



**JUL 05 2012**

Charlie Comfort  
TRC Operating Company, Inc.  
P O Box 227  
Taft, CA 93268

**Re: Notice of Preliminary Decision - Federally Mandated Operating Permit  
District Facility # S-3088  
Project # 1110983**

Dear Mr. Comfort:

Enclosed for your review and comment is the District's analysis of TRC's application for the Federally Mandated Operating Permit for its crude oil and natural gas production operation at its western Kern county fields Heavy Oil stationary source, California.

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

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Sincerely,

David Warner  
Director of Permit Services

DW: DT/cm

Enclosures

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

---

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

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
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**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585



**JUL 05 2012**

Mike Tollstrup, Chief  
Project Assessment Branch  
Air Resources Board  
P O Box 2815  
Sacramento, CA 95812-2815

**Re: Notice of Preliminary Decision - Federally Mandated Operating Permit  
District Facility # S-3088  
Project # 1110983**

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of TRC's application for the Federally Mandated Operating Permit for its crude oil and natural gas production operation at its western Kern county fields Heavy Oil stationary source, California.

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

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

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David Warner  
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JUL 05 2012

Gerardo C. Rios, Chief  
Permits Office (AIR-3)  
U.S. EPA - Region IX  
75 Hawthorne St  
San Francisco, CA 94105

**Re: Notice of Preliminary Decision - Federally Mandated Operating Permit  
District Facility # S-3088  
Project # 1110983**

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of TRC's application for the Federally Mandated Operating Permit for its crude oil and natural gas production operation at its western Kern county fields Heavy Oil stationary source, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 45-day comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Sincerely,

David Warner  
Director of Permit Services

DW: DT/cm

Enclosures

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

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Bakersfield Californian

**NOTICE OF PRELIMINARY DECISION  
FOR THE PROPOSED ISSUANCE OF  
FEDERALLY MANDATED OPERATING PERMITS**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed issuance of the Federally Mandated Operating permits to TRC Operating Company, Inc. for its crude oil and natural gas production operation at its western Kern county fields Heavy Oil stationary source, California.

The District's analysis of the legal and factual basis for this proposed action, project #1110983, is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](http://www.valleyair.org/notices/public_notices_idx.htm) and the District office at the address below. There are no emission changes associated with this proposed action. This will be the public's only opportunity to comment on the specific conditions of the proposed Federally Mandated Operating initial permits. If requested by the public, the District will hold a public hearing regarding issuance of this initial permit. For additional information, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.

**SANJOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT**

**TITLE V APPLICATION REVIEW  
TRC OPERATING COMPANY  
FACILITY # S-3088**

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# **Title V Application Review**

## **Heavy Oil Production**

Project #: 1110983, Deemed Complete: April 26, 2011

Engineer: David Torii  
Lead Engineer: Allan Phillips

Facility Number: S-3088  
Facility Name: TRC Operating Company  
Mailing Address: PO Box 227  
Taft, CA 93268

Contact Name: Charlie Comfort  
Phone: (661) 763-0081

Responsible Official: Charlie Comfort  
Title: Secretary/Treasurer

### **I. PROPOSAL**

TRC Operating Company (TRC) is proposing that the initial Title V Operating Permit be issued for its existing Heavy Oil Western production source (S-3088) located in Kern County. The purpose of this engineering evaluation is to identify all applicable requirements, determine if the facility will comply with those applicable requirements, and to provide the legal and factual basis for proposed permit conditions.

### **II. FACILITY LOCATION**

This heavy oil production source is located in TRC's Kern County Fields Heavy Oil Western stationary source in Kern County, California.

### **III. EQUIPMENT LISTING**

A detailed facility printout listing all permitted equipment at the facility is shown in Attachment A.

A summary of the exempt equipment categories which describe the insignificant activities or equipment at the facility not requiring a permit is shown in Attachment B. This equipment is not exempt from facility-wide requirements.

### **IV. GENERAL PERMIT TEMPLATE USAGE**

The applicant has requested to utilize Facility-Wide Umbrella template #UM-0-3. Based on the information submitted on the Template Qualification Form, the applicant qualifies for the use of this template.

## V. SCOPE OF EPA AND PUBLIC REVIEW

The proposed Facility-Wide Operating Permit is based on a model general permit template that has been previously subject to EPA and public review. The terms and conditions from the model general permit template are included in the proposed permit and are not subject to further EPA and public review.

For permit applications utilizing model general permit templates, public and agency comments on the District's proposed actions are limited to the applicant's eligibility for model general permit template, applicable requirements not covered by the model general permit template, and the applicable procedural requirements for issuance of Title V Operating Permits.

The following permit conditions, including their underlying applicable requirements, originate from model general permit templates and are not subject to further EPA or public review:

- Conditions 3-42 of the requirements for permit unit S-3088-0-2

## VI. APPLICABLE REQUIREMENTS ADDRESSED BY GENERAL PERMIT TEMPLATES

District Rule 1100, Equipment Breakdown (amended December 17, 1992)<sup>2</sup>

District Rule 1160, Emission Statements (adopted November 18, 1992)<sup>2</sup>

District Rule 2010, Permits Required (amended December 17, 1992)<sup>2</sup>

District Rule 2020, Exemptions (amended March 21, 2002)<sup>2</sup>

District Rule 2031, Transfer of Permits (adopted December 17, 1992)<sup>2</sup>

District Rule 2040, Applications (amended December 17, 1992)<sup>2</sup>

District Rule 2070, Standards for Granting Applications (adopted December 17, 1992)<sup>2</sup>

District Rule 2080, Conditional Approval (amended December 17, 1992)<sup>2</sup>

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<sup>2</sup> The Umbrella General Template addressed these requirements for all permit units at the facility.

- District Rule 4101, Visible Emissions (amended November 15, 2001)<sup>2</sup>
- District Rule 4201, Particulate Matter Concentration (amended October 31, 2001)
- District Rule 4701, Internal Combustion Engines (amended December 17, 1992)
- District Rule 4801, Sulfur Compounds (adopted November 18, 1992)
- District Rules 8021, 8031, 8041, 8051, 8061, 8071, Fugitive Dust (PM10) Emissions (amended November 15, 2001)<sup>2</sup>

## VII. APPLICABLE REQUIREMENTS NOT ADDRESSED BY GENERAL PERMIT TEMPLATES

- District Rule 2201, New and Modified Stationary Source Review Rule (as amended 4/21/11)
- District Rule 1070, Inspections (as amended December 17, 1992)
- District Rule 1081, Source Sampling (as amended December 16, 1993)
- District Rule 4301, Fuel Burning Equipment (as amended December 17, 1992)
- District Rule 4305, Boilers, Steam Generators, and Process Heaters – Phase 2 (as amended August 21, 2003)
- District Rule 4306, Boilers, Steam Generators, and Process Heaters – Phase 3 (as amended October 16, 2008)
- District Rule 4311, Flares (as amended June 18, 2009)
- District Rule 4320, Advanced Emission Reduction Options For Boilers, Steam Generators, and Process Heaters Greater Than 5.0 MMBtu/hr, (adopted October 16, 2008)
- District Rule 4401 Steam-Enhanced Crude Oil Production Well Vents (as amended 6/16/11)
- District Rule 4601, Architectural Coatings (as amended December 17, 2009)
- District Rule 4623, Storage of Organic Liquids (as amended May 19, 2005)
- District Rule 4701 Internal Combustion Engines – PHASE 1 (as amended August 21, 2003)

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<sup>2</sup> The Umbrella General Template addressed these requirements for all permit units at the facility.

District Rule 4702 Internal Combustion Engines (As amended August 18, 2011)

District Rule 4801, Sulfur Compounds (as amended December 17, 1992) (Non SIP replacement for Kern County Rule 407)

District Rules 8021, 8031, 8041, 8051, and 8061, Fugitive Dust (PM<sub>10</sub>) Emissions (as amended August 19, 2004)

District Rule 8071, Fugitive Dust (PM<sub>10</sub>) Emissions (as amended September 16, 2004)

40 CFR 60 Subpart Dc, New Source Performance Standards; Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

40 CFR 61, Subpart M - Asbestos

40 CFR 82, Subpart F - Stratospheric Ozone

40 CFR Part 64 - Compliance Assurance Monitoring

40 CFR Part 68 - Chemical Accident Prevention Provisions

Kern County Rule 407, Sulfur Compounds

Kern County Rule 424, Sulfur Compounds from Oil Field Steam Generators

## **VIII. REQUIREMENTS NOT FEDERALLY ENFORCEABLE**

For each Title V source, the District issues a single permit that contains the Federally Enforceable requirements, as well as the District-only requirements. The District-only requirements are not a part of the Title V Operating Permit. The terms and conditions that are part of the facility's Title V permit are designated as "Federally Enforceable Through the Title V Permit".

The facility is subject to the following District rules which are not currently Federally Enforceable:

1. District Rule 4102 - Nuisance

For this facility, condition 3 of the facility wide requirements is based on the rule identified above and is not Federally Enforceable Through the Title V Permit.

## **IX. COMPLIANCE**

**A. Requirements Addressed by Model General Permit Templates**

1. Facility Wide Requirements

The applicant is proposing to use a general permit template to address federally applicable facility-wide requirements. Section IV of template SJV-UM-0-3 includes a demonstration of compliance for all applicable requirements. Template conditions have been added to the facility wide requirements as condition numbers 4 through 43 to assure compliance with these requirements.

**B. Requirements Not Addressed by Model General Permit Templates**

1. **New and Modified Stationary Source Review Rule (District Rule 2201)**

a. Crude Oil Storage Tank (S-3088-4-0)

Permit unit S-3088-4-0 was not subject to District Rule 2201 at the time the applicant applied for an Authority to Construct.

b. 62.5 MMBtu/hr Steam Generators (S-3088-7-6, '20-4 and '24-2)

Permit unit S-3088-7-6 was subject to District Rule 2201 at the time the applicant applied for an Authority to Construct.

- Conditions 1, 5, 6, 19, 20 and 21 from the PTO were included as conditions 1, 4, 5, 19, 20 and 21 of the proposed permit.

Permit unit S-3088-20-4 was subject to District Rule 2201 at the time the applicant applied for an Authority to Construct.

- Conditions 1, 5, 6, and 19 from the PTO were included as conditions 1, 4, 7 and 20 of the proposed permit.

Permit unit S-3088-24-2 was subject to District Rule 2201 at the time the applicant applied for an Authority to Construct.

- Conditions 1, 5, 6, 8, 20, and 25 from the PTO were included as conditions 1, 4, 6, 8, 20 and 25 of the proposed permit.

c. TEOR Operation serving 150 steam enhanced wells (S-3088-8-10)

Permit unit S-3088-8-10, was subject to the District Rule 2201 at the time the applicant applied for an Authority to Construct.

TRC Operating Company  
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- Conditions 2, 3, 4, 5, 7, 8, 9, 10, 16 and 23 from the PTO were included as conditions 1, 2, 3, 4, 6, 7,8, 9, 15, and 22 of the proposed permit.

- d. Crude Oil Storage Tanks (S-3088-9-2, '10-2, '11-2, '12-2, '13-2, '14-3, '15-3, '16-3)

Permit unit S-3088-9-2, '10-2, '11-2, '12-2, '13-2, '14-3, '15-3, '16-3 and '21-2 were subject to the District Rule 2201 at the time the applicant applied for an Authority to Construct.

- Conditions 1, 2, 4 and 11 through 22 from the PTOs were included as conditions 1, 2, 4 and 11 through 22 of the proposed permits.

**2. District Rule 1081 Source Sampling (as amended December 17, 1992)**

- a. Steam Generators S-3088-7-6, '20-4 and '24-2

Sections 3.0, 4.0, 5.0, 6.0, and 7.0 of District Rule 1081 set forth requirements for sampling facilities, collection of samples, test methods, test procedures, and administrative requirements, respectively. These requirements are covered by conditions 9 and 14 of the requirements for permit unit S-3088-7-7; conditions 14 and 19 of the requirements for permit unit '20-5 and '24-3.

**3. District Rule 2010 Permits Required (as amended December 17, 1992)  
District Rule 2020 Exemptions (as amended March 21, 2002) - (Non SIP replacement for Kern County Rule 202)**

- a. Facility Wide (S-3088-0-2)

District Rule 2020 has been submitted to the EPA to replace Kern County APCD Rules 202. The comparison of the District and the County Rule presented below in table 2 indicate that the District Rule is at least as stringent as the County Rule.

**Table 2- Comparison of District Rule 2020 to Kern County Rule 202**

REQUIREMENT	District Rule 2020	Kern County Rule 202
An ATC or PTO is not required for listed exempt equipment	✓	✓
Conditions are stated under which listed exempt equipment will require an ATC or PTO.	✓	
Recordkeeping is required to verify and maintain exemption, when the exemption is based on a maximum daily limitation.	✓	
A compliance schedule is stated for equipment, which loses exemption from permitting, necessitating submission of a PTO application.	✓	

District Rule 2010 sections 3.0 and 4.0 require any person building, modifying or replacing any operation that may cause the issuance of air contaminants to apply for an Authority to Construct (ATC) from the District in advance. The ATC will remain in effect until the Permit to Operate (PTO) is granted.

District Rule 2020 lists equipment which are specifically exempt from obtaining permits and specifies recordkeeping requirements as stated in condition 7 of the facility wide requirements (S-3088-0-2).

**4. District Rule 2520, Federally Mandated Operating Permits**

There are no federally applicable Greenhouse Gas (GHG) requirements for this source. It should be noted that the Mandatory Greenhouse Gas Reporting rule (40CFR Part 98) is not included in the definition of an applicable requirement within Title V (per 40CFR 71.2). Therefore, there will be no further discussion of GHG in this evaluation.

**5. District Rule 4201 Particulate Matter Concentration (as amended December 17, 1992)**

**a. Steam Generators (S-3088-7-7, '20-5 and '24-3)**

The steam generators within this facility fire on natural gas. The following calculation demonstrates that the emissions of PM are expected to be well below applicable limits.

$$\left(\frac{13.7 \text{ lb PM}}{\text{MMscf}}\right) \left(\frac{1 \text{ MMscf}}{900 \text{ MMBtu}}\right) \left(\frac{1 \text{ MMBtu}}{8710 \text{ dscf}}\right) \left(\frac{7000 \text{ gr}}{1 \text{ lb}}\right) = \left(\frac{0.01 \text{ grain}}{\text{dscf}}\right) < \left(\frac{0.1 \text{ grain}}{\text{dscf}}\right)$$

where:

$$\frac{13.7 \text{ lb PM}}{\text{MMscf}} = \text{emission factor for filterable and condensable PM, natural gas, (AP-42, Table 1.4-2)}$$

$$\frac{1 \text{ MMscf}}{900 \text{ MMBtu}} = \text{minimum expected higher heating value of natural gas (AP-42, Table 1.4.1)}$$

$$\frac{8710 \text{ dscf}}{\text{MMBtu}} = \text{F factor, for natural gas at 0\% O}_2 \text{ (40CFR60, App. A, Table 19-1)}$$

Since the equation demonstrates that PM emissions will be well below the applicable limit, no further monitoring, recordkeeping or reporting will be necessary.

**6. District Rule 4301 Fuel Burning Equipment (as amended December 17, 1992)**

**a. Steam Generators (S-3088-7-7, '20-5 and '24-3)**

This rule limits the concentration of combustion contaminants and specifies maximum emission rates for sulfur dioxide, nitrogen oxide and combustion contaminant emissions from fuel burning equipment..

Sections 5.1 and 5.2.3 limits particulate matter emission. Section 5.1 limits the emission of combustion contaminants in the form of PM to 0.1 grain per cubic foot of gas corrected to 12% carbon dioxide. Section 5.2.3 limits PM to 10 lb/hr. As previously demonstrated in District Rule 4201 - Particulate Matter Concentration the following units listed shall not exceed 0.1 grain/dscf calculated to 12% CO<sub>2</sub>, nor 10 lb/hr.

Section 5.2.1 limits SO<sub>x</sub> emission to 200 lb/hr. and section 5.2.2 limits nitrogen oxides to 140 lb/hr calculated as nitrogen dioxide (NO<sub>2</sub>).

Permit conditions listing the emissions limits that ensure compliance with hourly NO<sub>x</sub> & SO<sub>x</sub> limits of this rule are shown in the following table.

Permit Unit	NO <sub>x</sub> Emission Limit	SO <sub>x</sub> Emission Limit	Condition #
S-3088-7-7	0.018 lb/MMBtu	328.5 lb/day	4 and 5
S-3088-20-5	0.018 lb/MMBtu	0.0076 lb/MMBtu	7
S-3088-24-3	0.018 lb/MMBtu	0.028 lb/MMBtu	4 and 6

7. **District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2** (as amended August 21, 2003)

Since emissions limits of District Rule 4306 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4306 requirements will satisfy requirements of District Rule 4305. Therefore, compliance with District Rule 4305 requirements is expected and no further discussion is required.

8. **District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3** (as amended October 16, 2008)

This rule applies to any boiler, steam generator or process heater, with a rated heat input greater than 5 million Btu per hour that is fired with gaseous and/or liquid fuels.

Section 5.1 requires that NO<sub>x</sub> and CO emissions shall not exceed the limits specified in Table 1. For oil field steam generators (Table 1 Category C), NO<sub>x</sub> and CO emissions shall not exceed 15 ppmv and 400 ppmv, respectively. Units emissions, limited to an annual heat input of 9 billion Btu/year to 30 billion Btu/year (Table 1, Category H), shall not exceed 30 ppmv NO<sub>x</sub> per year and 400 ppmv CO per year.

Section 5.3 states that emission limits shall not apply during start-up or shutdown provided an operator complies with the requirements that the

duration of each start-up or each shutdown shall not exceed two hours, the emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown, and an operator may submit an application for a permit condition to allow more than two hours for each start-up or each shutdown provided the operator meets all of the conditions specified in Sections 5.3.3.1 through 5.3.3.3.

Section 5.4 requires that operators of any unit subject to the applicable emission limits of the rule shall install and maintain an operational APCO approved Continuous Emissions Monitoring System (CEMS) for NO<sub>x</sub>, CO, and oxygen, or implement an APCO-approved Alternate Monitoring System. The operator of any Category H units shall install and maintain an operational non-resettable, totalizing mass or volumetric flow meter in each fuel line to each unit.

Section 6.1 requires that records required by Sections 6.1.1 through 6.1.4 shall be maintained for five calendar years and shall be made available to the APCO upon request.

Section 6.2 identifies the applicable test methods.

Section 6.3 requires that units subject to the requirements in Sections 5.1 or 5.2.3 shall be source tested to determine compliance with the applicable emission limits at least once every 12 months.

This rule applies to the following permits:

Steam generator S-3088-7-7:

Conditions 4, 7, 8, 10, 11, 12, 15 through 18, and 22 of the requirements for this permit unit assures compliance with this rule.

Steam generator S-3088-20-5:

Conditions 7 through 13, 15 through 18 and 21 and 22 of the requirements for this permit unit assures compliance with this rule.

Steam generator S-3088-24-3:

Conditions 6, 9, through 13, 15 through 18, 21 through 24, and 26 of the requirements for this permit unit assures compliance with this rule.

9. **District Rule 4311 Flares** (as amended June 15, 2009)
  - a. TEOR Operation Serving 150 Wells (S-3088-8-10)

Section 5.2 requires that a flame be present at all times when combustible gases are flared. Condition 18 of the requirements for this permit unit assures compliance with this requirement.

Section 5.3 requires an auto ignition system if a continuously burning pilot flame is not present at all times. Condition 19 of the requirements for this permit unit assures compliance with this requirement.

Section 5.4 requires that except for flares equipped with a flow sensing ignition system, a device be installed that continuously detects at least one pilot light. Section 5.5 requires that purge gas be used for purging flow-sensing automatic ignition systems. Condition 20 of the requirements for this permit unit assures compliance with this requirement.

Section 5.7 is not applicable as it applies to ground-level enclosed flares. The flare are not ground-level enclosed flares and thus Section 5.7 is not applicable.

**10. Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators and Process Heaters Greater than 5.0 MMBtu/Hr (adopted October 16, 2008**

**a. Steam Generators (S-3088-7-7, '20-5 and '24-3)**

The purpose of this rule is to limit emissions of NO<sub>x</sub>, CO and SO<sub>x</sub> and PM<sub>10</sub> from boilers, steam generators, and process heaters. Therefore steam generators S-3088-7-7, '20-5 and '24-3 are subject to this rule.

Sections 5.1 and 5.2 require that an operator of a unit(s) subject to this rule shall comply with all applicable requirements of the rule and one of the following, on a unit-by-unit basis:

- 5.1.1 Operate the unit to comply with the emission limits specified in Sections 5.2 and 5.4; or
- 5.1.2 Pay an annual emissions fee to the District as specified in Section 5.3 and comply with the control requirements specified in Section 5.4; or
- 5.1.3 Comply with the applicable Low-use Unit requirements of Section 5.5.

An annual emissions fee is paid for the steam generators. Compliance with this Section is expected.

Steam generator S-3088-7-7:

Compliance with these requirements will be assured by conditions 24 and 25.

TRC Operating Company  
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Steam generator S-3088-20-5:

Compliance with these requirements will be assured by conditions 23 and 24.

Steam generator S-3088-24-3:

Compliance with these requirements will be assured by conditions 27 and 28.

Section 5.4 requires that, in order to limit particulate matter emissions, an operator shall comply with one of the following requirements on and after the applicable NO<sub>x</sub> compliance deadline specified in Section 5.2 Table 1:

- 5.4.1.1 operators shall fire units exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases;
- 5.4.1.2 operators shall limit fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet; or
- 5.4.1.3 operators shall install and properly operate an emission control system that reduces SO<sub>2</sub> emissions by at least 95% by weight; or limit exhaust SO<sub>2</sub> to less than or equal to 9 ppmv corrected to 3.0% O<sub>2</sub>.

Steam generator S-3088-20:

This unit is limited to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet.

Compliance with these requirements will be assured by conditions 5 through 6.

Steam generators S-3088-7 and '24:

These units are currently in compliance with the requirements of section 5.4 and the applicant has stated that an ATC application to revise the permits to include conditions requiring compliance with this section will be submitted by 4/30/12.

Conditions 6 and 5 of permits S-3088-7-7 and '24-3, respectively, will specify the date that an ATC application must be submitted by.

Steam Generators S-3088-7, '20 and '24:

Section 5.5 pertains to units that were installed prior to January 1, 2009 and are limited to less than or equal to 1.8 billion Btu per calendar year heat input pursuant to a District Permit to Operate – the units are limited to greater than 1.8 billion Btu/yr—not applicable

## **Section 5.7 Monitoring Provisions**

### Steam Generators S-3088-7, '20 and '24:

Section 5.7.1 requires that permit units subject to District Rule 4320, Section 5.2 shall either install and maintain an operational APCO approved Continuous Emission Monitoring System (CEMS) for NO<sub>x</sub>, CO and O<sub>2</sub>, or implement an APCO-approved alternate monitoring.

The units will continue to use Alternate Monitoring Scheme A (pursuant to District Policy SSP-1105), which requires periodic monitoring of NO<sub>x</sub>, CO, and O<sub>2</sub> concentrations at least once a month using a portable analyzer. The following conditions will be placed in the ATCs to ensure compliance with the requirements of this alternate monitoring plan:

#### Steam Generator S-3088-7

Compliance with these requirements will be assured by conditions 15 through 18.

#### Steam Generator S-3088-20

Compliance with these requirements will be assured by conditions 8 through 11

#### Steam Generator S-3088-24

Compliance with these requirements will be assured by conditions 21 through 24.

Section 5.7.6 requires monitoring SO<sub>x</sub> emissions.

#### Steam Generator S-3088-20

Compliance with these requirements will be assured by conditions 5 and 6.

#### Steam Generators S-3088-7 and '24

These units are currently in compliance with the requirements of section 5.4 and the applicant has stated that an ATC application to revise

the permits to include conditions requiring compliance with this section will be submitted by 4/30/12.

### **Section 5.8 Compliance Determination**

Section 5.8.1 requires that the operator of any unit have the option of complying with either the applicable heat input (lb/MMBtu), emission limits or the concentration (ppmv) emission limits specified in Section 5.2. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant to Rule 1081 (Source Sampling).

#### Steam Generator S-3088-7:

Compliance with these requirements will be assured by condition 8.

#### Steam Generators S-3088-20 and '24:

Compliance with these requirements will be assured by condition 13.

Section 5.8.2 requires that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0.

#### Steam Generator S-3088-7

Compliance with these requirements will be assured by condition 7.

#### Steam Generators S-3088-20 and '24

Compliance with these requirements will be assured by condition 12.

Section 5.8.4 requires that for emissions monitoring pursuant to Sections 5.7.1 and 6.3.1 using a portable NO<sub>x</sub> analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced out over the 15-consecutive-minute period.

#### Steam Generator S-3088-7

Compliance with these requirements will be assured by condition 17.

#### Steam Generator S-3088-20

Compliance with these requirements will be assured by condition 10.

Steam Generator S-3088-24

Compliance with these requirements will be assured by condition 23.

Section 5.8.5 requires that for emissions source testing performed pursuant to Section 6.3.1 for the purpose of determining compliance with an applicable standard or numerical limitation of this rule, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply. If two (2) of three (3) runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. Therefore, the following permit condition will be listed on the permit as follows:

Steam Generator S-3088-7

Compliance with these requirements will be assured by condition 13.

Steam Generators S-3088-20 and '24

Compliance with these requirements will be assured by condition 18.

**Section 6.1 Recordkeeping**

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.5 shall be maintained for five calendar years and shall be made available to the APCO and EPA upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

Steam Generator S-3088-7

Compliance with these requirements will be assured by condition 22.

Steam Generator S-3088-20

Compliance with these requirements will be assured by condition 21.

Steam Generator S-3088-24

Compliance with these requirements will be assured by condition 26.

**Section 6.2, Test Methods**

Section 6.2 identifies test methods to be used when determining compliance with the rule.

Steam Generator S-3088-7

Compliance with these requirements will be assured by conditions 10, 11, 12 and 13.

Steam Generators S-3088-20 and '24

Compliance with these requirements will be assured by condition 15, 16, 17 and 18.

**Section 6.3, Compliance Testing**

Section 6.3.1 requires that each unit subject to the requirements in Section 5.2 shall be source tested at least once every 12 months, except if two consecutive annual source tests demonstrate compliance, source testing may be performed every 36 months. If such a source test demonstrates non-compliance, source testing shall revert to every 12 months.

Steam Generator S-3088-7

Compliance with these requirements will be assured by condition 23.

Steam Generators S-3088-20 and '24

Compliance with these requirements will be assured by condition 22.

**Conclusion**

Compliance with District Rule 4320 is expected.

**11. District Rule 4401 Enhanced Crude Oil Production Well Vent (as amended January 15, 1998)**

**a. TEOR Operation Serving 150 Wells (S-3088-8-11)**

Section 5.0 sets forth requirements for limiting the emissions of Volatile Organic Compounds (VOCs). This section lists emission control requirements as well as work practice standards.

Section 6.0 sets forth requirements for testing and recordkeeping. This section also allows the APCO to waive certain control systems from the requirements of section 6.2.1. Section 6.2.1 requires annual source testing to show control efficiency compliance. This waiver applies to control systems consisting of fuel burning equipment, an internal combustion engine, smokeless flares, or systems which do not have a VOC destruction device (specifically, if VOC collected is re-injected underground).

The basis of the waiver for smokeless open flares is that technology does not currently exist for source testing these controls. However, typically these devices have 99% or greater control efficiency.

The basis of the waiver for control systems which reinject VOC underground is that these systems are assumed to have 100% control. This VOC disposal method does not use an emission destruction device and there is no need to conduct a source test.

The basis of the waiver for control systems consisting of fuel burning equipment (primarily steam generators) is that these units have greater than 99% control efficiency for VOC, as demonstrated by the following calculations:

STEAM GENERATORS:

$$\frac{5.5 \frac{\text{lb} \cdot \text{VOC}}{10^6 \cdot \text{cf}}}{\frac{1 \cdot \text{lb}}{23.8 \cdot \text{cf}}} = 0.00013 \frac{\text{lb} \cdot \text{VOC}}{\text{lb} \cdot \text{gas}} = 0.013 \%$$

where:

$$5.5 \frac{\text{lb} \cdot \text{VOC}}{10^6 \cdot \text{cf}} = \text{VOC emission factor from natural gas fired boilers (AP-42, Table 1.4-2)}$$

$$\frac{1 \cdot \text{lb}}{23.8 \text{cf}} = \text{density of natural gas, (AP-42, Appendix A)}$$

The preceding calculations demonstrate that the control efficiency for VOC emissions is greater than 99% by almost two orders of magnitude for steam generators. Therefore, source tests for VOC control effectiveness are clearly unnecessary.

Compliance with these requirements will be assured by conditions 1 and 10 through 14.

**12. District Rule 4623 Storage of Organic Liquids (as amended May 19, 2005)**

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

This rule limits volatile organic compound (VOC) emissions from the storage of organic liquids. It applies to any tank with a capacity of 1,100

gallons or greater in which any organic liquid is placed, held, or stored. The rule was amended in May 19, 2005.

Section 4.3 states that except for complying with Sections 6.3.4 and 7.2, a small producer's tank with a throughput of 50 barrels of crude oil per day or less is exempt from the requirements of this rule. All other small producer tanks that do not qualify for exemption under Section 4.4 shall comply with all the requirements of this rule.

Section 4.4 states that tanks exclusively receiving and/or storing an organic liquid with a TVP less than 0.5 psia are exempt from all other requirements of the rule except for complying with the following provisions:

- 4.4.1 TVP and API Gravity Testing provisions pursuant to Section 6.2,
- 4.4.2 Recordkeeping provisions pursuant to Section 6.3.6,
- 4.4.3 Test Methods provisions pursuant to Section 6.4, and
- 4.4.4 Compliance schedules pursuant to Section 7.2.

The requirements of Section 4.4 shall not apply to tanks that are exempt pursuant to Sections 4.1 through 4.3.

Section 5.1 requires that no organic liquid shall be placed, held, or stored in any tank unless the tank is equipped with a VOC control system identified in Table 1.

Section 5.2 requires that pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The valves shall be permanently labeled with the operating pressure settings.

Section 5.6 requires that fixed roof tanks shall be fully enclosed and shall be maintained in a leak-free condition. The approved vapor recovery system shall consist of a closed system that collects all VOCs from the storage tank, and a VOC control device. This section also specifies the applicable VOC control device.

Section 5.7 states that only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5.

Section 6.2 requires initial and periodic TVP testing of each uncontrolled fixed roof tank.

Section 6.3 requires that tank subject to the requirements of this rule shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity, except for fixed roof tanks equipped with a vapor recovery system.

Section 6.4 addresses the test methods approved by the APCO and EPA.

Crude Oil Storage Tank (S-3088-4-2)

Conditions 2 through 4 of the requirements for this permit unit assures compliance with this rule.

Crude Oil Storage Tanks (S-3088-9-3, '10-3, '11-3, '12-3, '13-3, '14-4, '15-4, '16-4 and '21-3)

Conditions 3 and 5 through 10 of the requirements for these permits units assures compliance with this rule.

13. **District Rule 4801 Sulfur Compounds** (as amended December 17, 1992)
- a. Steam Generators (S-3088-7-7, '20-5 and '24-3)

District Rule 4801 has been submitted to the EPA to replace Kern County Rule 407, which is in the SIP. District Rule 4801 is as stringent as Kern County Rule 407, as shown below in Table 3.

**Table 3 - Comparison of District Rule 4801 and Kern County Rule 407**

REQUIREMENTS	District Rule 4801	Kern County Rule 407
a person shall not discharge into the atmosphere sulfur compounds exceeding in concentration at the point of discharge 0.2 percent by volume calculated as sulfur dioxide on a dry basis averaged over 15 consecutive minutes.	✓	✓
EPA Method 8 and ARB Method 1-100 shall be used to determine such emissions.	✓	

The following analysis shows that these units comply with the sulfur compound emissions limit. The combustion equation for natural gas is (neglecting NO<sub>x</sub> and SO<sub>x</sub> relative to O<sub>2</sub> in the exhaust):

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO<sub>2</sub>, on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation and the emission factors presented in Section VII, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = \frac{n RT}{P}$$

With:

N = moles SO<sub>2</sub>

T (Standard Temperature) = 60°F = 520°R

P (Standard Pressure) = 14.7 psi

R (Universal Gas Constant) =  $\frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}}$

EPA F-Factor for Natural Gas: 8,710 dscf/MMBtu at 68 °F, equivalent to

$$\text{Corrected F - factor} = \left( \frac{8,710 \text{ dscf}}{\text{MMBtu}} \right) \times \left( \frac{60^\circ \text{F} + 459.6}{68^\circ \text{F} + 459.6} \right) = 8,578 \frac{\text{dscf}}{\text{MMBtu}} \text{ at } 60^\circ \text{F}$$

Using S-3088-7's worst case SO<sub>x</sub> emissions:

$$\frac{0.219 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ \text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 151 \frac{\text{parts}}{\text{million}}$$

$$\text{Sulfur Concentration} = 151 \frac{\text{parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)}$$

Compliance with this rule is expected.

**15. 40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

a. Steam Generators (S-3088-7-7, '20-5 and '24-3)

Subpart Dc defines an affected facility as each steam-generating unit greater than 10 MMBtu/hr, but less than 100 MMBtu/hr for which construction, modification, or reconstruction has commenced after June 9, 1989. Subpart Dc only specifies performance standards for oxides of sulfur (SO<sub>x</sub>) and particulate emissions (PM) from steam generating equipment fired on liquid and solid fuels. There is no performance standards specified for gaseous fuel-fired steam generating equipment. Therefore, this subpart is not applicable except recordkeeping and reporting.

**16. CFR Part 64 Compliance Assurance Monitoring**

Steam Generators (S-3088-7-7, '20-5 and '24-3)

40 CFR Part 64 requires Compliance Assurance Monitoring (CAM) for units that meet all three following criteria:

- 1) the unit must have an emission limit for the pollutant;

- 2) the unit must have add-on controls for the pollutant; these are devices such as flue gas recirculation (FGR), baghouses, and catalytic oxidizers; and
- 3) the unit must have a pre-control potential to emit of greater than the major source thresholds.

The steam generators have add-on controls only for NO<sub>x</sub> in the form of FGR. The steam generators are equipped with ultra low NO<sub>x</sub> burners which are guaranteed to have NO<sub>x</sub> emissions of 15 ppmv @ 3% O<sub>2</sub> or 0.018 lb/MMBtu.

Therefore uncontrolled NO<sub>x</sub> emissions from a 62.5 MMBtu/hr unit is calculated as shown below.

$$0.018 \text{ lb/MMBtu} \times 62.5 \text{ MMBtu/hr} \times 8,760 \text{ hrs/year} = 9855 \text{ lb/year}$$

Therefore CAM is not applicable for NO<sub>x</sub>. Major source threshold for NO<sub>x</sub> is 20,000 lb/yr year.

## **X. PERMIT SHIELD**

A permit shield legally protects a facility from enforcement of the shielded regulations when a source is in compliance with the terms and conditions of the Operating Permit. Compliance with the terms and conditions of the Operating Permit is considered compliance with all applicable requirements upon which those conditions are based, including those that have been subsumed.

### **A. Requirements Addressed by Model General Permit Templates**

The applicant has not requested to utilize any model general permit templates.

### **B. Requirements not Addressed by Model General Permit Templates**

The applicant has requested a broad permit shield for all of requirements the facility is subject. Per District policy such broad permit shields can not be granted.

## **XI. PERMIT CONDITIONS**

See attached draft Initial TV Operating Permits in Attachment D.

# **Attachment A**

## **Equipment Listing**

- S-3088-4-2: 250 BBL FIXED ROOF PETROLEUM STORAGE TANK (#T-250)
- S-3088-7-7: 62.5 MMBTU/HR NATURAL GAS/WASTE GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME G-LE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (CYPRESS LEASE)
- S-3088-8-11: THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 150 STEAM ENHANCED CRUDE OIL PRODUCTION WELLS AND 665 SCFM AIR ASSIST STANDBY FLARE, WITH VAPOR PIPING FROM TANKS S-3088-9 THROUGH -16, -21 AND -22, GAS/LIQUID SEPARATORS, COMPRESSORS, HEAT EXCHANGERS, CONDENSATE PUMPS, FOUR SULFATREAT HP PACKED VESSELS, AND INCINERATION IN STEAM GENERATORS S-3088-7 OR -20, OR STANDBY FLARE
- S-3088-9-3: 1500 BBL FIXED ROOF CONSTANT LEVEL CRUDE OIL WASH TANK (1000-01) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8
- S-3088-10-3: 1000 BBL FIXED ROOF CRUDE OIL SHIPPING/REJECT TANK (T-1000-2) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8
- S-3088-11-3: 1000 BBL FIXED ROOF CRUDE OIL SHIPPING/REJECT TANK (T-1000-03) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8
- S-3088-12-3: 1000 BBL FIXED ROOF CRUDE OIL SHIPPING/REJECT TANK (T-1000-04) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8
- S-3088-13-3: 1000 BBL FIXED ROOF CRUDE OIL SHIPPING/REJECT TANK (T-1000-05) SERVED BY VAPOR CONTROL LISTED ON S-3088-8
- S-3088-14-4: 200 BBL FIXED ROOF CRUDE OIL SLOP TANK (T-3000-01) SERVED BY VAPOR CONTROL SYSTEM SHARED WITH S-3088-8
- S-3088-15-4: 250 BBL FIXED ROOF CRUDE OIL SLOP TANK (T-3000-02) SERVED BY VAPOR CONTROL SYSTEM SHARED WITH S-3088-8
- S-3088-16-4: 1000 BBL FIXED ROOF CRUDE OIL SLOP TANK (T-3000-03) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8
- S-3088-20-5: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS/WASTE GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE, ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION - CYPRESS LEASE
- S-3088-21-3: 1500 BBL CONSTANT LEVEL FIXED ROOF CRUDE OIL WASH TANK SERVED BY VAPOR CONTROL SYSTEM SHARED WITH S-3088-8
- S-3088-24-3: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS/WASTE GAS FIRED STEAM GENERATOR (#92 DIS# 27572-80) WITH NORTH AMERICAN MAGNA FLAME GLE ULTRA LOW NOX BURNER

# **Attachment B**

## **Exempt Equipment**

The following exempt equipment was identified by the applicant on TVFORM-003, Insignificant Activities

Exemption Category	Rule 2020 Citation	
Structure or incinerator assoc. with a structure designed as a dwelling for 4 families or less	4.1	
Locomotives, airplanes, and watercraft used to transport passengers or freight	4.4	
Natural gas or LPG-fired boilers or other indirect heat transfer units of 5 MMBtu/hr or less	6.1.1	✓
Piston-type i.c. engine with maximum continuous rating of 50 braking horsepower (bhp) or less	6.1.2	
Gas turbine engines with maximum heat input rating of 3 MMBtu/hr or less	6.1.3	
Space heating equipment other than boilers	6.1.4	
Cooling towers with a circulation rate less than 10,000 gal/min, and that are not used for cooling of process water, or water from barometric jets or condensers++	6.2	
Use of less than 2 gal/day of graphic arts materials	6.3	
Equipment at retail establishments used to prepare food for human consumption	6.4.1	
Ovens at bakeries with total daily production less than 1,000 pounds and exempt by sec. 6.1.1	6.4.3	
Equipment used exclusively for extruding or compression molding of rubber or plastics, where no plastisizer or blowing agent is used	6.5	
Containers used to store clean produced water	6.6.1	✓
Containers ≤100 bbl used to store oil with specific gravity ≥ 0.8762	6.6.2	
Containers ≤ 100 bbl installed prior to 6/1/89 used to store oil with specific gravity ≥ 0.8762	6.6.3	
Containers with a capacity ≤ 250 gallons used to store org-anic material where the actual storage temperature <150 F	6.6.4	✓
Containers used to store unheated organic material with an initial boiling point ≥ 302 F	6.6.5	
Containers used to store fuel oils or non-air-blown asphalt with specific gravity ≥0.9042	6.6.6	
Containers used to store petroleum distillates used as motor fuel with specific gravity ≥ 0.8251	6.6.7	

Exemption Category	Rule 2020 Citation	
Containers used to store refined lubricating oils	6.6.8	✓
Unvented pressure vessels used exclusively to store liquefied gases or assoc with exempt equipment	6.6.9 or 6.13	
Portable tanks used exclusively to store produced fluids for ≤ six months	6.6.10	✓
Mobile transport tanks on delivery vehicles of VOCs	6.6.11	
Loading racks used for the transfer of less than 4,000 gal/day of unheated organic material with initial boiling point ≥ 302 F or of fuel oil with specific gravity ≥ 0.8251	6.7.1.1	
Loading racks used for the transfer of asphalt, crude or residual oil stored in exempt tanks, or crude oil with specific gravity ≥ 0.8762	6.7.1.2	
Equipment used exclusively for the transfer of refined lubricating oil	6.7.2	
Equipment used to apply architectural coatings	6.8.1	
Unheated, non-conveyorized cleaning equipment with < 10 ft <sup>2</sup> open area; using solvents with initial boiling point ≥ 248 F; and < 25 gal/yr. evaporative losses	6.9	
Brazing, soldering, or welding equipment	6.10	✓
Equipment used to compress natural gas	6.11	
Fugitive emissions sources assoc. with exempt equipment	6.12	✓
Pits and Ponds as defined in Rule 1020	6.15	✓
On-site roadmix manufacturing and the application of roadmix as a road base material	6.17	✓
Emissions less than 2 lb/day from units not included above	6.19	✓
Venting PUC quality natural gas from for sole purpose of pipeline and compressor repair and or maintenance	7.2	
Non-structural repairs & maintenance to permitted equipment	7.3	✓
Detonation of explosives ≤ 100 lb/day and 1,000 lb/year	7.4	

# **ATTACHMENT C**

## **CURRENT PERMITS TO OPERATE (PTOs)**

# San Joaquin Valley Air Pollution Control District

**FACILITY:** S-3088-0-0

**EXPIRATION DATE:** 05/31/2014

## **FACILITY-WIDE REQUIREMENTS**

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1. Facilities S-3088 and S-2622 are included in the same stationary source. [District Rule 2201]
2. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rule 2080]

These terms and conditions are part of the Facility-wide Permit to Operate. Any amendments to these Facility-wide Requirements that affect specific Permit Units may constitute modification of those Permit Units.

Facility Name: TRC CYPRESS GROUP LLC

Location: HEAVY OIL WESTERN STATIONARY SOURCE, CA

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3088-4-0

**EXPIRATION DATE:** 05/31/2014

**SECTION:** 22 **TOWNSHIP:** 32S **RANGE:** 23E

**EQUIPMENT DESCRIPTION:**

250 BBL FIXED ROOF PETROLEUM STORAGE TANK (#T-250)

## PERMIT UNIT REQUIREMENTS

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The true vapor pressure (TVP) of liquids placed, stored, or held in the tank shall not exceed 1.5 psia at storage temperature. [District Rule 4623]
3. Crude oil throughput shall not exceed 50 barrels per day based on a monthly average. [District Rule 4623]
4. Permittee shall maintain monthly records of average daily crude oil throughput and shall submit such information to the APCO 30 days prior to the expiration date indicated in the Permit to Operate. [District Rule 4623]
5. 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]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-7-6

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/WASTE GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME G-LE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (CYPRESS LEASE)

## PERMIT UNIT REQUIREMENTS

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1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. Emissions rates from the unit shall not exceed any of the following limits: 15 ppmv NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.037 lb-PM10/MMBtu, 104 ppmv CO @ 3% O2 or 0.0757 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]
6. SOx emissions from this steam generator shall not exceed 328.5 lb/day. [District Rule 2201]
7. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]
8. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]
9. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
10. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306]
11. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306]
12. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306]
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306]
14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

15. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]
16. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]
18. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]
19. Permittee shall monitor H<sub>2</sub>S content of the gas prior to incineration in this steam generator on a daily basis utilizing Draeger tubes calibrated for H<sub>2</sub>S or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201]
20. The following calculation shall be used to show compliance with the SO<sub>x</sub> daily emissions limit:  $\text{lb SO}_x \text{ emitted/day} = (\text{volume of gas incinerated per day, in scf}) \times (\text{ppm H}_2\text{S prior to incineration}) \times (0.32)$ . [District Rule 2201]
21. Records of daily and weekly Draeger tube results for sulfur content as required by this permit, and daily natural gas and waste gas consumption volume in scf shall be maintained, retained on-site for a period of at least five years and made readily available for District inspection upon request. [District Rule 2201]
22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]
23. Source testing to measure NO<sub>x</sub> and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3088-8-10

**EXPIRATION DATE:** 05/31/2014

**SECTION:** SW22 **TOWNSHIP:** 32S **RANGE:** 23E

## **EQUIPMENT DESCRIPTION:**

THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 150 STEAM ENHANCED CRUDE OIL PRODUCTION WELLS AND 665 SCFM AIR ASSIST STANDBY FLARE, WITH VAPOR PIPING FROM TANKS S-3088-9 THROUGH -16, -21 AND -22, GAS/LIQUID SEPARATORS, COMPRESSORS, HEAT EXCHANGERS, CONDENSATE PUMPS, FOUR SULFATREAT HP PACKED VESSELS, AND INCINERATION IN STEAM GENERATORS S-3088-7 OR -20, OR STANDBY FLARE

## **PERMIT UNIT REQUIREMENTS**

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. VOC content of the vapor control system gas shall not exceed 10% by weight as determined in accordance with the latest revision of ASTM Methods D1945 for gases and South Coast AQMD Method 304-91 or the latest revision of ASTM Method E-168, E-169 or E-260 for liquids. [District Rules 2201 and 4401]
3. Thermally enhanced oil recovery operation shall include no more than 150 cyclically steam enhanced wells. [District Rule 2201]
4. Liquid from separators, heat exchangers, condensate collection vessels, compressor knockouts, and flare shall be piped only in closed piping to tanks with vapor control. [District Rule 2201]
5. Vapor control system gas shall be incinerated in steam generator S-3088-7 and S-3088-20 or standby John Zink model STF-LH-336-6/15 air assisted flare when steam generators are not operational. Flare shall be equipped with automatic re-ignition system. [District Rule 2201]
6. Flare shall operate smokelessly (i.e. visible emissions shall be less than 1/4 Ringelmann). [District Rule 4101]
7. No more than 0.958 MM scf/day of TEOR and/or TVR gas shall be incinerated in standby flare. [District Rule 2201]
8. Standby flare emissions shall not exceed any of the following limits: NOx: 0.068 lb/MMBtu, PM10: 0.008 lb/MMBtu, CO: 0.370 lb/MMBtu or VOC: 0.063 lb/MMBtu. [District Rule 2201]
9. SOx emissions from flare shall not exceed 207.6 lb/day based on mass balance calculation with H2S content and daily volume of the TEOR and/or TVR gas combusted. [District Rule 2201]
10. When the standby flare is being used, daily records shall be maintained of scrubbed vapor control system gas volume flow rate and sulfur content. [District Rule 2201]
11. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401]
12. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401]
13. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, component identification, record keeping, and notification requirements of Rule 4401 for all steam enhanced crude oil production wells at this facility except for those wells and components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

14. The inspection and re-inspection requirements set forth in Sections 5.8.1 through 5.8.5 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of 10% by weight or less [District Rule 4401]
15. The operator shall be in violation of Rule 4401 if any District inspection, or any operator inspection that is required by this rule, demonstrates that one or more of the leak standard conditions set forth in section 5.6.2 exists. [District Rule 4401, 5.6.1]
16. Operator shall conduct quarterly sampling of vapor recovery system gas. If vapor recovery system gas is shown to be less than 10% VOC by weight for 8 consecutive quarterly sampling, sampling shall only be required annually. [District Rule 2201]
17. The sulfur content of the scrubbed vapor control system gas shall be tested at least monthly. [District Rule 1081]
18. The sulfur content of the vapor control system gas being combusted in the flare shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 1081]
19. The flare flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311]
20. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311]
21. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311]
22. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311]
23. Permittee shall maintain a record of all vapor control system gas sample analysis conducted for VOC and sulfur content, the volume flow rate to the flare, and a current listing of the steam enhanced wells with casing vents connected to the well vent collection and control system. [District Rule 2201]
24. All records shall be maintained for a period of at least five years and made available for District inspection upon request. [District Rule 1070]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3088-9-2

**EXPIRATION DATE:** 05/31/2014

**SECTION:** SW22 **TOWNSHIP:** 32S **RANGE:** 23E

**EQUIPMENT DESCRIPTION:**

1500 BBL FIXED ROOF CONSTANT LEVEL CRUDE OIL WASH TANK (1000-01) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201]
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201]
3. 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]
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '16 and '21 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 tanks S-3088-8 through '16 and '21 in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623]
6. 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]
7. 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]
8. 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 Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '-16 and '-21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201]
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
13. 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 2201]
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201]
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201]
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201]
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201]
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201]
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201]
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201]
21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201]
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3088-10-2

**EXPIRATION DATE:** 05/31/2014

**SECTION:** SW22 **TOWNSHIP:** 32S **RANGE:** 23E

**EQUIPMENT DESCRIPTION:**

1000 BBL FIXED ROOF CRUDE OIL SHIPPING/REJECT TANK (T-1000-2) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201]
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201]
3. 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]
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '16 and '21 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 tanks S-3088-8 through '16 and '21 in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623]
6. 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]
7. 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]
8. 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 Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '-16 and '-21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201]
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
13. 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 2201]
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201]
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201]
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201]
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201]
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201]
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201]
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201]
21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201]
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3088-11-2

**EXPIRATION DATE:** 05/31/2014

**SECTION:** SW22 **TOWNSHIP:** 32S **RANGE:** 23E

**EQUIPMENT DESCRIPTION:**

1000 BBL FIXED ROOF CRUDE OIL SHIPPING/REJECT TANK (T-1000-03) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201]
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201]
3. 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]
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption form the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623]
6. 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]
7. 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]
8. 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 Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '-16 and '-21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201]
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
13. 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 2201]
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201]
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201]
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201]
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201]
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201]
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201]
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201]
21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201]
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-12-2

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

1000 BBL FIXED ROOF CRUDE OIL SHIPPING/REJECT TANK (T-1000-04) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201]
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201]
3. 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]
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623]
6. 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]
7. 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]
8. 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 Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '-16 and '-21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201]
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
13. 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 2201]
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201]
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201]
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201]
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201]
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201]
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201]
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201]
21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201]
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3088-13-2

**EXPIRATION DATE:** 05/31/2014

**SECTION:** SW22 **TOWNSHIP:** 32S **RANGE:** 23E

**EQUIPMENT DESCRIPTION:**

1000 BBL FIXED ROOF CRUDE OIL SHIPPING/REJECT TANK (T-1000-05) SERVED BY VAPOR CONTROL LISTED ON S-3088-8

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201]
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201]
3. 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]
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption form the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623]
6. 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]
7. 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]
8. 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 Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '16 and '21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201]
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
13. 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 2201]
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201]
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201]
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201]
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201]
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201]
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201]
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201]
21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201]
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-14-3

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

200 BBL FIXED ROOF CRUDE OIL SLOP TANK (T-3000-01) SERVED BY VAPOR CONTROL SYSTEM SHARED WITH S-3088-8

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201]
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201]
3. 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]
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '16 and '21 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 tanks S-3088-8 through '16 and '21 in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623]
6. 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]
7. 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]
8. 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 Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '-16 and '-21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201]
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
13. 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 2201]
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201]
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201]
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201]
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201]
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201]
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201]
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201]
21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201]
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3088-15-3

**EXPIRATION DATE:** 05/31/2014

**SECTION:** SW22 **TOWNSHIP:** 32S **RANGE:** 23E

**EQUIPMENT DESCRIPTION:**

250 BBL FIXED ROOF CRUDE OIL SLOP TANK (T-3000-02) SERVED BY VAPOR CONTROL SYSTEM SHARED WITH S-3088-8

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201]
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201]
3. 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]
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623]
6. 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]
7. 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]
8. 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 Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '16 and '21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201]
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
13. 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 2201]
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201]
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201]
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201]
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201]
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201]
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201]
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201]
21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201]
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-16-3

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

1000 BBL FIXED ROOF CRUDE OIL SLOP TANK (T-3000-03) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201]
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201]
3. 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]
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623]
6. 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]
7. 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]
8. 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 Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '16 and '21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201]
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
13. 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 2201]
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201]
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201]
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201]
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201]
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201]
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201]
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201]
21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201]
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-20-4

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS/WASTE GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE, ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION - CYPRESS LEASE

## PERMIT UNIT REQUIREMENTS

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1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. Testing for vapor recovery gas sulfur content shall be conducted no less than monthly. [District Rule 2201]
6. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 15 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.018 lb-NO<sub>x</sub>/MMBtu, 0.00285 lb-SO<sub>x</sub>/MMBtu, 0.0076 lb-PM<sub>10</sub>/MMBtu, 47.5 ppmvd CO @ 3% O<sub>2</sub> or 0.035 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]
7. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]
8. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]
9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]
11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]
12. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]
13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
14. NO<sub>x</sub> emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306]
15. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306]
16. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306]
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306]
18. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
19. The permittee shall keep daily records of the amount of natural gas and waste gas combusted, the sulfur content and higher heating value of each fuel, and the resulting calculated emissions of SO<sub>x</sub> (as SO<sub>2</sub>)/MMBtu. [District Rule 2201]
20. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]
21. Source testing to measure NO<sub>x</sub> and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3088-21-2

**EXPIRATION DATE:** 05/31/2014

**SECTION:** SW22 **TOWNSHIP:** 32S **RANGE:** 23E

**EQUIPMENT DESCRIPTION:**

1500 BBL CONSTANT LEVEL FIXED ROOF CRUDE OIL WASH TANK SERVED BY VAPOR CONTROL SYSTEM  
SHARED WITH S-3088-8

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201]
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201]
3. 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]
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption form the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623]
6. 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]
7. 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]
8. 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 Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '-16 and '-21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201]
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
13. 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 2201]
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201]
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201]
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201]
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201]
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201]
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201]
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201]
21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201]
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-24-2

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS/WASTE GAS FIRED STEAM GENERATOR (#92 DIS# 27572-80) WITH NORTH AMERICAN MAGNA FLAME GLE ULTRA LOW NOX BURNER

## PERMIT UNIT REQUIREMENTS

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1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. Emission rates from the unit shall not exceed any of the following limits: 0.028 lb-SO<sub>x</sub>/MMBtu, 0.058 lb-PM<sub>10</sub>/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rule 2201]
6. Except during startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 15 ppmv NO<sub>x</sub> @ 3% O<sub>2</sub>, or 47 ppmv CO @ 3% O<sub>2</sub>. [District Rules 2201, 4305, and 4306]
7. Emission rates during startup and shutdown shall not exceed: NO<sub>2</sub> - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301 and 4405]
8. Emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 54.0 lb/day or 9855 lb/year, CO: 52.5 lb/day. [District Rule 2201]
9. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305 and 4306]
10. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305 and 4306]
11. Source testing to measure natural gas-combustion NO<sub>x</sub> and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

12. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]
13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
15. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306]
16. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306]
17. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306]
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306]
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
20. Each fuel source shall be tested weekly for sulfur content and higher heating value using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H<sub>2</sub>S and mercaptans performed in the laboratory. If compliance with the sulfur emission limits has been demonstrated for 8 consecutive weeks, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. If the source of fuel is changed, weekly testing shall again be required as outlined in this permit condition. When source or type of fuel gas changes, sampling for sulfur content and heating value shall be conducted within one week. A change in fuel type is defined as changing between any of the following: crude oil, refined petroleum product, PUC-quality gas, unprocessed field gas or any field gas with any specific level of pretreatment. For certified fuel sources, permittee may use sulfur content analysis provided by the fuel supplier to meet testing requirements. [District Rule 2201]
21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]
22. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]
25. The permittee shall keep daily records of the amount of natural gas and waste gas combusted, the sulfur content and higher heating value of each fuel, and the resulting calculated emissions of SO<sub>x</sub> (as SO<sub>2</sub>)/MMBtu. [District Rule 2201]
26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]
27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO<sub>x</sub> emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO<sub>x</sub> emission limit listed in Rule 4320. [District Rule 4320]
28. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]
29. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

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

# **ATTACHMENT D**

## **DRAFT INITIAL TV PERMITS TO OPERATE (PTOs)**

# San Joaquin Valley Air Pollution Control District

FACILITY: S-3088-0-2

EXPIRATION DATE: 05/31/2014

## FACILITY-WIDE REQUIREMENTS

1. Facilities S-3088 and S-2622 are included in the same stationary source. [District Rule 2201] Federally Enforceable Through Title V Permit
2. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rule 2080] Federally Enforceable Through Title V Permit
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
5. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
6. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160] Federally Enforceable Through Title V Permit
7. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, and 2020] Federally Enforceable Through Title V Permit
8. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 2080; and 2520] Federally Enforceable Through Title V Permit
9. A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
10. Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040]

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate. Any amendments to these Facility-wide Requirements that affect specific Permit Units may constitute modification of those Permit Units.

Facility Name: TRC CYPRESS GROUP LLC  
Location: HEAVY OIL WESTERN STATIONARY SOURCE, CA  
S-3088-0-2; Apr 17 2012 12:45PM - TORID

11. The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520] Federally Enforceable Through Title V Permit
12. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520] Federally Enforceable Through Title V Permit
13. The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520] Federally Enforceable Through Title V Permit
14. Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520, 1100] Federally Enforceable Through Title V Permit
15. If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520] Federally Enforceable Through Title V Permit
16. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520] Federally Enforceable Through Title V Permit
17. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520] Federally Enforceable Through Title V Permit
18. The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520] Federally Enforceable Through Title V Permit
19. The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520] Federally Enforceable Through Title V Permit
20. The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520] Federally Enforceable Through Title V Permit
21. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520] Federally Enforceable Through Title V Permit
22. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520] Federally Enforceable Through Title V Permit
23. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

24. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
25. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
26. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in Table of Standards 1 effective until 12/30/10 or Table of Standards 2 effective on and after 1/1/11 of District Rule 4601 (12/17/09) for use or sale within the District. [District Rule 4601] Federally Enforceable Through Title V Permit
27. All VOC-containing materials subject to Rule 4601 (12/17/09) shall be stored in closed containers when not in use. [District Rule 4601] Federally Enforceable Through Title V Permit
28. The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (12/17/09). [District Rule 4601] Federally Enforceable Through Title V Permit
29. With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520] Federally Enforceable Through Title V Permit
30. If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
31. If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit
32. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8021 and 8011] Federally Enforceable Through Title V Permit
33. Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8031 and 8011] Federally Enforceable Through Title V Permit
34. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8041 and 8011] Federally Enforceable Through Title V Permit
35. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8051 and 8011] Federally Enforceable Through Title V Permit
36. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8061 and Rule 8011] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

37. Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rule 8071 and Rule 8011] Federally Enforceable Through Title V Permit
38. Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit
39. The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520] Federally Enforceable Through Title V Permit
40. The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520] Federally Enforceable Through Title V Permit
41. When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520] Federally Enforceable Through Title V Permit
42. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
43. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4601 (12/17/09); 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

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San Joaquin Valley  
Air Pollution Control District

PERMIT UNIT: S-3088-4-2

EXPIRATION DATE: 05/31/2014

SECTION: 22 TOWNSHIP: 32S RANGE: 23E

**EQUIPMENT DESCRIPTION:**

250 BBL FIXED ROOF PETROLEUM STORAGE TANK (#T-250)

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## PERMIT UNIT REQUIREMENTS

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1. The true vapor pressure (TVP) of liquids placed, stored, or held in the tank shall not exceed 1.5 psia at storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Crude oil throughput shall not exceed 50 barrels per day based on a monthly average. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Permittee shall maintain monthly records of average daily crude oil throughput and shall submit such information to the APCO 30 days prior to the expiration date indicated in the Permit to Operate. [District Rule 4623] Federally Enforceable Through Title V Permit
4. 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] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-7-7

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/WASTE GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME G-LE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (CYPRESS LEASE)

## PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Emissions rates from the unit shall not exceed any of the following limits: 15 ppmv NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.018 lb-NO<sub>x</sub>/MMBtu, 0.037 lb-PM<sub>10</sub>/MMBtu, 104 ppmv CO @ 3% O<sub>2</sub> or 0.0757 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
5. SO<sub>x</sub> emissions from this steam generator shall not exceed 328.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. An ATC application to modify this permit to comply with section 5.4 of Rule 4320 shall be submitted by 4/30/2012. [District Rule 4320] Federally Enforceable Through Title V Permit
7. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
8. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
10. NO<sub>x</sub> emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. Permittee shall monitor H<sub>2</sub>S content of the gas prior to incineration in this steam generator on a daily basis utilizing Draeger tubes calibrated for H<sub>2</sub>S or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit
20. The following calculation shall be used to show compliance with the SO<sub>x</sub> daily emissions limit:  $\text{lb SO}_x \text{ emitted/day} = (\text{volume of gas incinerated per day, in scf}) \times (\text{ppm H}_2\text{S prior to incineration}) \times (0.32)$ . [District Rule 2201] Federally Enforceable Through Title V Permit
21. Records of daily and weekly Draeger tube results for sulfur content as required by this permit, and daily natural gas and waste gas consumption volume in scf shall be maintained, retained on-site for a period of at least five years and made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

23. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-8-11

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 150 STEAM ENHANCED CRUDE OIL PRODUCTION WELLS AND 665 SCFM AIR ASSIST STANDBY FLARE, WITH VAPOR PIPING FROM TANKS S-3088-9 THROUGH -16, -21 AND -22, GAS/LIQUID SEPARATORS, COMPRESSORS, HEAT EXCHANGERS, CONDENSATE PUMPS, FOUR SULFATREAT HP PACKED VESSELS, AND INCINERATION IN STEAM GENERATORS S-3088-7 OR -20, OR STANDBY FLARE

## PERMIT UNIT REQUIREMENTS

1. VOC content of the vapor control system gas shall not exceed 10% by weight as determined in accordance with the latest revision of ASTM Methods D1945 for gases and South Coast AQMD Method 304-91 or the latest revision of ASTM Method E-168, E-169 or E-260 for liquids. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
2. Thermally enhanced oil recovery operation shall include no more than 150 cyclically steam enhanced wells. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Liquid from separators, heat exchangers, condensate collection vessels, compressor knockouts, and flare shall be piped only in closed piping to tanks with vapor control. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor control system gas shall be incinerated in steam generator S-3088-7 and S-3088-20 or standby John Zink model STF-LH-336-6/15 air assisted flare when steam generators are not operational. Flare shall be equipped with automatic re-ignition system. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Flare shall operate smokelessly (i.e. visible emissions shall be less than 1/4 Ringelmann). [District Rule 4101] Federally Enforceable Through Title V Permit
6. No more than 0.958 MM scf/day of TEOR and/or TVR gas shall be incinerated in standby flare. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Standby flare emissions shall not exceed any of the following limits: NOx: 0.068 lb/MMBtu, PM10: 0.008 lb/MMBtu, CO: 0.370 lb/MMBtu or VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. SOx emissions from flare shall not exceed 207.6 lb/day based on mass balance calculation with H2S content and daily volume of the TEOR and/or TVR gas combusted. [District Rule 2201] Federally Enforceable Through Title V Permit
9. When the standby flare is being used, daily records shall be maintained of scrubbed vapor control system gas volume flow rate and sulfur content. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
11. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, component identification, record keeping, and notification requirements of Rule 4401 for all steam enhanced crude oil production wells at this facility except for those wells and components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
13. The inspection and re-inspection requirements set forth in Sections 5.8.1 through 5.8.5 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of 10% by weight or less [District Rule 4401] Federally Enforceable Through Title V Permit
14. The operator shall be in violation of Rule 4401 if any District inspection, or any operator inspection that is required by this rule, demonstrates that one or more of the leak standard conditions set forth in section 5.6.2 exists. [District Rule 4401] Federally Enforceable Through Title V Permit
15. Operator shall conduct quarterly sampling of vapor recovery system gas. If vapor recovery system gas is shown to be less than 10% VOC by weight for 8 consecutive quarterly sampling, sampling shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The sulfur content of the scrubbed vapor control system gas shall be tested at least monthly. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The sulfur content of the vapor control system gas being combusted in the flare shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The flare flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
19. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311] Federally Enforceable Through Title V Permit
20. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311] Federally Enforceable Through Title V Permit
21. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311] Federally Enforceable Through Title V Permit
22. Permittee shall maintain a record of all vapor control system gas sample analysis conducted for VOC and sulfur content, the volume flow rate to the flare, and a current listing of the steam enhanced wells with casing vents connected to the well vent collection and control system. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All records shall be maintained for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-9-3

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

1500 BBL FIXED ROOF CONSTANT LEVEL CRUDE OIL WASH TANK (1000-01) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption form the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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 Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

Facility Name: TRC CYPRESS GROUP LLC  
Location: HEAVY OIL WESTERN STATIONARY SOURCE, CA

10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '-16 and '-21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
13. 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 2201] Federally Enforceable Through Title V Permit
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-10-3

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

1000 BBL FIXED ROOF CRUDE OIL SHIPPING/REJECT TANK (T-1000-2) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '16 and '21 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 tanks S-3088-8 through '16 and '21 in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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 Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '16 and '21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
13. 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 2201] Federally Enforceable Through Title V Permit
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-11-3

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

1000 BBL FIXED ROOF CRUDE OIL SHIPPING/REJECT TANK (T-1000-03) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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 Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '-16 and '-21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
13. 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 2201] Federally Enforceable Through Title V Permit
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-12-3

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

1000 BBL FIXED ROOF CRUDE OIL SHIPPING/REJECT TANK (T-1000-04) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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 Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '16 and '21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
13. 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 2201] Federally Enforceable Through Title V Permit
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

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21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-13-3

EXPIRATION DATE: 03/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

1000 BBL FIXED ROOF CRUDE OIL SHIPPING/REJECT TANK (T-1000-05) SERVED BY VAPOR CONTROL LISTED ON S-3088-8

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption form the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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 Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '16 and '21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
13. 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 2201] Federally Enforceable Through Title V Permit
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-14-4

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

200 BBL FIXED ROOF CRUDE OIL SLOP TANK (T-3000-01) SERVED BY VAPOR CONTROL SYSTEM SHARED WITH S-3088-8

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## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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 Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '16 and '21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
13. 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 2201] Federally Enforceable Through Title V Permit
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-15-4

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

250 BBL FIXED ROOF CRUDE OIL SLOP TANK (T-3000-02) SERVED BY VAPOR CONTROL SYSTEM SHARED WITH S-3088-8

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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 Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '16 and '21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
13. 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 2201] Federally Enforceable Through Title V Permit
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-16-4

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

1000 BBL FIXED ROOF CRUDE OIL SLOP TANK (T-3000-03) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-3088-8

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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 Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '16 and '21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
13. 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 2201] Federally Enforceable Through Title V Permit
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-20-5

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS/WASTE GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE, ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION - CYPRESS LEASE

## PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Testing for vapor recovery gas sulfur content shall be conducted no less than monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fuel gas sulfur content shall not exceed 5 gr S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Permittee shall determine sulfur content of combusted gas annually. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
7. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 15 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.018 lb-NO<sub>x</sub>/MMBtu, 0.00285 lb-SO<sub>x</sub>/MMBtu, 0.0076 lb-PM<sub>10</sub>/MMBtu, 47.5 ppmvd CO @ 3% O<sub>2</sub> or 0.035 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
8. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. NO<sub>x</sub> emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The permittee shall keep daily records of the amount of natural gas and waste gas combusted, the sulfur content and higher heating value of each fuel, and the resulting calculated emissions of SO<sub>x</sub> (as SO<sub>2</sub>)/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
21. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
22. Source testing to measure NO<sub>x</sub> and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

23. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
24. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3088-21-3

**EXPIRATION DATE:** 05/31/2014

**SECTION:** SW22 **TOWNSHIP:** 32S **RANGE:** 23E

**EQUIPMENT DESCRIPTION:**

1500 BBL CONSTANT LEVEL FIXED ROOF CRUDE OIL WASH TANK SERVED BY VAPOR CONTROL SYSTEM  
SHARED WITH S-3088-8

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## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC's collected from tank shall vent only to vapor control system S-3088-8. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored by tanks S-3088-8 through '-16 and '-21 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 tanks S-3088-8 through '-16 and '-21 in order to maintain exemption form the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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 Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the Compliance Section of the Southern Region of the SJVAPCD 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 Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling of gas from vapor recovery system serving tanks S-3088-8 through '-16 and '-21 upstream of TVR compressor # 1 (prior to connection to any other vapor control system). If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
13. 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 2201] Federally Enforceable Through Title V Permit
14. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All piping, fittings, and valves 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 provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit
18. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3088-24-3

EXPIRATION DATE: 05/31/2014

SECTION: SW22 TOWNSHIP: 32S RANGE: 23E

## EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS/WASTE GAS FIRED STEAM GENERATOR (#92 DIS# 27572-80) WITH NORTH AMERICAN MAGNA FLAME GLE ULTRA LOW NOX BURNER

## PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Emission rates from the unit shall not exceed any of the following limits: 0.028 lb-SO<sub>x</sub>/MMBtu, 0.058 lb-PM<sub>10</sub>/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
5. An ATC application to modify this permit to comply with section 5.4 of Rule 4320 shall be submitted by 4/30/2012. [District Rule 4320] Federally Enforceable Through Title V Permit
6. Except during startup and shutdown, emission rates from the unit shall not exceed any of the following limits: 15 ppmv NO<sub>x</sub> @ 3% O<sub>2</sub>. or 47 ppmv CO @ 3% O<sub>2</sub>. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
7. Emission rates during startup and shutdown shall not exceed: NO<sub>2</sub> - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301 and 4405] Federally Enforceable Through Title V Permit
8. Emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 54.0 lb/day or 9855 lb/year, CO: 52.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Source testing to measure NO<sub>x</sub> and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. NO<sub>x</sub> emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Each fuel source shall be tested weekly for sulfur content and higher heating value using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H<sub>2</sub>S and mercaptans performed in the laboratory. If compliance with the sulfur emission limits has been demonstrated for 8 consecutive weeks, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. If the source of fuel is changed, weekly testing shall again be required as outlined in this permit condition. When source or type of fuel gas changes, sampling for sulfur content and heating value shall be conducted within one week. A change in fuel type is defined as changing between any of the following: crude oil, refined petroleum product, PUC-quality gas, unprocessed field gas or any field gas with any specific level of pretreatment. For certified fuel sources, permittee may use sulfur content analysis provided by the fuel supplier to meet testing requirements. [District Rule 2201] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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22. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. The permittee shall keep daily records of the amount of natural gas and waste gas combusted, the sulfur content and higher heating value of each fuel, and the resulting calculated emissions of SO<sub>x</sub> (as SO<sub>2</sub>)/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO<sub>x</sub> emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO<sub>x</sub> emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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