

**San Joaquin Valley  
Unified Air Pollution Control District**

**Guideline for Expedited Application Review (GEAR #27b)  
Fixed Roof Oil Field Production Tank < 5000 BBLs  
Major Source, Heavy Oil, Connected to Vapor Control,  
Not subject to NSPS**

Approved By: _____ Signed _____ Date <u>11/29/07</u> David Warner Director of Permit Services
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**PURPOSE:**

To outline the procedures for expedited processing of Authority to Construct (ATC) applications for fixed roof oil field production tanks < 5000 BBLs, major source, heavy oil, connected to vapor control, and not subject to NSPS. These procedures will apply to processing of applications received over the counter or through the mail.

**I. APPLICABILITY**

This policy applies to applications for Authority to Construct permits for fixed roof oil field production tanks < 5000 BBLs, at a major source, heavy oil, connected to vapor control, and not subject to NSPS.

**II. PERMIT APPLICATION AND SUPPLEMENTARY FORMS**

The applicant must complete a regular ATC Application Form and the Oilfield Production Tank Supplemental Application Form.

**III. APPLICATION REVIEW**

In order to standardize the application reviews for this source category, the application review found on the AIRNET will be used as a base document. The following pages are hard copies of the standard review for fixed roof oil field production tanks < 5000 BBLs, at a major source, heavy oil, connected to vapor control, and not subject to NSPS. Standard emission factors and emission control efficiencies are included. This hard copy version for the GEAR Policy manual includes the ATC application review.

The use of this standard Application Review will ensure that:

- A. The proposed project complies with the Best Available Control Technology (BACT) requirements as specified in the District's current BACT Clearinghouse.
- B. The ATC has enforceable daily emission limitations (DELS).
- C. The proposed project complies with all applicable prohibitory rules.

#### **IV. EQUIPMENT DESCRIPTION**

To ensure uniformity, standard descriptions are established and presented in the attached engineer evaluation and will be used in the database:

#### **V. AUTHORITY TO CONSTRUCT CONDITIONS**

To ensure uniformity, a standard set of conditions is attached to the engineer evaluation and will be used as a base for all applications

#### **VI. UPDATES**

This GEAR will be updated as necessary to accommodate any changes in prohibitory rules or other items affecting the policy. Each update will be posted on the AIRNET by the GEAR coordinator for comments and the coordinator will forward the updates for the Director's approval.

# 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

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## I. Proposal

Facility Name is applying for (an) Authority(ies) to Construct (ATC) permit(s) for the installation of [# tanks] fixed roof [XXX] bbl crude oil tank(s). The new tank(s) (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.

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

or

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

or

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

or

**Facility Name** is applying for (an) Authority(ies) to Construct (ATC) permit(s) to tie-in [# tanks] 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 (9/21/06)   |
| 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 is $\leq 420,000$ gallons, and they store crude oil prior to custody transfer; therefore, this subpart does not apply to the tanks 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

### 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 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, 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

Delete blue areas if not applicable.

A-XXXX-XXX-XX

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 ei. 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 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, 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, 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 will be recalculated 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.

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 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.
- 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, (PE<sub>1</sub>)**

If new emissions unit:

Since this is a new emissions unit, the PE<sub>1</sub> = 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. 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	XX.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

\* X.X lb/day from tank and XX.X lb/day from vapor control system fugitive emission components

**2. Post Project Potential to Emit, (PE<sub>2</sub>)**

Post-project potential to emit is calculated based on the fugitive component counts. 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	XX.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

\* X.X lb/day from tank and XX.X lb/day from vapor control system fugitive emission components

### 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 applicant states that the facility exceeds threshold levels:

Applicant stipulates that the 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 (50,000 lb VOC/ yr). No other pollutants are emitted by this project; therefore, SSPE1 calculations for these pollutants are not necessary.

or:

Since this is an existing facility, SSPE1 is equal to the  $PE_{\text{Total Pre-Project}}$  for all criteria pollutants.

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

SSPE1 (lb/yr)		
Permit #	VOC	Source
A-xxxx-x-x	[X]	PTO A-XXXX-X-X
A-xxxx-x-x	[X]	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

SSPE1	
A-xxxx-x-x	
A-xxxx-x-x	
Total	

Or:

As noted above, the applicant 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

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.

## 6. Baseline Emissions (BE)

### a. Annual BE

The annual BE is performed pollutant by pollutant 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 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

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. 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:

PE2<sub>quarterly</sub> = PE2<sub>annual</sub> ÷ 4 quarters/year  
 = X,XXX lb/year ÷ 4 qtr/year  
 = X,XXX lb PM<sub>10</sub>/qtr

BE<sub>quarterly</sub> = BE<sub>annual</sub> ÷ 4 quarters/year  
 = X,XXX lb/year ÷ 4 qtr/year  
 = X,XXX lb PM<sub>10</sub>/qtr

### 8. Major Modification Determination

A Major Modification occurs if the post-project stationary source Potential to Emit (SSPE2) exceeds the Major Source Thresholds (as defined in Rule 2201) and PE<sub>2</sub> – HE is equal to or greater than one or more of the following threshold values:

Major Modification	
Pollutant	(lb/year)
NO <sub>x</sub>	50,000
SO <sub>x</sub>	80,000
PM <sub>10</sub>	30,000
VOC	50,000

Calculating PE<sub>2</sub> - HE is required for existing Major Sources to determine if the current project has emissions increases above Title I Modification thresholds.

A major modification is defined 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 these emissions are fugitive only, and fugitive emissions from oil production operations are not counted in major modification calculations, this change does not result in a major modification.

## 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.

or

**Scenario 1:** the applicant wishes to lower the VOC content of the vapors limit to less than 10% VOC by weight

**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-XXXXXXX])  
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	<a href="#">[X]</a>	20,000	<a href="#">[Yes/ No]</a>

### 2. Quantity of Offsets Required

As shown in the table above, the SSPE2 is not greater than or equal to the offset threshold levels for any criteria pollutant. Therefore, offsets will not be required.

or

As shown in the table above, the SSPE2 meets or exceeds the offset threshold levels. Therefore, offsets will be required. (If this is true, this project is NO LONGER A GEAR. Check with your supervisor before further processing.)

**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 SSIPE 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 Levels (lb/yr)	Major Source?
VOC	[ ]	[ ]	50,000	[Yes or 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 Levels (lb/yr)	Public Notice Required?
VOC	[ ]	[ ]	20,000	[Yes or 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]

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.

or

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**

If fugitive emission components are used to calculate emissions:

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

Insert appropriate conditions from Draft Policy “Organic Liquid Storage Tanks – Voluntary Inspection and Maintenance Program.” SSPE XXXX-X. 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 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 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***

The District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, 3/2/01) requires that a Risk Management Review is performed for any increase in hourly or annual emissions of Hazardous Air Pollutants (HAPs). HAPs are limited to substances included on the list in CH&SC 44321 and that have an OEHHA approved health risk value.

#### **If project does not result in an increase in VOC emissions:**

A health risk analysis was not required as there is no increase in process rates or emissions of hazardous air pollutants (HAP's).

#### **If project results in an increase in VOC emissions:**

This project results in increases in emissions of HAPs

The risk associated with emissions increase for this project was reviewed by performing a prioritization in accordance with the requirements of the CAPCOA prioritization guidelines. The resulting prioritization score, acute hazard index, chronic hazard index, and cancer risk from 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
Project Approved?	Yes/No

*Use one of the following paragraphs (delete all others as well as italicized language):*

*Prioritization Score less than or equal to 1.0 (project or total facility)*

Pursuant to the District Risk Management Policy for New and Modified Sources, a screening Health Risk Assessment (HRA) is not required since the prioritization score is equal to or less than 1.0.

The project is approved for permitting without consideration of Toxic Best Available Control Technology (T-BACT).

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

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

*or*

*Cancer risk less than or equal to 1.0 per million (acute and chronic indices) (T-BACT not Required)*

Pursuant to the District Risk Management Policy for New and Modified Sources, a Health Risk Assessment (HRA) is required for projects with a prioritization score greater than 1.0. Since the prioritization score of the sum of all projects subject to District's Risk Management Review Policy is greater than one, a HRA is requested.

District policy APR 1905 specifies that the increase in emissions associated with a proposed new source or modification project not pose a significant health risk. A cancer risk greater than 1.0 per million is considered to pose a significant risk.

Since the HRA indicates that risk is below District acute, chronic, and cancer risk thresholds, Toxic Best Available Technology (T-BACT) is not required for this project.

In accordance with the policy, no further analysis is required. As long as the unit is properly maintained and operated, it should not be a public nuisance. Therefore compliance with District Rule 4102 requirements is expected.

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

or

*Increase in cancer risk greater than 1.0 per million (T-BACT Required)*

District policy APR 1905 specifies that the increase in emissions associated with a proposed new source or modification project not pose a significant health risk. A cancer risk greater than 1.0 per million is considered to pose a significant risk.

For projects where the increase in cancer risk is greater than 1.0 per million, Toxic Best Available Technology (T-BACT) is required.

Based on the HRA results, T-BACT [is/ is not] required for this project.

**If T-BACT is required:**

The applicant has proposed T-BACT, therefore, compliance with District Risk Management Policy is expected. *{Note: If T-BACT is not proposed, the project cannot be approved}.*

*If applicable add the following section*

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

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

*Leave in all evaluations*

In accordance with the policy, no further analysis is required. As long as the unit is properly maintained and operated it should not be a public nuisance. Therefore compliance with District Rule 4102 requirements is expected.

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

**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 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 that 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 capacity of less than 1,100 gallons; therefore, this rule does not apply.

**Place in all evaluations:**

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.

**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 equipped with vapor control. 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.

**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	3020-5-[X]	XXX gallons	\$XXX

- ATTACHMENT: X Current PTO(s)
- ATTACHMENT: X Gas Analysis
- ATTACHMENT: X Emissions Calculations
- ATTACHMENT: X BACT Guideline
- ATTACHMENT: X Top down BACT Analysis
- ATTACHMENT: X Health Risk Assessment
- ATTACHMENT: X Location Drawings and Piping Diagrams
- ATTACHMENT: X Draft ATC(s)
- ATTACHMENT: X Permit Conditions – by category of applications described in Section I

# ATTACHMENT XX

## 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.

### 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

# ATC Conditions

November 27, 2006

This appendix includes two basic sets of conditions for tanks 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]