

Authority to Construct Application Review

Fixed Roof Oil Field Production Tank < 5000 BBLs
Major Source, Heavy Oil, Connected to Vapor Control,
Not subject to NSPS

Facility Name: Facility Name
Mailing Address: Mailing Address
City, State Zip
Contact Person: Contact
Telephone: Telephone
Application #(s): ATC Number
Project #: Project Number
Deemed Complete: Date

Date: Date
Engineer: Name
Lead Engineer: Name

PLEASE NOTE: THIS GEAR IS ONLY APLICABLE FOR

- **TANK < 5000 BBLs,**
- **HEAVY OIL,**
- **MAJOR SOURCE,**
- **CONNECTED TO VAPOR CONTROL AND**
- **NOT SUBJECT TO NSPS.**

IF THIS IS NOT THE CASE, PLEASE DO NOT USE THIS GEAR AND CONSULT YOUR SUPERVISOR

I. Proposal

Installation NEW tank

Facility Name is applying for (an) Authority(ies) to Construct (ATC) permit(s) for the installation of [# tanks/vessels] fixed roof [XXX] bbl crude oil tanks/vessels. The new tanks/vessels (if necessary insert will replace (an) existing tank(s) (PTO A-XXXX-XX-X) and will be connected to an existing vapor control system listed on Permit A-XXXX-XX-X. The current PTOs for the tank and vapor control system are included in Attachment XXX.

Modification of EXISTING tank – Tank Cleaning

Facility Name is applying for (an) Authority(ies) to Construct (ATC) permit(s) to modify their [# tanks/vessels] roof [XXX] bbl crude oil tank(s) to allow for tank cleaning.

Modification of EXISTING tank – Change fugitive component count

Facility Name is applying for (an) Authority(ies) to Construct (ATC) permit(s) to modify their # tanks/vessels] fixed roof [XXX] bbl crude oil tank(s) to [increase/decrease] the fugitive component count by [installing/removing] [insert equipment].

Modification of EXISTING tank – Connect to vapor Control

Facility Name is applying for (an) Authority(ies) to Construct (ATC) permit(s) to tie-in [# tanks/vessels] fixed roof [XXX] bbl tank(s) to the vapor control system listed on permit [A-XXXX-XXX]. The project results in an increase in fugitive VOC emissions from the new tank(s) and the additional tie-in fugitive emission components.

If Title V facility:

Example (a): (Without COC.)

Facility Name received their Title V Permit on [date]. This modification can be classified as a Title V minor modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). But the facility has not requested that this project be processed in that manner; therefore, applicant will be required to submit a Title V minor modification application prior to operating under the revised provisions of the ATC(s) issued with this project.

Example (b): (With COC.)

Facility Name received their Title V Permit on [date]. This modification can be classified as a Title V minor modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. [Facility name] must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

Example (c): (Exempt by 2520, 6.4.4.)

Facility Name received their Title V Permit on [date]. [This/these] modification(s) can be made off the Title V Permit pursuant to Rule 2520 Section 6.4.4 as the modification(s) consist of additional emissions unit(s) with no additions or changes contravening any existing permit conditions. The permittee shall notify the EPA and the District in writing of the change contemporaneous with implementation of the change.

II. Applicable Rules

- Rule 2201 New and Modified Stationary Source Review Rule (8/15/19)
Rule 2410 Prevention of Significant Deterioration (6/16/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01) (if applicable)
Rule 4001 New Source Performance Standards, subpart Kb (Amended 4/14/99). [is/is not] applicable. This subpart does not apply to vessels with a design capacity $\leq 1,589.874 \text{ m}^3$ ($\leq 420,000$ gallons) used for petroleum or condensate stored, processed, or treated prior to custody transfer. The capacity of these tanks/vessels is $\leq 420,000$ gallons, and they store crude oil prior to custody transfer; therefore, this subpart does not apply to the tanks/vessels in this project.
- Rule 4101 Visible Emissions (04/20/05)
Rule 4102 Nuisance (12/17/92)
Rule 4623 Storage of Organic Liquids (05/19/05) Not applicable tank capacity less than 1,100 gallons If tank capacity is $\geq 1,100$ gallons delete the comment.
- CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The facility is located at [location & Stationary Source]. The facility [is/is not] located within 1,000 feet of the outer boundary of any K-12 school, Therefore, pursuant to CH&SC 42301.6, California Health and Safety Code (School Notice), public notification [is/is not] required.

IV. Process Description

The tanks and vessels at [lease/tank battery/designation] receive production from the [oil field or lease name] prior to transport to the [next location the oil will be shipped and the method ex. pipeline, vacuum trucked, tanker truck, etc.]. The XXX bbl tank(s) in this project operate(s) as (a) [wash/shipping/produced water/other] tank(s).

VOC emissions from the tanks/vessels are controlled to [95% or 99%] by a shared vapor control system in accordance with [tank PTO # that lists the vapor control] permit conditions. The vapor control system collects vapors from the tanks/vessels, If applicable add: [condenses out the separates condensed liquids,] and routes the uncondensed vapors to appropriate disposal equipment.

If there is an increase in emissions:

The project results in an increase in fugitive VOC emissions from [the new tank](#) and the additional tie-in fugitive emission components. The piping schematic of the new tank is found in Attachment [XXX](#).

V. Equipment Listing

If new tank listed on this permit:

XXX BBL (if necessary insert constant level) FIXED ROOF (insert tank type) TANK [WITH VAPOR CONTROL SYSTEM CONSISTING OF \[LIST VAPOR CONTROL EQUIPMENT e.g. VAPOR COMPRESSORS, PRE-COOLER, FIN-FAN COOLER, KNOCK OUT DRUMS, VARIOUS PUMPS AND PIPING, VENTED TO APPROVED INCINERATION DEVICES A-XXXX-XX-X OR TEOR VAPOR CONTROL SKID INLET ON PERMIT A-XXXX-XX-X FOR RE-INJECTION TO DOGGR APPROVED WELL\(S\)\], SERVING TANKS A-XXXX-XX: \(describe modification\)](#)

If modification is to the lowest permit unit served by vapor control:

[MODIFICATION OF](#) XXX BBL (if necessary insert constant level) FIXED ROOF (insert tank type) TANK (add or delete equipment as appropriate) [WITH VAPOR CONTROL SYSTEM CONSISTING OF VAPOR COMPRESSORS, PRE-COOLER, FIN-FAN COOLER, KNOCK OUT DRUMS, VARIOUS PUMPS AND PIPING, VENTED TO APPROVED INCINERATION DEVICES A-XXXX-XX-X OR TEOR VAPOR CONTROL SKID INLET ON PERMIT S-XXXX-XX FOR RE-INJECTION TO DOGGR APPROVED WELL\(S\), SERVING TANKS A-XXX-XX: \(describe modification\)](#)

If tank is connected to vapor control listed on another emissions unit:

[MODIFICATION OF](#) XXX BBL (if necessary insert constant level) FIXED ROOF (insert tank type) TANK [WITH VAPOR CONTROL SYSTEM LISTED ON PERMIT UNIT A-XXXX-XX: \(describe modification\)](#)

VI. Emission Control Technology Evaluation

If tank receives vapors from a TEOR system:

The tank vapor control system collects vapors from the tanks/vessels permits [A-XXXX-XXX](#), (if applicable): vessels permits [A-XXXX-XXX](#) and (a) TEOR system(s) permit(s) [A-XXXX-XXX](#), removes entrained liquid in knockout vessels and scrubber vessels, condenses vapors in heat exchangers, and routes the uncondensed vapors to (adjust as necessary) [incineration devices, to a gas](#)

pipeline, or to DOGGR approved disposal wells. The efficiency of the vapor control system is at least 99%.

If tank is does not receive vapors from a TEOR System and triggers BACT or had BACT placed on it before this project:

The tank vapor control system collects vapors from the tanks/vessels, removes entrained liquid in knockout vessels and scrubber vessels, condenses gases in heat exchangers and routes the uncondensed vapors to (adjust as necessary incineration devices, to a gas pipeline, or to DOGGR approved disposal wells). The efficiency of the vapor control system is at least 99%.

If tank does not require BACT:

The tank vapor control system collects vapors from the tanks/vessels, removes entrained liquid in knockout vessels and scrubber vessels, condenses gases in heat exchangers and routes the uncondensed vapors to (adjust as necessary) incineration devices or to DOGGR approved disposal wells. The efficiency of the vapor control system is at least 95%.

VII. Emissions Calculations

If emissions are calculated based on fugitive emission factors use the following. Delete sections that do not apply:

The potential to emit from the tanks/vessels will be calculated using California Implementation Guidelines for Estimating Mass Emissions of fugitive Hydrocarbon Leaks at Petroleum Facilities, CAPCOA/CARB, February 1999. Applicant is proposing use of the ["average"/"revised screening"] emission factors.

As established by "Protocol for Equipment Leak Emission Estimate" dated 11/95 (EPA-453/R-95-017) and "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities" dated 2/99 (CAPCOA document), VOC emissions are not assessed to oil and gas production operations, components handling produced fluids with an API gravity less than 30°. therefore, components handling heavy oil (API Gravity < 20°) will not be assessed emissions and calculations are not required for these components.

If an applicant proposes "EPA correlation equation" (highly unlikely), do not use this GEAR. See your lead engineer for direction.

If project maintains the VOC content of vapors to less than 10% by weight and the tank is connected to vapor control, include the following as the entire calculations section, omit the rest:

As the VOC content of the vapors is less than 10% by weight (see analysis, Attachment XX), there are no fugitive emissions from the components. Therefore this project is not a modification as defined in Section 3.25 of Rule 2201 and no emissions changes are quantified.

A. Assumptions

- Facility will operate 24 hours per day, 7 days per week, and 52 weeks per year.
- The fugitive emissions for all tanks/vessels are calculated using California Implementation Guidelines for Estimating Mass Emissions of fugitive Hydrocarbon Leaks at Petroleum Facilities, CAPCOA/CARB, February 1999 [[“average”/“revised screening”](#)] emissions factors.
- The tanks/vessels emit only volatile organic compounds (VOCs), therefore only VOC emissions will be addressed in this evaluation.
- As discussed above, only fugitive VOCs emitted from components in gas service are calculated.
- Fugitive emissions from heavy oil liquid service components are negligible.
- The percentage of VOCs of the total hydrocarbons is XX% (see gas analysis in Attachment XX).

If the permit unit that lists the vapor control is not being modified:

- For tank [A-XXXX-XX-X](#), this proposal to add one tank to the existing vapor control system is not a New and Modified Source Review (NSR) modification and does not require calculations.

B. Emission Factors

Pursuant to California Implementation Guidelines for Estimating Mass Emissions of fugitive Hydrocarbon Leaks at Petroleum Facilities, CAPCOA/CARB, February 1999, emissions in this project are calculated using the [[“average”/“revised screening”](#)] emissions factors (see Attachment [XXX](#) for a calculation spreadsheets showing the emission factors used and the resulting emissions).

C. Calculations

1. Pre-Project Potential to Emit, (PE₁)

If new emissions unit:

Since this is a new emissions unit, the PE₁ = 0

If the permit unit that lists the vapor control is not being modified:

The project is not a NSR modification to the existing tank, therefore, calculations are not required for ATC [A-XXXX-XXX-X](#).

or, use the following otherwise:

Pre-project potential to emit is calculated based on the fugitive component counts utilizing California Implementation Guidelines for Estimating Mass Emissions of fugitive Hydrocarbon Leaks at Petroleum Facilities, CAPCOA/CARB, February 1999, emissions in this project are calculated using the ["average"/"revised screening"] emissions factors (see Attachment III for a calculation spreadsheets showing the emission factors used and the resulting emissions). . The following table summarizes the pre-project potential to emit for units included in this project.

Permit Unit	VOC - Daily PE1 (lb/day)	VOC - Annual PE1 (lb/year)
A-XXX-XX-X	X.X	XXX
A-XXX-XX-X	X.X	XXX
A-XXX-XX-X	X.X	XXX
A-XXX-XX-X	X.X	XXX
A-XXX-XX-X	X.X	XXX

2. Post Project Potential to Emit, (PE₂)

Post project potential to emit is calculated based on the fugitive component counts utilizing California Implementation Guidelines for Estimating Mass Emissions of fugitive Hydrocarbon Leaks at Petroleum Facilities, CAPCOA/CARB, February 1999, emissions in this project are calculated using the ["average"/"revised screening"] emissions factors (see Attachment III for a calculation spreadsheets showing the emission factors used and the resulting emissions). . The following table summarizes the post project potential to emit for units included in this project.

Permit Unit	VOC - Daily PE2 (lb/day)	VOC - Annual PE2 (lb/year)
A-XXX-XX-X	X.X	XXX
A-XXX-XX-X	X.X	XXX
A-XXX-XX-X	X.X	XXX
A-XXX-XX-X	X.X	XXX
A-XXX-XX-X	X.X	XXX

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.

If the facility exceeds both exceeds 20,000 lb VOC/yr

Pre-project facility-wide VOC emissions exceed both the offset threshold for VOC's (20,000 lb VOC/yr.) and the Major Source threshold for VOC's (20,000 lb VOC/yr.) No other pollutants are emitted by this project; therefore, SSPE1 calculations for these pollutants are not necessary.

or:

The pre-project stationary source VOC Potential to Emit (SSPE1) is presented in the following table:

SSPE1 (lb/yr)		
Permit #	VOC	Source
A-xxxx-x-x	[X]	Ex. PTO A-XXXX-X-X
A-xxxx-x-x	[X]	Ex. Project A-XXXXXXXX
Total	[X]	

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 (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the stationary source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. The post-project stationary source Potential to Emit (SSPE2) is presented in the following table:

SSPE2 (lb/yr)		
Permit #	VOC	Source
A-xxxx-x-x	[X]	Ex. PTO A-XXXX-X-X

A-xxxx-x-x	[X]	Ex. Project A-XXXXXXXX
Total	[X]	

Or:

The facility is an existing Major Source for VOC's, and the facility-wide VOC emissions already exceed the offset threshold for VOC's. The Applicant is therefore not becoming a Major Source for VOC's as a result of this project. No other pollutants are emitted by this project; therefore, no SSPE2 calculations for these pollutants are necessary.

5. Major Source Determination

Rule 2201 Major Source Determination:

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

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀
SSPE1	XX	XX	XX	XX	XXX	XX
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source?	No	No	No	No	No	No

Please note once it is determined that a facility is a PSD major source for one pollutant, it is not necessary to determine if the facility is a PSD major source for any other pollutants.

PSD Major Source

As shown above, the facility is an existing PSD major source for at least one pollutant.

OR – NOT PSD Major Source

As shown above, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

6. Baseline Emissions (BE)

The annual BE is performed on a pollutant-by-pollutant basis to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold. For this project the annual BE will be performed to calculate quarterly Baseline Emissions (QBE)

BE = Pre-project Potential to Emit (PE1) 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 3.23

For a new emissions unit

Since this is a new emissions unit, BE = PE1 = 0 for all pollutants.

For existing tanks/vessels:

Since tank A-XXXX-XX-X is controlled by a vapor control system capable of reducing at least 95% emissions, it is considered a Clean Emissions Units.

Therefore, the BE is equal to the pre-project potential to emit (PE1).

7. SB 288 Major Modification

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

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the, increases in fugitive emissions are not included in the SB 288 Major Modification calculation. All the emissions associated with this project are fugitive; therefore, this is not a SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a “Major Modification” as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the Federal Major Modification determination.

All the emissions associated with this project are fugitive

All the emissions associated with this project are fugitive; therefore, this project is not a Federal Major Modification.

**Otherwise, Federal Major Mod must be addressed in detail.
In this case, this GEAR is NOT applicable, please use APR 1010**

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. This project only affects VOC emissions which do not require a PSD evaluation.

10. 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 - BE, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr

PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr

BE = Baseline Emissions (per Rule 2201) 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 BE can be calculated as follows:

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

$$\begin{aligned} \text{BE}_{\text{quarterly}} &= \text{BE}_{\text{annual}} \div 4 \text{ quarters/year} \\ &= \text{X,XXX lb/year} \div 4 \text{ qtr/year} \\ &= \text{X,XXX lb PM}_{10}\text{/qtr} \end{aligned}$$

VIII. Compliance

Rule 2201 - New and Modified Stationary Source Review Rule

A. BACT

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following*:

- a) Any new emissions unit with a potential to emit exceeding two pounds per day,
- b) The relocation from one stationary source to another of an existing emissions unit with a potential to emit exceeding two pounds per day, and/or
- c) Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day.
- d) When a Major Modification is triggered for a modification project at a facility that is a Major Source.

*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.

If new installation

The applicant is proposing to install a new emissions unit with a PE of [XX] lb/day for VOC as calculated in section VII.C.2. Since the daily VOC emissions are [greater/less] than 2.0 lbs/day, BACT [will/will not] be triggered.

or if modification

The applicant is proposing to modify its existing emissions unit with an AIPE of [XX] lb/day for VOC as calculated in the following section. Since the daily VOC emissions are [greater/less] than 2.0 lbs/day, BACT [will/will not] be triggered.

Scenario 1:

-If the VOC content of the vapors is limited to less than 10% VOC by weight then no VOC emissions are assessed to piping and components handling the fluid streams.

Scenario 2:

if increase in emissions is less than 0.5 lb/day, state the following and omit AIPE, BACT Guidance, Top down BACT analysis, offsets and public notice sections of the application

If Scenario 1 or 2:

New and Modified Source Review (NSR) addresses requirements such as Best Available Control Technology (BACT), offsets and public notice. This project is an NSR modification under Rule 2201 § 3.26.1.4. However, District Policy APR 1130 states:

“District policy is to consider an IPE of less than 0.5 lb/day to be rounded to zero for the purposes of triggering NSR requirements and therefore the requirements are not triggered.”

Therefore, Rule 2201 does not require BACT, offsets, and public notice under District Policy APR 1130.

Adjusted Increase in Permitted Emissions (AIPE)

AIPE = PE2 – HAPE where,

AIPE = Adjusted Increase in Permitted Emissions, lb/day.

PE2 = the emission unit’s post project Potential to Emit, lb/day.

HAPE = the emission unit’s Historically Adjusted Potential to Emit, lb/day.

Historically Adjusted Potential to Emit (HAPE) Calculations:

HAPE = PE1 x (EF2 / EF1) where,

PE1 = The emission unit’s Potential to Emit prior to modification or relocation.

EF2 = The emission 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 emission unit’s permitted emission factor for the pollutant before the modification or relocation.

EF1 = [XX] (from project # [A-XXXXXXXX])

EF2 = [XX] (this project)

AIPE (lb/day) = PE2 (lb/day) – [PE1 (lb/day) x (EF2 / EF1)]

If BACT is not triggered delete Sections 2 & 3 & Attachment XXX.

2. BACT Guidance

Per District Policy APR 1305, Section IX, “A top-down BACT analysis shall be performed as a part of the Application Review for each application subject to the BACT requirements pursuant to the District’s NSR Rule for source categories or classes covered in the BACT Clearinghouse, relevant information under each of

the following steps may be simply cited from the Clearinghouse without further analysis.”

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

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District’s NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see Attachment XXX), BACT has been satisfied with the following:

The applicant is proposing to use [describe vapor disposal equipment such as waste gas incinerated in steam generator, heater treater, or other fired equipment] and inspection and maintenance program at 99% control. The proposed equipment is the most effective control technology listed in BACT Guideline 7.3.1; therefore, the proposed equipment satisfies the BACT requirement.

B. Offsets

1. Offset Applicability

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

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

Offset Applicability			
Pollutant	SSPE2 (lb/yr)	Offset Threshold Levels (lb/yr)	Offsets Required?
VOC	[X]	20,000	No

2. Quantity of Offsets Required

As seen above, the facility is an existing Major Source for VOC and the SSPE2 is greater than the offset thresholds. Therefore, offset calculations will be required for this project.

The quantity of offsets in pounds per year for VOC is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = $(\Sigma[\text{PE2} - \text{BE}] + \text{ICCE}) \times \text{DOR}$, for all new or modified emissions units in the project,

Where,

PE2 = Post-Project Potential to Emit, (lb/year)

BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 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 = HAE

As calculated in Section VII.C.6 above, the BE from this unit are equal to the PE1 since the unit is a Clean Emissions Unit.

There are no increases in cargo carrier emissions. Therefore offsets can be determined as follows:

Offsets Required (lb/year) = $(\Sigma [\text{PE2} - \text{BE}] + \text{ICCE}) \times \text{DOR}$

PE2 (NO_x) = X,XXX lb/year

BE (NO_x) = X,XXX lb/year

ICCE = 0 lb/year

DOR = 1.5

Offsets Required (lb/year) = $([X,XXX - X,XXX] + 0) \times \text{DOR}$
= XXX lb VOC/year

If no offsets are required, use the following:

As demonstrated in the calculation above, the amount of offsets is zero. Therefore, offsets will not be required for this project.

If offset require, VOC emissions > 0 lb/year, use the following:

Calculating the appropriate quarterly emissions to be offset is as follows:

$$\begin{aligned} \text{Quarterly offsets required (lb/qtr)} &= (X,XXX \text{ lb VOC/year}) \div (4 \text{ quarters/year}) \\ &= X,XXX \text{ lb/qtr} \end{aligned}$$

{If this calculation results in equal whole numbers in each quarter, delete the following paragraphs and table.}

As shown in the calculation above, the quarterly amount of offsets required for this project, when evenly distributed to each quarter, results in fractional pounds of offsets being required each quarter. Since offsets are required to be withdrawn as whole pounds, the quarterly amounts of offsets need to be adjusted to ensure the quarterly values sum to the total annual amount of offsets required.

To adjust the quarterly amount of offsets required, the fractional amount of offsets required in each quarter will be summed and redistributed to each quarter based on the number of days in each quarter. The redistribution is based on the Quarter 1 having the fewest days and the Quarters 3 and 4 having the most days. The redistribution method is summarized in the following table:

Redistribution of Required Quarterly Offsets (where X is the annual amount of offsets, and $X \div 4 = Y$)				
Value of z	Quarter 1	Quarter 2	Quarter 3	Quarter 4
.0	Y	Y	Y	Y
.25	Y	Y	Y	Y+1
.5	Y	Y	Y+1	Y+1
.75	Y	Y+1	Y+1	Y+1

Therefore, the appropriate quarterly emissions to be offset are as follows:

<u>Total Annual Offsets</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
XXXX	XXX	XXX	XXX	XXX

The applicant has stated that the facility plans to use ERC certificate S-XXXX-1 to offset the increases in VOC emissions associated with this project. The above certificate has available quarterly VOC credits as follows:

	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
ERC #S-XXXX-1	XXXX	XXXX	XXXX	XXXX

As seen above, the facility has sufficient credits to fully offset the quarterly VOC emissions increases associated with this project.

(Note: interpollutant offsets may also be allowed; however, the facility must justify the proposed interpollutant offset ratio with an interpollutant offset ratio analysis.)

Proposed Rule 2201 (offset) Conditions:

- {GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - XXX lb, 2nd quarter - XXX lb, 3rd quarter - XXX lb, and fourth quarter - XXX lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- {GC# 1983} ERC Certificate Number S-XXXX-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

3. ERC Withdrawal Calculations

NOTE: *This section is required when offset is triggered and required, otherwise, delete this section.*

The applicant must identify the ERC Certificate(s) to be used to offset the increase of XXX emissions for the project. As indicated in previous section, the applicant is proposing to use ERC certificate #S-XXXX-2 to mitigate the increases of XXX emissions associated with this project. See **Appendix L** for detailed ERC Withdrawal Calculations.

C. Public Notification

1. Applicability

Public noticing is required for:

- a) A facility which is becoming a new Major Source,
- b) Major Modifications of an existing Major Source,
- c) Any project which results in the offset thresholds being exceeded,
- d) New emission units with an PE of greater than 100 pounds during any one day for any one pollutant, and/or
- e) Any project with an SSPE of greater than 20,000 lb/year for any pollutant.

a) Major Source

The following table compares the pre-project and post-project facility-wide annual emissions in order to determine if this facility is already an existing Major Source or if the facility is becoming a new Major Source as a result of this project.

Major Source Applicability				
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Major Source Thresholds (lb/yr)	Major Source?
VOC	[X]	[X]	20,000	No

Since the SSPE [exceeded/did not exceed] the major source level, public noticing is [not] required for this project.

b) Major Modification

This facility is not becoming a major source as a result of this project. Since for non-major sources, the Major Modification threshold levels are equivalent to the major source threshold levels, a Major Modification is not triggered. Therefore public noticing is not required for this project.

c) Offset Threshold

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

Offset Threshold				
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Offset Threshold (lb/yr)	Public Notice Required?
VOC	XXX	XXX	20,000	Yes / No

Since the SSPE2 [does/does not] surpass the offset threshold levels, public noticing [is/is not] triggered for this project.

d) PE > 100 lb/day

For new emissions units, public notification is required if the PE exceeds 100 lb/day for any pollutant. As shown in section VII.C.2.a, the daily PE does not exceed 100 lb/day for any criteria pollutant. Therefore, public noticing is not required for this project due to exceeding the PE Public Notice Thresholds.

or

For new emissions units, public notification is required if the PE exceeds 100 lb/day for any pollutant. As shown in section VII.C.2.a, the daily PE exceeds 100 lb/day for VOC. Therefore, public noticing is required for this project for exceeding the PE public notice threshold.

e) SSIPE > 20,000 lb/yr

The SSIPE (NEC) is calculated and shown as follows:

SSIPE= SSPE2 – SSPE1

Stationary Source Increase in Permitted Emissions (SSIPE)			
Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
VOC	[XX]	[XX]	[XX]

Not triggering Public Notice

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

Therefore, public noticing is not required for SSIPE purposes.

Triggering Public Notice

As shown in the above table, the SSIPE for this project exceeds the 20,000 lb/yr public notice threshold.

Therefore, public noticing will be required for SSIPE purposes.

2. Public Notice Action

As discussed above, public noticing pursuant to District Rule 2201 is required for this project [specify the reason for the public notice]. Public notice

documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

or

This project will not result in emissions, for any criteria pollutant, which would subject these emission units to any of the noticing requirements listed above. Therefore, public notice will not be required for this project.

D. Daily Emissions Limits (DEL)

Daily Emission Limits, DELs, are required by section 3.15. The DELs are required to enforce the applicability of BACT.

DELs for the emission units in this project will be included on the ATCs in the form of fugitive component emissions limits in lb VOC/day. The permittee will be required to maintain accurate records of fugitive component counts and resulting emission calculations to validate the DEL.

E. Compliance Assurance

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

1. Source Testing

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

2. Monitoring

Fugitive emissions monitoring is required. The following permit conditions will ensure continued compliance:

Insert appropriate conditions from District Policy “Organic Liquid Storage Tanks – Voluntary Inspection and Maintenance Program.” SSPE 2215. If Rule 2201 applies, then Rule 2201 should be inserted into the Rule reference in the condition. If applicant is requesting tank cleaning conditions, then Rule 4623 should be inserted the rule reference. If neither Rule 2201 nor 4623 applies, Rule 2080, Conditional Approval, should be inserted the rule reference.

3. Record Keeping

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

- *The permittee shall keep accurate records of the dates of inspection and monitoring and the components inspected and monitored. [District Rule 2201]*
- {2490} All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] N

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2410 Prevention of Significant Deterioration

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. This project only affects VOC emissions which do not require a PSD evaluation. Therefore, no further discussion is required.

Rule 2520 Federally Mandated Operating Permits

For a facility that is an existing major source (and has not received their Title V permit):

Pursuant to their current operating permit, this facility is an existing major source; however, the facility has not received their Title V permit. An application to comply with Rule 2520 - *Federally Mandated Operating Permits* has already been submitted to the District; therefore, no action is required at this time.

For a facility that is an existing major source (and has received their Title V permit):

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. As discussed above, the facility has (not) applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with a(n) administrative amendment/minor modification, prior to operating with the proposed modifications. Continued compliance with this rule is expected.

For a facility that is an existing major source (and has received their Title V permit) but the project is exempt by 2520, 6.4.4:

This facility is subject to this rule, and has received their Title V Operating Permit. The proposed modification(s) can be made off the Title V Permit pursuant to Rule 2520 Section 6.4.4 as the modification(s) consist of additional emissions unit(s) with no additions or changes contravening any existing permit conditions. The permittee shall notify the EPA and the District in writing of the change contemporaneous with implementation of the change. Continued compliance with this rule is expected.

Rule 4001 New Source Performance Standards

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/vessels located at this facility. However, pursuant to 40 CFR 60.110 (b), 60.110(a) (b), and 60.110(b) (b), these subparts do not apply to storage vessels less than 10,000 bbls, used for petroleum or condensate, that is stored, processed, and/or treated at a drilling and production facility prior to custody transfer.

Therefore, the requirements of this subpart are not applicable to this project.
If the above Rule applies, this is no longer a GEAR. See your lead engineer.

Rule 4101 - Visible Emissions

Rule 4101 states that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity.

As long as the equipment is properly maintained and operated, compliance with visible emissions limits is expected under normal operating conditions.

Rule 4102 - Public Nuisance

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance.

CH&SC 41700 - California Health and Safety Code

Discuss whether a Health Risk Assessment is required and/or the results of the HRA, including any special conditions to consider when issuing the ATC(s).

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.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification of an existing source shall not result in an increase in cancer risk greater than the District's significance level (20 in a million) and shall not result in acute and/or chronic risk indices greater than 1.

Example (a): (For a project with no increase in emissions.)

As demonstrated above, there are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

(Note 1: An HRA is necessary if there is a change in any HRA parameter, i.e. exhaust flow rate changes, stack changes, fuel use and type changes, receptor distances, etc.)

(Note 2: If example (a) is used, delete the following sections, since they don't apply if an HRA was not performed.)

Example (b): (For a project with a Prioritization score ≤ 1 .)

This project results in increases in emissions of VOCs.

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project, the total facility prioritization score including this project was less than or equal to one.

The resulting prioritization score for this project is shown below.

Health Risk Assessment Summary	
	Worst Case Potential
Prioritization Score	[X]

In accordance with District policy APR 1905, no further analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Compliance with District Rule 4102 requirements is expected.

See Attachment [XXX](#): Health Risk Assessment Summary

Example (c): (For a project with a Prioritization score > 1 .)

This project results in increases in emissions of VOCs.

According to the Technical Services Memo for this project, 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 resulting prioritization score, acute hazard index, chronic hazard index, and cancer risk for this project is shown below.

Health Risk Assessment Summary	
	Worst Case Potential
Prioritization Score	[X]
Cancer Risk	[X]
Acute Hazard Index	[X]
Chronic Hazard Index	[X]
T-BACT Required?	Yes/No

Discussion of T-BACT

Discuss whether a T-BACT is or is not triggered and the requirements which satisfy T-BACT (if any).

Example (a): (For a project where T-BACT not triggered.)

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.

In accordance with District policy APR 1905, no further analysis is required, and compliance with District Rule 4102 requirements is expected.

See Attachment **XXX**: Health Risk Assessment Summary

Example (b): (For a project where T-BACT is triggered)

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

For this project T-BACT is triggered for VOC. T-BACT is satisfied with BACT for VOC (see [Appendix XXX](#)), which is the use of HVLP spay guns, coatings compliant with District Rules, enclosed paint gun cleaners, and a spray booth with exhaust filters; therefore, compliance with the District's Risk Management Policy is expected.

In accordance with District policy APR 1905, no further analysis is required, and compliance with District Rule 4102 requirements is expected.

See Attachment [XXX](#): Health Risk Assessment Summary

List all conditions necessary to ensure that the equipment is operated in the manner assumed when the RMR was performed.

The following permit conditions are required to ensure compliance with the assumptions made for the risk management review:

- [\[Add HRA Conditions\]](#)

Rule 4623, Storage of Organic Liquids

This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored.

If tank TVP is being limited to less than 0.5 psia and is connected to a vapor control system:

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

- {2480} This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] N
- {2498} The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device the reduces the inlet VOC emissions by at least [XX%](#) by weight as determined by the test method specified in Section 6.4.7. [District Rule 2201] N

- {2910} Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] N
- {2482} The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] N
- {2483} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] N
- {2911} The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 4623] N
- {2912} Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 4623] N
- {2913} The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 4623] N
- {2490} All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] N

Place in all evaluations:

The affected tanks/vessels 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.

If applicant desires tank cleaning:

Tank(s) A-XXX-X and '-XX are equipped with a vapor control system with a VOC control efficiency of 9X%. No throughput/TVP records are required to be kept for fixed-roof tanks/vessels equipped with vapor control. The applicant has elected to participate in the voluntary tank preventive inspection, maintenance, and tank cleaning program. Tank cleaning will be conducted according to the requirements of Table 6.

Place in all evaluations:

Compliance with the requirements of this rule is expected.

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

The applicant has indicated that this facility is [not] within 1,000 feet of a K-12 school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is [not] required.

California Environmental Quality Act (CEQA)

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

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- 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 the project qualifies for ministerial approval under the District's Guideline for Expedited Application Review (GEAR). 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.

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project’s potential for litigation risk, which in turn may be based on a project’s potential to generate public concern, its potential for significant impacts, and the project proponent’s ability to pay for the costs of litigation without a letter of credit, among other factors.

As described above, the project requires only ministerial approval, and is exempt from the provisions of CEQA. As such, an Indemnification Agreement or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendations

For a project where public noticing is not triggered.

Issue Authority to Construct [A-XXXX-XX](#) subject to the permit conditions on the attached draft Authority to Construct.

For a project where public noticing is triggered.

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authority to [Construct X-XXXX-X-X](#) subject to the permit conditions on the attached draft Authority to Construct in Attachment [XX](#).

X. Billing Information

Permit Number	Fee Schedule	Fee Description	Annual Fee
S-xxxx-x-x	3020-5S- [X]	XXX gallons	\$XXX

ATTACHMENT: I Current PTO(s)
ATTACHMENT: II Gas Analysis
ATTACHMENT: III Emissions Calculations
ATTACHMENT: IV BACT Guideline
ATTACHMENT: V BACT Analysis
ATTACHMENT: VI Health Risk Assessment
ATTACHMENT: VII Location Drawing
ATTACHMENT: VIII Draft ATC(s)

ATTACHMENT: IX: Sample ATC Conditions FOR REFERENCE ONLY, DO NOT INCLUDE
ATTACHMENT IN FINAL APPLICATION REVIEW

ATTACHMENT I

CURRENT PTO(S)

ATTACHMENT II GAS ANALYSIS

**ATTACHMENT III
EMISSION CALCULATIONS**

**ATTACHMENT IV
BACT GUIDELINE**

**ATTACHMENT V
BACT ANALYSIS**

Top Down BACT Analysis

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

Step 1 - Identify All Possible Control Technologies

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

Technologically feasible:

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

Achieved in Practice:

PV vent set to within 10% of maximum allowable pressure.

Step 2 - Eliminate Technologically Infeasible Options

All of the above identified control options are technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

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

Step 4 - Cost Effectiveness Analysis

The applicant is proposing the most effective control technology – collection and control system with collected gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program at 99% control. Therefore, a cost effectiveness analysis is not required.

Step 5 - Select BACT

If vapor control is cost effective:

Waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program at 99% control

ATTACHMENT VI

HEALTH RISK ASESMENT

ATTACHMENT VII

LOCATION DRAWING

ATTACHMENT VIII

DRAFT ATC(S)

ATTACHMENT IX

**Sample ATC Conditions
FOR REFERENCE ONLY, DO NOT INCLUDE
ATTACHMENT IN FINAL APPLICATION REVIEW**

This attachment includes two basic sets of conditions for tanks/vessels equipped with a vapor control system based on estimating emissions from fugitive components (screening values & average emissions factors). Following the three sets of conditions are subsets to include on the permit if TVP < 0.5 psia, VOC Content of the gas < 10%, or if the applicant requests tank cleaning conditions.

Screening Values:

{Modified 2498} The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to (insert 95% control device(s) here). [District Rules 2201 and 4623] N

{2499} All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] N

{2501} 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 and shall be reported as a deviation. [District Rules 2201 and 4623] N

{2502} Any tank gauging or sampling device on a tank vented to the vapor control system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] N

Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] N

VOC fugitive emissions from the components in gas service on tank (if permit includes the vapor control system Insert: and tank vapor collection system) shall not exceed XX.X lb/day. [District Rule 2201] N

Permittee shall maintain accurate component count 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 Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201] N

Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] N

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

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

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

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

Average Emissions Factors:

{Modified 2498} The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to (insert 95% control device(s) here). [District Rule 4623] N

{2499} All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] N

{2501} 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. [District Rule 4623] N

{2502} Any tank gauging or sampling device on a tank vented to the vapor control system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] N

Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] N

VOC fugitive emissions from the components in gas service on tank (if permit includes the vapor control system insert: and tank vapor collection system) shall not exceed XX.X lb/day. [District Rule 2201] N

Permittee shall maintain accurate component count for tank according to EPAs "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission Factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] N

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

Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] N

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

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

Subsets if Applicable:

TVP < 0.5 psi – controlled:

{2480} This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] N

VOC content of the gas is less than 10% (replace component conditions and DEL conditions):

Conditions to be replaced:

VOC fugitive emissions from the components in gas service on tank (if permit includes the vapor control system Insert: and tank vapor collection system) shall not exceed XX.X lb/day. [District Rule 2201] N

And:

Permittee shall maintain accurate component count 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 Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201] N

Or:

Permittee shall maintain accurate component count for tank according to EPAs "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission Factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] N

Conditions to be added:

The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201]

Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201]

Tank Cleaning:

Check draft District Policy SSP 1920, "Organic Liquid Storage Tanks – Cleaning Requirements" & SSP1925, "Organic Liquid Storage Tanks – Voluntary Inspection and Maintenance Program" for updated conditions

As of 11-21-06 draft Policies SSP 1920 & 1925 contains the following conditions. The following conditions should be added to the ATC if the applicant request tank cleaning conditions (please note, if the tank is not subject to the requirements of Rule 4623, the rule references must be changed from Rule 4623 to Rule 2080):

As of 11-21-06 the following conditions should be added to the ATC if the applicant request tank cleaning conditions:

I& M Conditions:

1. 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, Table 3]
2. 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, Table 3]
3. 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 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, Table 3]
4. 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, Table 3]
5. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3]
6. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are

found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3]

7. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3]

Tank Cleaning Conditions:

While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623]

Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623]

Sludge Handling: if TVP is 1.5 psia or greater

During sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]

Permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623]

Permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623]