (LACT) facility collects production from the surrounding oil field. Oil is separated from the water and is sold via an existing LACT unit. The tank vapors are compressed and routed to the Elk Hills gas collection system.

The pressure separator vessel separates oil and gas from the production water stream. The gas is collected by the vapor recovery system through suction from the existing compressors. The pressure vessel vents through the Pressure Safety Valve for emergency purposes only.

V. Equipment Listing

Pre-Project Equipment Description:

S-382-136-18: 672,000 GALLON DEHYDRATION TANK UNX #11103 (10G DEHYDRATION TRAIN) INCLUDING VAPOR CONTROL SYSTEM SERVING TANKS S-382-111, '-263, '-265, '-320, '-321, '-399, '-400, '-703, AND '-814 WITH ONE 100 HP VAPOR CONTROL COMPRESSOR, ONE 150 HP VAPOR COMPRESSORS, ONE 30 HP OIL TRANSFER PUMP, TWO 40 HP OIL TRANSFER PUMPS, THREE 30 HP WATER PUMPS, AND ONE FREE-WATER KNOCKOUT VESSEL

Proposed Modification:

S-382-136-19: MODIFICATION OF 672,000 GALLON DEHYDRATION TANK UNX #11103 (10G DEHYDRATION TRAIN) INCLUDING VAPOR CONTROL SYSTEM SERVING TANKS S-382-111, '-263, '-265, '-320, '-321, '-399, '-400, '-703, AND '-814 WITH ONE 100 HP VAPOR CONTROL COMPRESSOR, ONE 150 HP VAPOR COMPRESSORS, ONE 30 HP OIL TRANSFER PUMP, TWO 40 HP OIL TRANSFER PUMPS, THREE 30 HP WATER PUMPS, AND ONE FREE-WATER KNOCKOUT VESSEL: ADD ONE PRESSURE SEPARATOR VESSEL AND REVISE LISTING OF INDIVIDUAL PUMPS IN THE EQUIPMENT WITH GENERAL DESCRIPTION OF "PUMPS"

Post Project Equipment Description:

S-382-136-19: 672,000 GALLON DEHYDRATION TANK UNX #11103 (10G DEHYDRATION TRAIN) INCLUDING VAPOR CONTROL SYSTEM SERVING TANKS S-382-111, '-263, '-265, '-320, '-321, '-399, '-400, '-703,

AND '814 WITH ONE 100 HP VAPOR CONTROL COMPRESSOR, ONE 150 HP VAPOR COMPRESSORS, ONE FREE-WATER KNOCKOUT VESSEL, ONE PRESSURE SEPARATOR VESSEL AND ASSOCIATED PUMPS

VI. Emission Control Technology Evaluation

The pressure vessel is equipped with a Pressure Safety Valve, set at 75 psig, which will only vent in the case of an emergency. Emissions from the new vessel are limited to fugitive VOC emissions. Fugitive emissions are controlled by implementation a District-approved I & M program consistent with the requirements of Rule 4623. No leaks resulting in a reading exceeding 10,000 ppmv VOC are allowed.

VII. General Calculations

A. Assumptions

- The facility operates 24 hours per day, 365 days per year.
- Only VOCs are emitted from the tanks/vessels.
- VOC content of tank/vessel vapors will be conservatively assumed at 100% of the total organic compounds (TOCs).
- Emissions from the new vessel consist of fugitive emissions associated with process piping components
- Emissions calculations are performed using fugitive component count and District recognized fugitive emissions factors.

B. Emission Factors

- Emissions calculations are performed using fugitive component count and fugitive emissions factors from the 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.*

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Taken from Project S-1110942 which were calculated using the aforementioned component count and emission factors, the pre-project potential to emit is summarized below:

Pre-Project Potential to Emit (PE1)		
	Daily Emissions (lb VOC/day)	Annual Emissions (lb VOC/year)
S-382-136-18	2.6	949

2. Post Project Potential to Emit (PE2)

See Appendix C for detailed increase in emissions due to new components. PE2 = PE1 + increase in emissions due to new components.

Post-Project Potential to Emit (PE2)		
	Daily Emissions (lb VOC/day)	Annual Emissions (lb VOC/year)
S-382-136-19	2.8	1,022

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

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

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

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

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE2 calculations are not necessary. The fugitive VOC emissions increase associated with this project approval are less than 0.5 lb/day, and therefore round to zero for the purpose of NSR calculations. Therefore, there is no need to calculate the SSPE2 for this project.

5. Major Source Determination

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

This source is an existing Major Source for VOC emissions and will remain a Major Source for VOC. No change in other pollutants are proposed or expected as a result of this project.

6. Baseline Emissions (BE)

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

Pursuant to Section 3.7 of District Rule 2201, BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22 of District Rule 2201.

Clean Emissions Unit, Located at a Major Source

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

Existing tank S-382-136 is served by a vapor control system, which meets the requirements for achieved-in-practice BACT pursuant to BACT guideline 7.3.1 (Petroleum and Petrochemical Production – Fixed Roof Organic Liquid Storage or Processing Tank < 5,000 bbl Tank capacity (see Appendix D)). Therefore, Baseline Emissions (BE) are equal to the Pre-Project Potential to Emit (PE1).

7. SB 288 Major Modification

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

As discussed in Section VII.C.5 above, the facility is an existing Major Source for VOC; however, the project by itself would need to be a significant increase in order to trigger a Major Modification. The emissions units within this project do not have a total potential to emit which is greater than Major Modification thresholds (see table below). Therefore, the project cannot be a significant increase and the project does not constitute a SB 288 Major Modification.

SB 288 Major Modification Thresholds (Existing Major Source)			
Pollutant	Project PE (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	1,022	50,000	No

8. Federal Major Modification

District Rule 2201, Section 3.17 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA. SB 288 Major Modifications are not Federal Major Modifications if they meet the criteria of the "Less-Than-Significant Emissions Increase" exclusion.

A Less-Than-Significant Emissions Increase exclusion is for an emissions increase for the project, or a Net Emissions Increase for the project (as defined in 40 CFR 51.165 (a)(2)(ii)(B) through (D), and (F)), that is not significant for a given regulated NSR pollutant, and therefore is not a Federal Major Modification for that pollutant.

- To determine the post-project projected actual emissions from existing units, the provisions of 40 CFR 51.165 (a)(1)(xxviii) shall be used.
- To determine the pre-project baseline actual emissions, the provisions of 40 CFR 51.165 (a)(1)(xxxv)(A) through (D) shall be used.
- If the project is determined not to be a Federal Major Modification pursuant to the provisions of 40 CFR 51.165 (a)(2)(ii)(B), but there is a reasonable possibility that the project may result in a significant emissions increase, the owner or operator shall comply with all of the provisions of 40 CFR 51.165 (a)(6) and (a)(7).
- Emissions increases calculated pursuant to this section are significant if they exceed the significance thresholds specified in the table below.

Pollutant	Threshold (lb/year)
VOC	0
NO _x	0
PM ₁₀	30,000
SO _x	80,000

The source is not included in the 28 specific source categories specified in 40 CFR 51.165. Therefore increases in fugitive emissions are not included in the Federal Major Modification calculation and the project is not a Federal major Modification.

9. Quarterly Net Emissions Change (QNEC)

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

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless exempted pursuant to Section 4.2, BACT shall be required for the following actions*:

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

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

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

As seen in Section VII.C.2 of this evaluation, the applicant is proposing to install a new pressure separator vessel with a PE less than 2 lb/day for all criteria pollutants. Therefore, BACT is not triggered.

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

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

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

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

Where,

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

$$HAPE = PE1 \times (EF2/EF1)$$

Where,

PE1 = The emissions unit's Potential to Emit prior to modification or relocation, (lb/day)

EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1

EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

$$AIPE = PE2 - (PE1 * (EF2 / EF1))$$

S-382-136:

Since emission factors for the existing tank are not changing, EF2=E1 and EF2/EF1 = 1.

$$\begin{aligned} AIPE &= 2.8 - (2.6 * (1)) \\ &= 0.2 \text{ lb/day} \end{aligned}$$

As demonstrated above, the AIPE is not greater than 2.0 lb/day for any criteria pollutant; therefore BACT is not triggered.

d. SB 288/Federal Major Modification

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

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)	--	--	--	--	>20,000
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	No	Yes

2. Quantity of Offsets Required

Pursuant to District policy APR 1130, an IPE of less than 0.5 lb/day is to be rounded to zero for the purposes of triggering NSR requirements.

Offsets are not required for this project as the IPE < 0.5 lb-VOC/day for every emissions unit included in this project approval.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

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

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

As demonstrated in VII.C.7, this project does not constitute an 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. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

The SSPE1 was already greater than the offset threshold. Therefore the offset threshold was not surpassed by this project and public noticing is not required for increasing the SSPE from a level below the offset threshold to a level exceeding the emissions offset threshold, for any pollutant.

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. As seen in the emissions calculations section, there is no IPE or SSIPE associate with this project since District policy APR 1130 states that an IPE of less than 0.5 lb/day is to be rounded to zero for the purposes of triggering NSR requirements. Therefore public noticing for SSIPE purposes is not required.

2. Public Notice Action

As discussed above, this project will not result in emissions, for any pollutant, which would subject the project to any of the 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 3.16 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.16.1 and 3.16.2, 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.

For the tanks, the DELs are a combination of the fugitive components emissions factors and the total number of components used in the vapor collection and control system. Proposed conditions are shown in the draft ATCs in Appendix A.

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Record keeping is required to demonstrate compliance with the daily emission limit requirements of Rule 2201.

- Permittee shall maintain with the permit accurate fugitive component counts and component types for this tank and the associated tank vapor control system and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999) Screening Value Range emission factors. [District Rule 2201]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit pursuant to Section 3.20 of this rule:

In accordance with Rule 2520, 3.20, these modifications:

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

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment application.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates the New Source Performance Standards from 40 CFR Part 60. 40 CFR Part 60, Subparts, K, Ka and Kb could potentially apply to the storage tanks located at this facility.

Pursuant to 40 CFR 60.110 (b), Subpart K does not apply to a vessel used for petroleum storage at a production facility prior to custody transfer. Since these vessels are used at a production facility prior to custody transfer, Subpart K does not apply.

Pursuant to 60.110a (b), Subpart Ka does not apply to a vessel with a capacity of less than 420,000 gallons used for petroleum storage at a production facility prior to custody transfer. Since these vessels have a capacity less than 420,000 gallons and are used at a production facility prior to custody transfer, Subpart Ka does not apply.

Pursuant to 60.110b (b), Subpart Kb does not apply to a vessel with a design capacity less than or equal to 1,589.874 cubic meters (10,000 barrels) used for petroleum storage at a production facility prior to custody transfer. Since these vessels have a capacity less than 1,589.874 cubic meters and are used at a production facility prior to custody transfer, Subpart Kb does not apply.

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

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

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-382-136-19	0.0 per million	No

Discussion of T-BACT

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

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

The facility is subject to 4409 as seen by permit conditions on their facility wide permit. Continued compliance is expected. The tanks & components within 5 feet of the tanks are subject to Rule 4623, therefore these components are not subject to Rule 4409

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.

Section 5.1.1 provides the VOC control system requirements. An operator shall not place, hold, or store crude oil in any tank unless such tank is equipped with a VOC control system identified in Table 1. The specifications for the VOC control system are described in Sections 5.2, 5.3, 5.4, 5.5, and 5.6. The requirements from Section 5.1.1 Table 1 are listed in the table below,

Tank Capacity (Gallons)	TVP and Crude Oil Throughput		
	0.5 psia to <11 psia	0.5 psia to <11 psia	≥11.0 psia
(Group A) 1,100 to 19,800	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system
(Group B) 19,800 to 39,600	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system
(Group C) >39,600	Internal floating roof, or external floating roof, or vapor recovery system	Internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system

The proposed tank is itself a pressure vessel; therefore, it meets the VOC control requirements of the Rule. However, there is an existing vapor control system listed under this permit; therefore, the following existing conditions taken from the current PTO will be included on the ATC:

- The vapor recovery system shall consist of a closed vent system that collects all VOCs from the storage tank and collected vapors shall be routed to a gas gathering system that connects to 35R gas plant (S-2234) inlet piping. The vapor recovery system shall

be APCO-approved and maintained in a Leak-Free condition. [District NSR Rule and District Rule 4623, 5.6.1]

- Vapor control system shall include one vapor recovery line with one pressure control valve regulated by tank pressure sensing line, and piping from vapor recovery line to gas compressors or field vacuum gas gathering system. [District NSR Rule]

Section 5.1.3 requires all tanks subject to the control requirements of this rule to be maintained in a leak-free condition, except for the following components and as allowed by Section 5.2 and applicable provisions of Table 3 through Table 5, and Section 5.7.5.4:

The following conditions will be placed on the permits to ensure compliance with this section.

- There shall be no leaks in excess of 10,000 ppmv when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule and 4623]
- 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]
- All piping, valves, and fittings shall be constructed and maintained in a Leak-Free condition. [District Rule 4623, 5.6.3]
- 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]
- {2487} This tank shall be in a leak-free condition. A leak-free condition is defined as a condition without a gas 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. [District Rule 4623]

Section 5.6.1 requires that fixed roof tanks shall be fully enclosed and shall be maintained in a leak-free condition. An APCO-approved vapor recovery system shall consist of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall be one of the following: A condensation or vapor return system that connects to one of the following; a gas processing plant, a field gas pipeline, a pipeline distributing Public Utility Commission quality gas for sale, an injection well for disposal of vapors as approved by the California Department of Conservation, Division of Oil Gas, and Geothermal Resources; or a

VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6.

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.

Section 5.6.2 requires that 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. Therefore, the following condition will be listed on the permits to ensure compliance:

- 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]

Section 5.6.3 requires that all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. Therefore, the following condition will be listed on the permits to ensure compliance:

- All piping, valves, and fittings shall be constructed and maintained in a Leak-Free condition. [District Rule 4623, 5.6.3]

Compliance with the requirements of this rule is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

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

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District conducted a Risk Management Review and concludes that potential health impacts are less than significant.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct S-382-136-18 subject to the permit conditions on the attached draft Authority to Construct in Appendix A.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-382-136-18	3020-05-F	672,000 gallons	\$301.00

Appendices

- A: Draft Authority to Construct
- B: Current Permit to Operate
- C: Fugitive Emissions Calculations
- D: Health Risk Assessment Summary
- E: Quarterly Net Emissions Change

**APPENDIX A:
Draft Authority to Construct**

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-382-136-19

LEGAL OWNER OR OPERATOR: OCCIDENTAL OF ELK HILLS INC
MAILING ADDRESS: 10800 STOCKDALE HIGHWAY
BAKERSFIELD, CA 93311

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: 10 TOWNSHIP: 31S RANGE: 24E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 672,000 GALLON DEHYDRATION TANK UNX #11103 (10G DEHYDRATION TRAIN) INCLUDING VAPOR CONTROL SYSTEM SERVING TANKS S-382-111, '-263, '-265, '-320, '-321, '-399, '-400, '-703, AND '-814 WITH ONE 100 HP VAPOR CONTROL COMPRESSOR, ONE 150 HP VAPOR COMPRESSORS, ONE 30 HP OIL TRANSFER PUMP, TWO 40 HP OIL TRANSFER PUMPS, THREE 30 HP WATER PUMPS, AND ONE FREE-WATER KNOCKOUT VESSEL: ADD ONE PRESSURE SEPARATOR VESSEL AND REVISE LISTING OF INDIVIDUAL PUMPS IN THE EQUIPMENT WITH POST PROJECT DESCRIPTION OF "ASSOCIATED PUMPS"

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Components subject to District Rule 4409 (amended April 20, 2005) shall be inspected for leaks at least quarterly using a portable hydrocarbon detection instrument. Any vapor leak greater than 7,500 ppmv, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21, or condensate leaking at a rate of greater than 3 drops of liquid per minute shall be repaired in a manner consistent with the procedures specified in Rule 4409 Section 5.3. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-382-136-19 : Mar 12 2012 12:58PM - GARCIAJ : Joint Inspection NOT Required

4. There shall be no leaks in excess of 10,000 ppmv when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The vapor recovery system shall consist of a closed vent system that collects all VOCs from the storage tank and collected vapors shall be routed to a gas gathering system that connects to 35R gas plant (S-2234) inlet piping. The vapor recovery system shall be APCO-approved and maintained in a Leak-Free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. All piping, valves, and fittings shall be constructed and maintained in a Leak-Free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. 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] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of gas leak (VOC concentration >10,000 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 Rule 4623] Federally Enforceable Through Title V Permit
13. 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] Federally Enforceable Through Title V Permit
14. 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] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

16. 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] Federally Enforceable Through Title V Permit
17. 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] Federally Enforceable Through Title V Permit
18. 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] Federally Enforceable Through Title V Permit
19. This unit commenced construction, modification, or reconstruction before May 19, 1978, 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] Federally Enforceable Through Title V Permit
20. 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] Federally Enforceable Through Title V Permit
21. Vapor control system shall include one vapor recovery line with one pressure control valve regulated by tank pressure sensing line, and piping from vapor recovery line to gas compressors or field vacuum gas gathering system. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Test separators, pool separators, and gas scrubbers shall not vent to atmosphere except during a breakdown condition pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit
23. The emergency stand-by system, including the knockout tank and drain tank shall not vent gas except during a breakdown condition pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit
24. All tank roof vents, gauge hatches, and breather valves shall be designed and maintained at a minimum release pressure of 1.5 oz./sq.in. and vacuum of 0.5 oz./sq.in. [District Rule 2201] Federally Enforceable Through Title V Permit
25. The gas blanket supply line shall be closed before the Leak-Free (as defined in Rule 4623, amended May 19, 2005) seal is broken on any tank with vapor recovery system, including opening the tanks for any reason. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c less than or equal to 10,000 ppm (Feb 1999), from the total number of tank components and vapor control system components shall not exceed 2.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Permittee shall maintain with the permit accurate fugitive component counts and component types for this tank and the associated tank vapor control system and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999) Screening Value Range emission factors. [District Rule 2201]

DRAFT

**APPENDIX B:
Current Permit to Operate**

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-382-136-17

EXPIRATION DATE: 10/31/2016

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 24E

EQUIPMENT DESCRIPTION:

672,000 GALLON DEHYDRATION TANK UNX #11103 (10G DEHYDRATION TRAIN) SERVED BY VAPOR CONTROL SYSTEM WITH ONE 100 HP VAPOR CONTROL COMPRESSOR, ONE 150 HP VAPOR COMPRESSORS, ONE 30 HP OIL TRANSFER PUMP, TWO 40 HP OIL TRANSFER PUMPS, THREE 30 HP WATER PUMPS, AND ONE FREE-WATER KNOCKOUT VESSEL

PERMIT UNIT REQUIREMENTS

1. Components subject to District Rule 4409 (amended April 20, 2005) shall be inspected for leaks at least quarterly using a portable hydrocarbon detection instrument. Any vapor leak greater than 7,500 ppmv, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21, or condensate leaking at a rate of greater than 3 drops of liquid per minute shall be repaired in a manner consistent with the procedures specified in Rule 4409 Section 5.3. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The vapor recovery system shall consist of a closed vent system that collects all VOCs from the storage tank and collected vapors shall be routed to a gas gathering system that connects to 35R gas plant (S-2234) inlet piping. The vapor recovery system shall be APCO-approved and maintained in a Leak-Free condition. [District Rules 2201 and 4623, 5.6.1] Federally Enforceable Through Title V Permit
3. 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
4. This unit commenced construction, modification, or reconstruction before May 19, 1978, 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
5. 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
6. Vapor control system shall include one vapor recovery line with one pressure control valve regulated by tank pressure sensing line, and piping from vapor recovery line to gas compressors or field vacuum gas gathering system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Test separators, pool separators, and gas scrubbers shall not vent to atmosphere except during a breakdown condition pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The emergency stand-by system, including the knockout tank and drain tank shall not vent gas except during a breakdown condition pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

9. All tank roof vents, gauge hatches, and breather valves shall be designed and maintained at a minimum release pressure of 1.5 oz./sq.in. and vacuum of 0.5 oz./sq.in. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The gas blanket supply line shall be closed before the Leak-Free (as defined in Rule 4623, amended May 19, 2005) seal is broken on any tank with vapor recovery system, including opening the tanks for any reason. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c less than or equal to 10,000 ppm (Feb 1999), from the total number of tank components and vapor control system components shall not exceed 2.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. All tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
14. 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
15. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated 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 and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Fugitive VOC emissions rate shall be calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999) from the total number of components from this tank. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. 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
19. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
20. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. 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. 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
22. 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
23. 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
24. 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
25. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Section 5.7 of Rule 4623. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. 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
27. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit
28. 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

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

**APPENDIX C:
Fugitive Emissions Calculations**

EH-10G Oil and Water Separation Facility
Fugitive Emissions Using Screening Emission Factors

Pressure Vessel and Pumps (Pre Project)
 23-Dec-2011

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)? 100 %
 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	3	0	1.852E-03	7.333E+00	0.01
	Light Crude Oil	6	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	5.270E-02	4.709E+00	0.00
	Light Crude Oil	6	0	1.402E-02	4.709E+00	0.08
	Heavy Crude Oil	0	0	N/A	N/A	N/A
Others	Gas/Light Liquid	2	0	7.778E-03	7.281E+00	0.02
	Light Crude Oil	8	0	6.931E-03	3.757E-01	0.06
	Heavy Crude Oil	0	0	3.016E-03	N/A*	0.00
Connectors	Gas/Light Liquid	13	0	6.349E-04	1.370E+00	0.01
	Light Crude Oil	22	0	5.291E-04	1.238E+00	0.01
	Heavy Crude Oil	0	0	4.233E-04	4.233E-04	0.00
Flanges	Gas/Light Liquid	4	0	1.482E-03	3.228E+00	0.01
	Light Crude Oil	12	0	1.270E-03	1.376E+01	0.02
	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 = 0.2 lb/day

**APPENDIX D:
Health Risk Assessment Summary**

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Jesse Garcia, AQE– Permit Services
From: Esteban Gutierrez, AQS– Technical Services
Date: February 10, 2012
Facility Name: Occidental of Elk Hills
Location: SE/4 Section 10, Township 31S, Range 24E
Application #(s): S-0382-136-19
Project #: S-1114924

A. RMR SUMMARY

RMR Summary			
Categories	Separation Tank (Unit 136-19)	Project Totals	Facility Totals
Prioritization Score	0.0	0.0	>1.0
Acute Hazard Index	0.0	0.0	0.0
Chronic Hazard Index	0.0	0.0	0.0
Maximum Individual Cancer Risk (10^{-6})	0.0	0.0	0.2
T-BACT Required?	No		
Special Permit Conditions?	No		

Proposed Permit Conditions

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

Unit # 136-19

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on February 2, 2012, to perform a Risk Management Review for a proposed installation of a new separation tank for oil and water.

II. Analysis

Technical Services performed a health risk assessment using the Toxic Fugitive Emissions from Oilfield Equipment spreadsheet. The cumulative prioritization scores were greater than 1.0, thus modeling was conducted using the AERMOD model, with the parameters outlined below and meteorological data for 2005-2009 from Bakersfield to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid.

Analysis Parameters Unit 136-19			
Source Type	Area	Location Type	Rural
X-Length (m)	3.96	Closest Receptor (m)	1609
Y-Length (m)	3.96	Type of Receptor	Residential
Release Height (m)	3.6	Pollutant Type	VOC
		Emission Rate	0.0083 lb/hr

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the project is less than 1.0 in a million. **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.

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

APPENDIX E:
Quarterly Net Emissions Change (QNEC)

Quarterly Net Emissions Change (QNEC)

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

$QNEC = PE2 - PE1$, where:

- QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
- PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
- PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

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

$$\begin{aligned} PE2_{\text{quarterly}} &= PE2_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 1,022 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 256 \text{ lb-VOC/qtr} \end{aligned}$$

$$\begin{aligned} PE1_{\text{quarterly}} &= PE1_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 949 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 237 \text{ lb-VOC/qtr} \end{aligned}$$

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	0	0	0
CO	0	0	0
VOC	256	237	19