



**MAR 09 2011**

John Ldwick  
Berry Petroleum Company  
5201 Truxton  
Bakersfield, CA 93309

**Re: Notice of Preliminary Decision - Federally Mandated Operating Permit  
District Facility # S-3585  
Project # S-1083911**

Dear Mr. Ldwick:

Enclosed for your review and comment is the District's analysis of Berry Petroleum's application for the Federally Mandated Operating Permit for its Heavy Oil Production Source located near Poso Creek in Kern County, 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. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Sincerely,

David Warner  
Director of Permit Services

cc: Kamaljit Sran, Permit Services Engineer

Attachments

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

---

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

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

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



MAR 09 2011

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-3585  
Project # S-1083911**

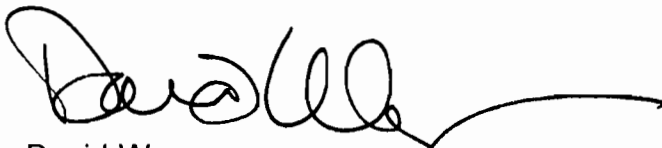
Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of Berry Petroleum's application for the Federally Mandated Operating Permit for its Heavy Oil Production Source located near Poso Creek in Kern County, 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. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Sincerely,



David Warner  
Director of Permit Services

cc: Kamaljit Sran, Permit Services Engineer

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MAR 09 2011

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-3585  
Project # S-1083911**

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Berry Petroleum's application for the Federally Mandated Operating Permit for its Heavy Oil Production Source located near Poso Creek in Kern County, 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. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Sincerely,



David Warner  
Director of Permit Services

cc: Kamaljit Sran, Permit Services Engineer

Attachments

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

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34946 Flyover Court  
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Tel: 661-392-5500 FAX: 661-392-5585

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 Berry Petroleum Company for its Heavy Oil Production Source located near Poso Creek in Kern County, California.

The District's analysis of the legal and factual basis for this proposed action, project #S-1083911, 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. Jim Swaney, Permit Services Manager, at (559) 230-5900. 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, 1990 E. GETTYSBURG AVE, FRESNO, CALIFORNIA 93726-0244.

**SANJOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT**

**TITLE V APPLICATION REVIEW  
BERRY PETROLEUM COMPANY  
FACILITY # S-3585**

**TABLE OF CONTENTS**

**I. PROPOSAL..... 1**

**II. FACILITY LOCATION ..... 1**

**III. EQUIPMENT LISTING ..... 1**

**IV. GENERAL PERMIT TEMPLATE USAGE..... 1**

**V. SCOPE OF EPA AND PUBLIC REVIEW..... 2**

**VI. APPLICABLE REQUIREMENTS ADDRESSED BY GENERAL PERMIT TEMPLATES..... 2**

**VII. APPLICABLE REQUIREMENTS NOT ADDRESSED BY GENERAL PERMIT TEMPLATES..... 2**

**VIII. REQUIREMENTS NOT FEDERALLY ENFORCEABLE..... 3**

**IX. COMPLIANCE..... 4**

**X. PERMIT SHIELD ..... 23**

**XI. PERMIT CONDITIONS..... 23**

**ATTACHMENT A (EQUIPMENT LISTING)..... A-1**

**ATTACHMENT B (EXEMPT EQUIPMENT LISTING AND ACTIVITIES LISTING)..... B-1**

**ATTACHMENT C (CURRENT DISTRICT PTOS & ATCS) ..... C-1**

# **Title V Application Review**

## **Heavy Oil Production**

Project #: 1083911

Deemed Complete: August 28, 2008

Engineer: Kamaljit Sran

Date: March 8, 2011

Facility Number: S-3585  
Facility Name: Berry Petroleum Company  
Mailing Address: 5201 Truxton Ave.  
Bakersfield, CA 93309

Contact Name: John Ludwick  
Phone: (661) 616-3900

Responsible Official: Tim Crawford  
Title: Vice President of CA Production

## **I. PROPOSAL**

Berry Petroleum Company is proposing that the initial Title V Operating Permit be issued for its existing heavy oil production source 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 near Poso Creek 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 is not requesting to use the any model general permit templates:

## V. SCOPE OF EPA AND PUBLIC REVIEW

Since applicant is not requested to use any model general permit templates, the proposed permit in it's entirety is subject to EPA and public review.

## VI. APPLICABLE REQUIREMENTS ADDRESSED BY GENERAL PERMIT TEMPLATES

The applicant has not proposed to utilize any model general permit templates. All applicable requirements are explicitly addressed in the permit outside of the general permit templates.

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

### District New and Modified Stationary Source Review Rule

District Rule 1070, Inspections (as amended December 17, 1992)

District Rule 1081, Source Sampling (as amended December 16, 1993)

District Rule 1100, Equipment Breakdown (as amended December 17, 1992)

District Rule 2010, Permits Required (as amended December 17, 1992)

District Rule 2020, Exemptions (as amended December 20, 2007)

District Rule 2031, Transfer Of Permits (as amended December 17, 1992)

District Rule 2040, Applications (as amended December 17, 1992)

District Rule 2070, Standards for Granting Applications (as amended December 17, 1992)

District Rule 2080, Conditional Approval (as amended December 17, 1992)

District Rule 2520, Federally Mandated Operating Permits (as amended June 21, 2001)

District Rule 4101, Visible Emissions (as amended December 17, 2005)

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

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 19, 2009)

District Rule 4401 Steam-Enhanced Crude Oil Production Well Vents (as  
amended December 14, 2006)

District Rule 4601, Architectural Coatings (as amended December 17, 2009)

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

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

## **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 41 of the facility wide requirements are based on the rules identified above and are not Federally Enforceable Through the Title V Permit.

2. District Rule 4320, Advanced Emission Reduction Options For Boilers, Steam Generators, and Process Heaters Greater Than 5.0 MMBtu/hr, (adopted October 16, 2008)

The purpose of this rule is to limit emissions of oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), oxides of sulfur (SO<sub>2</sub>), and particulate matter 10 microns or less (PM<sub>10</sub>) from boilers, steam generators, and process heaters.

The rule was adopted on October 16, 2008 and has not yet been approved into the State Implementation Plan (SIP). In addition, the deadline to meet compliance with the requirements of this rule has not yet passed. Therefore, the steam generators and heater treater in this project is not currently subject to the requirements of this rule, and the requirements of this rule will not be addressed in this evaluation.

3. District Rule 4311, Section 6.5 (as amended June 15, 2009)

The section 6.5 of the current version of Rule 4311 addresses the requirements for flare minimization plan. This section of the latest version of District Rule 4311 has not been SIP approved. In addition, the deadline to meet compliance with the requirements of this rule has not yet passed. Therefore, the flare permit unit S-3585-9-7 in this project is not currently subject to the requirements of this section of the rule, and the requirements of this rule will not be addressed in this evaluation

## **IX. COMPLIANCE**

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

The applicant has chosen to not use any general permit templates; therefore, no requirements are addressed by model general permit templates.

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

The applicant has not proposed to utilize any model general permit templates. All applicable requirements are explicitly addressed in the permit outside of the general permit templates

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

**a. Crude Oil Storage Tank (S-3585-1-5)**

Permit unit S-3585-1-5 was subject to the District NSR Rule at the time the applicant applied for an Authority to Construct. ATC S-3585-1-6 issued by the District on October 22, 2009.

- Condition 1 from the PTO was included as condition 39 of the facility wide requirements. This condition is not federally enforceable because it is based on the public nuisance requirements of the California Health and Safety Code rather than a federally applicable requirement.
- Condition 2 from the PTO was included as condition 8 of the requirements for this permit unit.
- Conditions 3 through 9 from the PTO were included as conditions 1 through 7 of the requirements for this permit unit.
- Condition 10 from the PTO was included as condition 9 of the requirements for this permit unit.
- Condition 11 from the PTO was included as condition 21 of the requirements for this permit unit.

**b. Crude Oil Storage Tanks (S-3585-2-2, -3-3, -4-3, -5-3, and -6-3)**

These permit units were subject to the District NSR Rule at the time the applicant applied for an Authority to Construct. In accordance with the White Paper for Streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 from the PTO was included as condition 22 of the facility wide requirements.
- Condition 2 from the PTO was included as condition 41 of the facility wide requirements. This condition is not federally enforceable because it is based on the public nuisance requirements of the California Health and Safety Code rather than a federally applicable requirement.
- Condition 3 from the PTO is not applicable condition for petroleum storage tanks, since these tanks do not have stack vents to measure sulfur compound emissions.
- Conditions 4 through 11 from the PTO assured compliance with District Rule 4623 and were included as conditions 1 through 8 of the requirements for these permit units.

c. Crude Oil Storage Tanks (S-3585-13-4, -14-3, and -25-2)

Permit units S-3585-13-4, -14-3, and -25-2 were subject to the District NSR Rule at the time the applicant applied for an Authority to Construct. ATCs S-2585-13-3, -14-2, and -25-1 were issued by the District on October 22, 2009.

- Condition 1 from the PTO was included as condition 39 of the facility wide requirements. This condition is not federally enforceable because it is based on the public nuisance requirements of the California Health and Safety Code rather than a federally applicable requirement.
- Condition 2 from the PTO was included as condition 8 of the requirements for this permit unit.
- Conditions 2 through 4 from the PTO were included as conditions 1 through 3 of the requirements for this permit unit.
- Condition 5 from the PTO was included as condition 15 of the requirements for this permit unit.

d. Crude Oil Storage Tank (S-3585-19-2)

This permit unit was subject to the District NSR Rule at the time the applicant applied for an Authority to Construct. In accordance with the White Paper for Streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 from the PTO was included as condition 22 of the facility wide requirements.
- Condition 2 from the PTO was included as condition 41 of the facility wide requirements. This condition is not federally enforceable because it is based on the public nuisance requirements of the California Health and Safety Code rather than a federally applicable requirement.
- Conditions 3 through 11 from the PTO assured compliance with District Rule 4623 and were included as conditions 1 through 9 of the requirements for this permit unit.

e. 84 MMBtu/hr Steam Generators (S-3585-8-5, -17-1, -24-1, and -28-2)

Permit units S-3585-8-5, -17-1, -24-1, and -28-2 were subject to the District NSR Rule at the time the applicant applied for an Authority to Construct. ATCs S-2585-8-6, -17-2, -24-2, and -28-1 were issued by the District on October 22, 2009.

- Condition 1 from the PTO was included as condition 22 of the facility wide requirements.
- Condition 2 from the PTO was included as condition 39 of the facility wide requirements. This condition is not federally enforceable because it is based on the public nuisance requirements of the California Health and Safety Code rather than a federally applicable requirement.
- Conditions 3 through 8 from the PTO were included as conditions 1 through 6 of the requirements for this permit unit.
- Condition 9 from the PTO was included as condition 9 of the requirements for this permit unit.
- Conditions 10 and 11 from the PTO were included as conditions 7 and 8 of the requirements for this permit unit.
- Conditions 12 through 27 from the PTO were included as conditions 10 and 25 of the requirements for this permit unit.

f. TEOR Operation serving 120 steam enhanced wells (S-3585-9-7)

Permit unit S-3585-9-7 was subject to the District NSR Rule at the time the applicant applied for an Authority to Construct. ATC S-3585-9-3 issued by the District on October 22, 2009.

- Condition 1 from the PTO was included as condition 22 of the facility wide requirements.
- Condition 2 from the PTO was included as condition 41 of the facility wide requirements. This condition is not federally enforceable because it is based on the public nuisance requirements of the California Health and Safety Code rather than a federally applicable requirement.
- Conditions 3 through 47 from the PTO were included as conditions 1 through 45 of the requirements for this permit unit.
- Conditions 48 through 49 from the PTO were included as condition 10 and 46 of the requirements for this permit unit.

g. 12.0 MMBtu/hr Heater Treater (S-3585-11-2)

Permit unit S-3585-11-0 was subject to the District NSR Rule at the time the applicant applied for an Authority to Construct. ATC S-3585-11-3 issued by the District on October 22, 2009.

- Condition 1 from the PTO was included as condition 22 of the facility wide requirements.
- Condition 2 from the PTO was included as condition 39 of the facility wide requirements. This condition is not federally enforceable because it is based on the public nuisance requirements of the California Health and Safety Code rather than a federally applicable requirement.
- Conditions 3 through 8 from the PTO were included as conditions 1 through 6 of the requirements for this permit unit.

- Condition 9 from the PTO was included as condition 9 of the requirements for this permit unit.
- Conditions 10 and 11 from the PTO were included as conditions 7 and 8 of the requirements for this permit unit.
- Conditions 12 through 23 from the PTO were included as conditions 10 and 21 of the requirements for this permit unit.

h. 85 MMBtu/hr Steam Generator (S-3585-12-1)

Permit unit S-3585-12-1 was subject to the District NSR Rule at the time the applicant applied for an Authority to Construct. ATC S-3585-12-2 issued by the District on October 22, 2009.

- Condition 1 from the PTO was included as condition 22 of the facility wide requirements.
- Condition 2 from the PTO was included as condition 39 of the facility wide requirements. This condition is not federally enforceable because it is based on the public nuisance requirements of the California Health and Safety Code rather than a federally applicable requirement.
- Condition 3 from the PTO was included as condition 1 of the requirements for this permit unit.
- Conditions 4 through 7 from the PTO were included as conditions 2 through 5 of the requirements for this permit unit.
- Condition 8 from the PTO was included as condition 8 of the requirements for this permit unit.
- Conditions 9 through 25 from the PTO were included as conditions 6 and 23 of the requirements for this permit unit.

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

a. Steam Generators (S-3585-8-5, -12-1, -17-1, 24-1, and -28-1) and Heater Treater (S-3585-11-2)

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 1, 11, 12, and 15 of the requirements for permit unit S-3585-8-5, -17-1, 24-1, and -28-1, 1, 10, 12, and 15 of requirements for permit unit S-3585-11-2; and 1, 8, 10, and 13 of the requirements for permit unit S-3585-12-1.

**3. District Rule 1100 Equipment Breakdown** (as amended December 17, 1992) - (Non SIP replacement for Kern County Rule 111)

a. Facility-wide (S-3585-0-1)

District Rule 1100 has been submitted to the EPA to replace the SIP approved Kern County APCD Rule 111. District Rule 1100 is at least as stringent as the County Rule addressing breakdowns, as is evident in the comparison on below in table 1:

**Table 1 - Comparison of District Rule 1100 to Kern County Rule 111**

REQUIREMENT	District Rule 1100	Kern County Rule 111
A breakdown occurrence must be reported as soon as reasonably possible but no later than 1 hour after detection.	✓	✓ (2 hours)
A variance must be obtained if the occurrence will last longer than a production run or 24 hours, whichever is shorter (96 hours for CEM systems)	✓	✓
A report must be submitted to the APCO within 10 days of correction of a breakdown occurrence which includes the following:	✓	✓
1) A statement that the breakdown condition has been corrected together with the date of correction and proof of compliance.	✓	✓
2) A specific statement of the reason(s) or cause(s) for the occurrence sufficient to enable the APCO to determine whether the occurrence was a breakdown condition.	✓	✓
3) A description of corrective measures undertaken and/or be undertaken to avoid such an occurrence in the future.	✓	✓
4) Pictures of the equipment or controls which, failed if available.	✓	✓

Section 6.1 requires the owner or operator to notify the APCO of any occurrence which constitutes a breakdown condition; the notification should include time, location, and equipment involved and to the extent known the cause of the occurrence. Such notification should be given as soon as reasonably possible, but no later than one hour after detection, unless the owner or operator demonstrates to the APCO that the longer reporting period was necessary. Condition 1 of facility-wide requirements (S-3585-0-1) assures compliance with this requirement.

Section 7.0 requires the owner or operator to submit the APCO a written report within ten days of any occurrence that constitutes a breakdown condition. The report should include time, location, equipment involved, cause of the occurrence, estimated emissions in excess of those allowed, and methods utilized to restore normal operation. Conditions 2 and 11 of facility-wide requirements (S-3585-0-1) assure compliance with this requirement.

**4. District Rule 1130 Severability (as amended December 17, 1992)**

a. Facility Wide (S-3585-0-1)

Section 2.0 requires that if any provision, clause, sentence, paragraph, section or part of these conditions for any reason be judged invalid, such judgment shall not affect or invalidate the remainder of conditions.

Condition 12 of facility wide requirements (S-3585-0-1) assures compliance with this requirement.

**5. District Rule 1160 Emission Standards** (adapted November 18, 1992)

a. Facility-wide (S-3585-0-1)

Section 5.0 requires the owner or operator of any stationary source to provide the District with a written emission statement showing actual emissions of reactive organic gases (ROGs) and nitrogen oxides (NO<sub>x</sub>) from that source. The District waives this requirement for sources emitting less than 25 tons per year of these pollutants if the District provides the Air Resources Board (ARB) with an emission inventory of sources emitting greater than 10 tons per year of NO<sub>x</sub> or ROGs based on the use of emission factors acceptable to the ARB. See condition 3 of the facility-wide requirements (S-3585-0-1).

**6. 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-3585-0-1)

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 4 of the facility wide requirements (S-3585-0-1).

**7. District Rule 2031 Transfer of Permits; District Rule 2070, Standards for Granting Applications; and District Rule 2080, Conditional Approval** (as amended December 17, 1992)

a. Facility Wide (S-3585-0-1)

These rules set forth requirements to comply with all conditions of the Permit to Operate. Permits to Operate or Authorities to Construct are not transferable unless a new application is filed with and approval by the District. All source operations must be constructed and operated as specified in the Authority to Construct. See conditions 5 and 6 of the facility wide requirements (S-3585-0-1).

**8. District Rule 2040 Applications** (as amended December 17, 1992)

a. Facility Wide (S-3585-0-1)

Section 3.0 requires that every application for a permit shall be filed in a manner and form prescribed by the District. See condition 7 of the facility wide requirements (S-3585-0-1).

**9. District Rule 2520 Federally Mandated Operating Permits** (as amended June 21, 2001)

a. Facility Wide (S-3585-0-1)

Section 5.2 requires that permittees submit applications for Title V permit renewal at least six months prior to permit expiration. Condition 36 of the facility wide requirements (S-3585-0-1) assures compliance with this requirement.

Section 9.3.2 states that periodic monitoring be required if none is associated with a given emission limit to assure compliance. Monitoring is required for the permit units. The following table shows permit units and conditions requiring periodic monitoring.

Table 6: Section 9.3.2 Condition Mapping

Permit Unit	Section 9.3.2
S-3585-1-5	13 through 20
S-3585-14-3, -16-3, & -25-1	4, 5, 7 through 14
S-3585-11-2	21
S-3585-12-1	24



Sections 9.4.1 and 9.4.2 contain requirements to incorporate all applicable record keeping requirements into the Title V permit, specific records of any required monitoring, and the retention of all required monitoring data and support information for five years. The requirements to keep specific monitoring records and retain records for five years are stated in condition 8 and 9 of the facility wide requirements (S-3585-0-1).

Section 9.5 contains requirements for the submittal of reports for monitoring results at least every six months and prompt recording of deviations from permitting requirements, including those attributable to upset conditions. All required reports must be certified by the responsible official. These requirements are stated in conditions 10 and 11 of the facility wide requirements (S-3585-0-1).

Section 9.7 states that the Title V permit also must contain a severability clause in case of a court challenge; the severability clause is in condition 12 of the facility wide requirements (S-3585-0-1).

Section 9.8 contains following provisions for the Title V permit: 1) the permittee must comply with all permit conditions; 2) that the permitted activity would have to be reduced to comply with the permit conditions should not be a defense in an enforcement action, 3) that the permit may be revoked, modified, reissued, or reopened for cause, 4) that the Title V permit does not reflect any property rights, and 5) that the permittee will furnish the District with any requested information to determine compliance. Compliance with this section will be assured by conditions 5 and 13 through 16 of the facility wide requirements S-3585-0-1.

Section 9.9 requires the permittee to pay annual permit fees and applicable fees described in District Rules 3010, 3030, 3050, 3080, 3090, 3110, and 3120. This requirement is stated in condition 17 of the facility wide requirements (S-3585-0-1).

Section 9.12.1 states that all terms and conditions of a permit are required pursuant to the CAA, including provisions designed to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. This requirement is stated in condition 5 of the facility wide (S-3585-0-1).

Section 9.13.1 requires that any report or document submitted under a permit requirement or following a request for information by the District or EPA to contain certification by a responsible official to its truth, accuracy, and completeness. Compliance with this section will be assured by condition 28 of the facility wide requirements (S-3585-0-1).

Section 9.13.2 presents inspection and entry requirements that allow an authorized representative of the District to enter a permittee's premises to

inspect equipment, operations, work practices, permits on file, and to sample substances or monitor parameters for the purpose of assuring compliance with the permit requirements. Compliance with these requirements will be assured by conditions 18, 19, 20, and 21 of the facility wide requirements (S-3585-0-1).

Section 9.16 requires the permittee to submit certification of compliance with the terms and standards of Title V permits to the EPA and the District annually (or more frequently as required by the applicable District requirement). Condition 36 of the facility wide requirements (S-3585-0-1) assures compliance with this requirement.

Section 10.0 requires that any application form, report or compliance certification submitted pursuant to these regulations to contain certification of truth, accuracy, and completeness by a responsible official. Compliance with this section will be assured by condition 26 of the facility wide requirements (S-3585-0-1).

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.

**10. District Rule 4101 Visible Emissions** (as amended February 17, 2005)

a. Facility Wide (S-3585-0-1)

Section 5.0 prohibits the discharge of any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker in shade as that designated as No.1 on the Ringlemann Chart; or is of such opacity as to obscure an observer's view to a degree equal to or greater than 20% opacity. This requirement is stated in condition 22 of the facility wide requirements (S-3585-0-1).

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

a. Steam Generators (S-3585-8-5, -12-1, -17-1, -24-1, and -28-2) and Heater Treater (S-3585-11-2)

The steam generators and heater treater within this facility fire on natural gas. The following equation 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:

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

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

$\frac{8710 \text{ dscf}}{\text{MMBtu}}$  = F factor, for natural gas at 0% O<sub>2</sub> (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.

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

- a. Steam Generators (S-3585-8-5, -12-1, -17-1, -24-1, and -28-2) and Heater Treater (S-3585-11-2)

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 on the permit units are shown in the following table.

Permit Unit	NO <sub>x</sub> Emission Limit	SO <sub>x</sub> Emission Limit	Condition #
S-3585-8-5	0.008 lb/MMBtu	0.0084 lb/MMBtu	2
S-3585-11-2	0.0108 lb/MMBtu	0.00285 lb/MMBtu	2
S-3585-12-1	0.008 lb/MMBtu	0.00285 lb/MMBtu	2
S-3585-17-1	0.008 lb/MMBtu	0.00298 lb/MMBtu	2
S-3585-24-1	0.008 lb/MMBtu	0.00298 lb/MMBtu	2
S-3585-28-2	0.008 lb/MMBtu	0.00298 lb/MMBtu	2

**13. 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.

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

- a. Steam Generators (S-3585-8-5, -12-1, -17-1, 24-1, and -28-2) and Heater Treater (S-3585-11-2)

Section 5.1.1 requires that all oilfield gas fired steam generators comply with 15 ppmv or 0.018 lb/MMBtu NO<sub>x</sub> and 400 ppmv carbon monoxide (CO) emissions shall not exceed the limits specified in the following table. Emission concentrations shall be corrected to 3.00 percent oxygen.

Permit conditions listing the emissions limits on the permit units are shown in the following table.

Permit Unit	NO <sub>x</sub> Emission Limit	CO Emission Limit	Condition #
S-3585-8-5	7 ppmv @ 3% O <sub>2</sub>	50 ppmv @ 3% O <sub>2</sub>	2
S-3585-11-2	15 ppmv @ 3% O <sub>2</sub>	200 ppmv @ 3% O <sub>2</sub>	2
S-3585-12-1	7 ppmv @ 3% O <sub>2</sub>	50 ppmv @ 3% O <sub>2</sub>	2
S-3585-17-1	7 ppmv @ 3% O <sub>2</sub>	35 ppmv @ 3% O <sub>2</sub>	2
S-3585-24-1	7 ppmv @ 3% O <sub>2</sub>	35 ppmv @ 3% O <sub>2</sub>	2
S-3585-28-2	7 ppmv @ 3% O <sub>2</sub>	35 ppmv @ 3% O <sub>2</sub>	2

The applicant is already using pre-approved alternate monitoring scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO<sub>x</sub>, CO, and O<sub>2</sub> exhaust concentrations shall be conducted at least once per month using a portable analyzer.

Permit conditions listing the alternate monitoring on the permit units are shown in the following table.

Permit Unit	Condition #s
S-3585-8-5, -17-1, -24-1, & -28-2	21 through 24
S-3585-11-2	16 through 19
S-3585-12-1	19 through 22

Section 5.5.1 requires that the operator of any unit shall have the option of complying with either the applicable heat input (lb/MMBtu) emission limits

or the concentration (ppmv) emission limits specified in Section 5.1. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant to Rule 1081 (Source Sampling).

Permit conditions listing the above requirement on the permit units are shown in the following table.

Permit Unit	Condition #s
S-3585-8-5, -17-1, -24-1, & -28-2	7
S-3585-11-2	8
S-3585-12-1	6

Section 5.5.2 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. 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:

Permit conditions listing the above requirement on the permit units are shown in the following table.

Permit Unit	Condition #s
S-3585-8-5, -17-1, -24-1, & -28-2	8
S-3585-11-2	9
S-3585-12-1	7

Section 5.5.5 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 limits:

Permit conditions listing the above requirement on the permit units are shown in the following table.

Permit Unit	Condition #s
S-3585-8-5, -17-1, -24-1, & -28-2	13
S-3585-11-2	13
S-3585-12-1	11

Section 6.2 identifies the following test methods as District-approved source testing methods for the pollutants listed:

Pollutant	Units	Test Method Required
NO <sub>x</sub>	ppmv	EPA Method 7E or ARB Method 100

NO <sub>x</sub>	lb/MMBtu	EPA Method 19
CO	ppmv	EPA Method 10 or ARB Method 100
Stack Gas O <sub>2</sub>	%	EPA Method 3 or 3A, or ARB Method 100
Stack Gas Velocities	ft/min	EPA Method 2
Stack Gas Moisture Content	%	EPA Method 4

Permit conditions listing the above requirement on the permit units are shown in the following table.

Permit Unit	Condition #s
S-3585-8-5, -17-1, -24-1, & -28-2	10
S-3585-11-2	11
S-3585-12-1	9

Section 6.3.1 requires that this unit be tested to determine compliance with the applicable requirements of section 5.1 and 5.2.3 not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to thirty-six months.

Permit conditions listing the above requirement on the permit units are shown in the following table.

Permit Unit	Condition #s
S-3585-8-5, -17-1, -24-1, & -28-2	6
S-3585-11-2	7
S-3585-12-1	5

**15. District Rule 4311 Flares (as amended June 15, 2009)**

**a. TOER Operation Serving 275 Wells (S-3585-9-7)**

Section 5.2 requires that a flame be present at all times when combustible gases are flared. Condition 1 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 2 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 3 of the requirements for this permit unit: assures compliance with this requirement.

Section 5.6 is applicable to air assist flares with gas pressure less than 5 psig. Condition 4 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.

Section 6.1 lists compliance requirements for flares subject to Section 5.6 and ground level flares and therefore is not applicable.

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

a. TOER Operation Serving 120 Wells (S-3585-9-7)

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.

**17. District Rule 4601 Architectural Coatings** (as amended December 17, 2009)

a. Facility Wide (S-3585-0-1)

The latest version of District Rule 4601 has not been SIP approved. Attachment F contains the streamlining of the SIP approved District Rule 4601 (10/31/01) to the current District Rule 4601 to show the current rule is as stringent if not more than the SIP approved version. Conditions 23 through 25 on the facility-wide permit (S-3585-0-1) demonstrate compliance with the requirements of the latest version of this rule.

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

a. Oil Storage Tanks (S-3585-1-5, -2-2, -3-3, -4-3, -5-3, -6-3, and -19-2)

This rule applies to equipment used to store organic liquids with a true vapor pressure of greater than 0.5 psia and design capacity greater than 1100 gallons, pursuant to section 2.0, Applicability. The uncontrolled tanks have conditions requiring TVP of stored liquids not to exceed 0.5 psia, periodic testing of TVP, and recordkeeping. Compliance with these requirements are assured by condition 1 through 8 of the requirements for these permit units.

**19. District Rule 4801 - Sulfur Compounds** (as amended December 17, 1992)



- a. Steam Generators (S-3585-8-5, -12-1, -17-1, and 24-1) and Heater Treater (S-3585-11-2)

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 engines 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:

$$\begin{aligned} N &= \text{moles SO}_2 \\ T \text{ (Standard Temperature)} &= 60^\circ\text{F} = 520^\circ\text{R} \\ P \text{ (Standard Pressure)} &= 14.7 \text{ psi} \\ R \text{ (Universal Gas Constant)} &= \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \end{aligned}$$

SO<sub>x</sub> emissions from the steam generators are based on combusting the fuel with a total fuel sulfur (S) content of 1.0 grain per 100 scf, which results in a SO<sub>x</sub> emission rate of 0.00285 lb/MMBtu

$$\frac{0.00285 \text{ lb SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \text{ parts}}{\text{million}} = 1.97 \frac{\text{parts}}{\text{million}}$$

$$\text{Sulfur Concentration} = 1.97 \frac{\text{parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)}$$

**20. 40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

- a. Steam Generators (S-3585-8-5, -12-1, -17-1, and 24-1), Heater Treater (S-3585-11-2)

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 (SOx) 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.

**21. District Rules 8021, 8031, 8041, 8051, 8061, and 8071 Fugitive Dust (PM<sub>10</sub>)Emissions (as amended September 17, 2004)**

- a. Facility Wide (S-3585-0-1)

These rules contain requirements for the control of fugitive dust. These requirements apply to a variety of sources, including: construction, demolition, excavation, extraction, and water mining activities; outdoor storage piles; paved and unpaved roads. Conditions 29, 30, 31, 32, 33 and 34 of the facility wide requirements (S-3585-0-1) assure compliance with these rules.

**22. 40 CFR 82 Subpart B & F - Stratospheric Ozone**

- a. Facility Wide (S-3585-0-1)

These are applicable requirements from Title VI of the CAA (Stratospheric Ozone) which apply to all sources. The requirements pertain to air conditioners, chillers, and refrigerators located at a Title V source and to disposal of air conditioners or maintenance/recharging/disposal of motor vehicle air conditioners. Conditions 27 & 28 of the facility wide requirements (S-3585-0-1) address these requirements.

**23. 40 CFR 61, Subpart M - Asbestos**

- a. Facility Wide (S-3585-0-1)

These are applicable requirements from the National Emissions Standards for Hazardous Air Pollutants, which apply to all sources. The requirements pertain to asbestos removal and disposal from renovated or demolished structures. Compliance with these requirements is assured by condition 35 of the facility wide requirements (S-3585-0-1).

**24. 40 CFR 68 Risk Management Plans**

a. Facility Wide (S-3585-0-1)

This rule sets forth planning and reporting requirements for preventing possible accidental release of regulated substances or other extremely hazardous substances. This includes the preparation and implementation of a Risk Management Plan by June 21, 1999, if the facility stores substances listed in 40 CFR 68.130 in quantities above threshold levels. Condition 42 of the facility wide requirements (S-3585-0-1) assures compliance with this requirement.

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

a. Steam Generators (S-3585-8-5, -12-1, -17-1, and 24-1), Heater Treater (S-3585-11-2)

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 85 MMBtu/hr unit is calculated as shown below.

$$0.018 \text{ lb/MMBtu} \times 85 \text{ MMBtu/hr} \times 8,760 \text{ hrs/year} = 13,403 \text{ lb/year}$$

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 Operating Permits.

# San Joaquin Valley Air Pollution Control District

FACILITY: S-3585-0-1

EXPIRATION DATE: 04/30/2014

## FACILITY-WIDE REQUIREMENTS

1. 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, 6.1 and Kern County Rule 111] Federally Enforceable Through Title V Permit
2. 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, 7.0 and Kern County Rule 111] Federally Enforceable Through Title V Permit
3. {2287} 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, 5.0] Federally Enforceable Through Title V Permit
4. {2288} 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 (3/21/02). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. {2289} 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, 7.0; 2080; and 2520, 9.8.1 and 9.12.1] Federally Enforceable Through Title V Permit
6. {2290} 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
7. {2291} 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] Federally Enforceable Through Title V Permit
8. {2292} 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, 9.4.1] Federally Enforceable Through Title V Permit
9. {2293} 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, 9.4.2] 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. Any amendments to these Facility-wide Requirements that affect specific Permit Units may constitute modification of those Permit Units.

Facility Name: BERRY PETROLEUM COMPANY  
Location: HEAVY OIL CENTRAL STATIONARY SOURCE, CA  
S-3585-0-1: Oct 11 2010 1:17PM -- SRANK

10. {2294} 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, 9.5.1] Federally Enforceable Through Title V Permit
11. {2295} 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, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit
12. {2296} 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, 9.7] Federally Enforceable Through Title V Permit
13. {2297} 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, 9.8.2] Federally Enforceable Through Title V Permit
14. {2298} 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, 9.8.3] Federally Enforceable Through Title V Permit
15. {2299} The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit
16. {2300} 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, 9.8.5] Federally Enforceable Through Title V Permit
17. {2301} 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, 9.9] Federally Enforceable Through Title V Permit
18. {2302} 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, 9.13.2.1] Federally Enforceable Through Title V Permit
19. {2303} 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, 9.13.2.2] Federally Enforceable Through Title V Permit
20. {2304} 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, 9.13.2.3] Federally Enforceable Through Title V Permit
21. {2305} 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, 9.13.2.4] Federally Enforceable Through Title V Permit
22. 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 (2/17/05). 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 Kern County Rule 401] 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.

23. 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 the Table of Standards of District Rule 4601 (12/17/09) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit
24. All VOC-containing materials for architectural coatings subject to Rule 4601 (12/17/09) shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit
25. 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, 6.1 and 6.3] Federally Enforceable Through Title V Permit
26. {2310} 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, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit
27. {2311} 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 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
28. {2312} 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 82, Subpart B. [40 CFR 82, Subpart B] Federally Enforceable Through Title V Permit
29. 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
30. 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
31. 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
32. 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
33. 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
34. 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 (9/17/2004) or Rule 8011 (8/19/2004). [District Rule 8071 and Rule 8011] Federally Enforceable Through Title V Permit
35. {2319} 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

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

36. {2320} 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, 9.16] Federally Enforceable Through Title V Permit
37. {2321} 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, 5.2] Federally Enforceable Through Title V Permit
38. {2322} 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, 9.1.1] Federally Enforceable Through Title V Permit
39. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
40. When applicable to 40 CFR Part 68, a subject facility shall submit to the proper authority a Risk Management Plan when mandated by the regulation. [40 CFR Part 68] Federally Enforceable Through Title V Permit
41. On {MONTH DAY, YEAR}, the initial Title V permit was issued. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report are based upon this initial permit issuance date, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [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-3585-1-5

EXPIRATION DATE: 04/30/2014

SECTION: 14 TOWNSHIP: 27S RANGE: 27E

## EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF WASH TANK #WT-1 WITH VAPOR RECOVERY SYSTEM INCLUDING COMPRESSOR SHARED WITH TANKS S-3585-13, -14 AND -25, HEATER TREATERS V-200 (PEER 1-0) AND -11, WEMCO -16 AND THREE FWKOS, VENTED TO TEOR OPERATION S-3585-9

## PERMIT UNIT REQUIREMENTS

1. 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 2201 and 4623] Federally Enforceable Through Title V Permit
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
3. 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
4. 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
5. 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
6. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
7. 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
8. VOC emissions from the components associated with the tank vapor recovery system shall not exceed 110.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rules 2201 and 1070] Federally Enforceable Through Title V Permit
10. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Operator shall monitor vapor control system pressures on a quarterly basis to ensure that system pressure does not exceed pressure relief valve setting [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. A Leak-Free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 (amended May 19, 2005) and shall be reported as a deviation. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minutes. [District Rule 4623, 3.11, 3.17, 3.18 and 6.4.8] Federally Enforceable Through Title V Permit
13. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2520, 9.3.2] 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
18. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
19. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. 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
22. Formerly permit number S-1632-6-0.

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-3585-2-2

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

ONE 126,000 GALLON FIXED ROOF WASH TANK #WT-2

## PERMIT UNIT REQUIREMENTS

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1. 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
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
3. 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
4. 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
5. 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
6. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
7. 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
8. 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
9. Formerly permit number S-1632-7-0.

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3585-3-3

EXPIRATION DATE: 04/30/2014

SECTION: 14 TOWNSHIP: 27S RANGE: 27E

## EQUIPMENT DESCRIPTION:

ONE 84,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK #20S302

## PERMIT UNIT REQUIREMENTS

1. 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
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
3. 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
4. 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
5. 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
6. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
7. 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
8. 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
9. Formerly permit number S-1632-8-0.

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-4-3

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

ONE 84,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK #20S284

## PERMIT UNIT REQUIREMENTS

1. 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
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
3. 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
4. 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
5. 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
6. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
7. 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
8. 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
9. Formerly permit number S-1632-9-0.

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-5-3

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

ONE 84,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK #20S283

**EXPIRATION DATE:** 04/30/2014

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## PERMIT UNIT REQUIREMENTS

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1. 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
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
3. 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
4. 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
5. 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
6. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
7. 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
8. 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
9. Formerly permit number S-1632-10-0.

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-3585-6-3

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

ONE 84,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK #20S285

## PERMIT UNIT REQUIREMENTS

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1. 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
2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
3. 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
4. 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
5. 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
6. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
7. 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
8. 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
9. Formerly permit number S-1632-11-0.

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3585-8-5

EXPIRATION DATE: 04/30/2014

SECTION: 14 TOWNSHIP: 27S RANGE: 27E

## EQUIPMENT DESCRIPTION:

84 MMBTU/HR THERMOTICS NATURAL & TEOR GAS-FIRED STEAM GENERATOR W/ MAGNA FLAME MODEL 4231-85-GLE-X2631 BURNER, FGR, AND RADAC O2 CONTROLLER

## PERMIT UNIT REQUIREMENTS

1. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
2. Emissions shall not exceed any of the following limits: 7 ppmv-NOx @ 3% O2 (0.008 lb/MMBtu), 0.0084 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmv-CO @ 3% O2 (0.037 lb-CO/MMBtu) or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rules 4201] Federally Enforceable Through Title V Permit
4. The sulfur content of the gas combusted in this steam generator shall be reduced by a minimum of 95% or to a concentration not to exceed 2.95 grains/100 dscf. [District Rules 2201, 4320 and 4801] Federally Enforceable Through Title V Permit
5. The gas incinerated in this steam generator shall be tested for sulfur content every week in which it burns non-PUC certified gas, during the time that it is burning the non-PUC certified gas. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive sulfur tests, then the fuel sulfur testing frequency shall be semi-annually. If a semi-annual fuel sulfur test fails to show compliance, weekly testing shall resume as indicated above until compliance with the sulfur limits can be demonstrated for 8 consecutive sulfur tests. If the unit is not operated on any non-PUC certified gas during the interval between the semi-annual sulfur testing, the test need not be performed until the unit is operated on fuel that contains non-PUC certified gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Source testing to measure natural gas-combustion NOx 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, 4306 and 4320] Federally Enforceable Through Title V Permit
7. 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
8. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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



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. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall determine sulfur content of gas combusted in this steam generator using ASTM method D3246 or double GC for H<sub>2</sub>S and mercaptans or Draeger tube analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
12. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] 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 fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. 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
16. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO<sub>x</sub> and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO<sub>x</sub> and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The following conditions must be met for representative unit(s) to be used to test for NO<sub>x</sub> and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. All units in a group for which representative units are source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. All units in a group for which representative units are source tested for NO<sub>x</sub> and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches at any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306 and 4320] 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

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

22. 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
23. 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
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. 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

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-3585-9-7

EXPIRATION DATE: 04/30/2014

SECTION: 14 TOWNSHIP: 27S RANGE: 27E

## EQUIPMENT DESCRIPTION:

TEOR OPERATION WITH CASING GAS COLLECTION SYSTEM WITH SULFUR TREATMENT SYSTEM SERVING 275 STEAM-ENHANCED WELLS CONNECTED TO TANK VAPOR RECOVERY SYSTEM S-3585-1 AND VENTED TO A FLARE AND/OR STEAM GENERATORS -8, -17, -24 AND -28

## PERMIT UNIT REQUIREMENTS

1. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
2. The 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
3. 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. 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
4. Flare gas pressure shall be greater than or equal to 5 psig. [District Rules 4001 and 4311] Federally Enforceable Through Title V Permit
5. Air-assist blower shall be maintained and operated for smokeless combustion. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
6. Flare shall be equipped with operational produced gas volume flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The total number of leaks in the TEOR system shall not exceed 15. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
8. There shall be no components with any gas leaks greater than 50,000 ppmv. [District Rule 4401] Federally Enforceable Through Title V Permit
9. Pilot gas flow rate to flare shall not exceed 1,500 scf per day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Flow rate of collected casing gas and tank vapor recovery gas to the flare shall not exceed 251,580 scf per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Pilot shall be fired only on PUC quality natural gas containing no more than 1 grain-S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The weight percentage of VOC in the total organic compounds in the TEOR gas shall not exceed 52%. [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.

13. Sulfur compounds of casing gas and tank vapor recovery gas shall be reduced by a minimum of 95% across the sulfur treatment system or to an outlet concentration not exceeding 2.91 grain/100 scf. Compliance with sulfur treatment system control efficiency or outlet concentration limit shall be demonstrated annually by measuring the inlet and/or outlet flows to the treatment system, as appropriate. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Emissions from the flare shall not exceed any of the following limits: 67.9 lb-NO<sub>x</sub>/MMscf, 8.3 lb-SO<sub>x</sub>/MMscf, 7.9 lb-PM<sub>10</sub>/MMscf, 369.8 lb-CO/MMscf, or 63.1 lb-VOC/MMscf. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Fugitive emissions from the TEOR system shall not exceed 58.4 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Un-condensable vapors from these steam enhanced wells shall be incinerated in the flare and/or steam generators S-3585-8 (J401), -17 (J403) -24 (J404) and -28 (J405). [District Rule 2201] Federally Enforceable Through Title V Permit
17. The gas being flared shall be tested for sulfur content every week in which it operates. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive sulfur tests, then the fuel sulfur testing frequency shall be semi-annually. If a semi-annual fuel sulfur test fails to show compliance, weekly testing shall resume as indicated above until compliance with the sulfur limits can be demonstrated for 8 consecutive sulfur tests. If the unit is not operated during the interval between the semi-annual sulfur testing, the test need not be performed until the unit is operated again. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The sulfur content of the gas being flared 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 2201] Federally Enforceable Through Title V Permit
19. The TEOR gas shall be tested annually for VOC content. [District Rule 2201] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Any open steam-enhanced crude oil production well vents shall be connected to a VOC collection and control system that has a VOC destruction or removal efficiency of at least 99%. [District Rule 4401] Federally Enforceable Through Title V Permit
22. There shall be no open ended lines or valves located at the end of any lines that are not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
23. Unless otherwise specified, an operator shall perform all component inspections and gas leak measurements pursuant to the requirements of Section 6.3.3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
24. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401] Federally Enforceable Through Title V Permit
25. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but no later than any of the following limits: 14 calendar days for minor gas leaks, 5 calendar days for major gas leaks between 10,000 ppm and 50,000 ppmv, 2 calendar days for major gas leaks in excess of 50,000 ppmv, 3 calendar days for minor liquid leaks and 2 calendar days for major liquid leaks. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

26. An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but no later than any of the following limits: 14 calendar days for minor gas leaks, 5 calendar days for major gas leaks between 10,000 ppm and 50,000 ppmv, 2 calendar days for major gas leaks in excess of 50,000 ppmv, 3 calendar days for minor liquid leaks and 2 calendar days for major liquid leaks. [District Rule 4401] Federally Enforceable Through Title V Permit
27. An operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. An operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
28. An operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
29. Except for PRDs subject to the requirements of Section 5.8.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
30. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
31. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
32. Upon detection of a leaking component, the operator shall affix to that component a weatherproof, readily visible tag, bearing the date and time when the leak was detected, the date and time of the leak measurement, and the concentration in ppmv. The tag shall remain in place until the leaking component is repaired or replaced and reinspected (using EPA test method 21) and found to be in compliance with the requirements of this rule. [District Rule 4401] Federally Enforceable Through Title V Permit
33. The operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit
34. If an operator has minimized a leak in a non-critical or non-essential component, but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall either repair or replace the leaking component, vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation as soon as practicable, but no later than any of the following limits: 14 calendar days for minor gas leaks, 5 calendar days for major gas leaks between 10,000 ppm and 50,000 ppmv, 2 calendar days for major gas leaks in excess of 50,000 ppmv, 3 calendar days for minor liquid leaks and 2 calendar days for major liquid leaks. [District Rule 4401] Federally Enforceable Through Title V Permit
35. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of Rule 4401, the operator shall repair or replace the essential component or critical component 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, whichever comes earlier. [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.

36. An operator shall maintain records required by Section 6.1, including all of the following information: 1) The date and well identification where steam injection or well stimulation occurs, 2) The inspection log pursuant to Section 6.4 of Rule 4401, 3) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration, 4) Copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401, 5) A copy of the APCO-approved Operator Management Plan at the facility, 6) A list of all gauge tanks including the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment, and 8) The date that any PRD release is discovered, and the identity and location of the PRD that released. [District Rule 4401] Federally Enforceable Through Title V Permit
37. An operator shall maintain an inspection log that includes all of the following data: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type, 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found, 3) The date of leak detection and the method of leak detection, 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak, 5) The date of repair, replacement, or removal from operation of leaking components, 6) The identity and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, 9) The inspector's name, business mailing address, and business telephone number, and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
38. An operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
39. An operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO, using diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required. The OMP shall include all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to Rule 4401, and all wells and all associated VOC collection and control systems that are exempt pursuant to Section 4.0 of Rule 4401, 2) Identification and description of any known hazard that might affect the safety of an inspector, 3) Except for pipes, the number of components that are subject to Rule 4401 by component type, 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to Rule 4401 and the reasons for such designation, 5) Except for pipes, the location of components subject to Rule 4401 (components may be grouped together functionally by process unit or facility description), 6) Except for pipes, components exempt pursuant to Section 4.8 of Rule 4401 (except for components buried below ground) may be described in the OMP by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.8 of Rule 4401 shall be submitted with the OMP, 7) A detailed schedule of an operator's inspections of components to be conducted as required by Rule 4401 and whether the required operator inspections of components will be performed by a qualified contractor or by an in-house team, 8) A description of the training standards for personnel that inspect and repair components, and 9) A description of the leak detection training for conducting the test method specified in Section 6.3.3 of Rule 4401 for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
40. No provision of the Operator Management Plan, approved or not, shall conflict with or take precedence over any provision of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
41. An operator shall submit information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [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.

42. By January 30 of each year, an operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to an existing Operator Management Plan. [District Rule 4401] Federally Enforceable Through Title V Permit
43. Daily records of the amount of gas combusted in the flare shall be maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
44. Records of all TEOR gas sulfur and VOC content analyses shall be maintained. [District Rules 2201] Federally Enforceable Through Title V Permit
45. Permittee shall maintain with the permit a list of all steam enhanced wells connected to the TEOR system, and an accurate fugitive component count and the resulting emissions calculated pursuant to CAPCOA document, "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c, "Oil and Gas Production," using screening value ranges emission factors. [District Rule 2201] Federally Enforceable Through Title V Permit
46. All records shall be retained for a period of at least 5 years and shall be made available for District inspection, California Air Resources Board (ARB), and EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3585-11-2

EXPIRATION DATE: 04/30/2014

SECTION: 14 TOWNSHIP: 27S RANGE: 27E

## EQUIPMENT DESCRIPTION:

12.0 MMBTU/HR NATURAL GAS-FIRED CE NATCO HEATER TREATER WITH TWO 6.0 MMBTU/HR MAXON MODEL M-PAKT EB-6 LOW-NOX BURNERS

## PERMIT UNIT REQUIREMENTS

1. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
2. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 (0.018 lb/MMBtu), 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 200 ppmvd CO @ 3% O2 (0.148 lb/MMBtu), or 0.0055 lb-VOC/MMBtu. [District Rule 2201]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rules 4201] Federally Enforceable Through Title V Permit
4. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive emissions from the components that connect this unit to the vapor recovery system (S-3585-1) shall not exceed 5.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
7. Source testing to measure natural gas-combustion NOx 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, 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]
9. 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
10. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] 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 fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. 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
16. 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
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. 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
19. 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
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, 4306 and 4320] Federally Enforceable Through Title V Permit
21. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3585-12-1

EXPIRATION DATE: 04/30/2014

SECTION: NW14 TOWNSHIP: 27S RANGE: 27E

## EQUIPMENT DESCRIPTION:

85 MMBTU/HR PCL IDENTIFICATION #POSO-J402 NATURAL GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL LE LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR), AND O2 CONTROLLER

## PERMIT UNIT REQUIREMENTS

1. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
2. Emissions from the unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 (0.008 lb/MMBtu), 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 (0.037 lb/MMBtu), or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rules 4201] Federally Enforceable Through Title V Permit
4. The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
5. Source testing to measure natural gas-combustion NOx 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, 4306 and 4320] Federally Enforceable Through Title V Permit
6. 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
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. 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
9. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] 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. 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
12. The fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. 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
14. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All units in a group for which representative units are source tested for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches at any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 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
20. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. 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
22. 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
23. 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
24. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3585-13-4

EXPIRATION DATE: 04/30/2014

SECTION: 14 TOWNSHIP: 27 S RANGE: 27 E

## EQUIPMENT DESCRIPTION:

5,000 BBL PETROLEUM STORAGE TANK #T-100 VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-3585-1

## PERMIT UNIT REQUIREMENTS

1. Fugitive emissions shall not exceed 12.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
4. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. Operator shall monitor vapor control system pressures on a quarterly basis to ensure that system pressure does not exceed pressure relief valve setting [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. A Leak-Free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 (amended May 19, 2005) and shall be reported as a deviation. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minutes. [District Rule 4623, 3.11, 3.17, 3.18 and 6.4.8] Federally Enforceable Through Title V Permit
7. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. 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 2520, 9.3.2] 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. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. 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-3585-14-3

EXPIRATION DATE: 04/30/2014

SECTION: 14 TOWNSHIP: 27S RANGE: 27E

**EQUIPMENT DESCRIPTION:**

10,000 BBL PETROLEUM STORAGE TANK #TK-10 VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-3585-1

## PERMIT UNIT REQUIREMENTS

1. Fugitive emissions shall not exceed 12.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
4. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. Operator shall monitor vapor control system pressures on a quarterly basis to ensure that system pressure does not exceed pressure relief valve setting [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. A Leak-Free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 (amended May 19, 2005) and shall be reported as a deviation. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minutes. [District Rule 4623, 3.11, 3.17, 3.18 and 6.4.8] Federally Enforceable Through Title V Permit
7. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. 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 2520, 9.3.2] 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. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. 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-3585-16-3

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

600 BBL WEMCO UNIT VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-3585-1

## PERMIT UNIT REQUIREMENTS

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1. Fugitive emissions shall not exceed 12.8 lb/day. [District Rule 2201]
2. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
4. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. Operator shall monitor vapor control system pressures on a quarterly basis to ensure that system pressure does not exceed pressure relief valve setting [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. A Leak-Free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 (amended May 19, 2005) and shall be reported as a deviation. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minutes. [District Rule 4623, 3.11, 3.17, 3.18 and 6.4.8] Federally Enforceable Through Title V Permit
7. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. 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 2520, 9.3.2] 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. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. 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-3585-17-1

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

85 MMBTU/HR THERMOTICS NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNAFLAME LOW-NOX BURNER, FGR, AND O2 CONTROLLER

## PERMIT UNIT REQUIREMENTS

1. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
2. Emissions shall not exceed any of the following limits: 7 ppmv-NOx @ 3% O2 (0.008 lb/MMBtu), 0.00298 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 35 ppmv-CO @ 3% O2 (0.026 lb-CO/MMBtu) or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rules 4201] Federally Enforceable Through Title V Permit
4. The sulfur content of the gas combusted in this steam generator shall be reduced by a minimum of 95% or to a concentration not to exceed 2.95 grains/100 dscf. [District Rules 2201, 4320 and 4801] Federally Enforceable Through Title V Permit
5. The gas incinerated in this steam generator shall be tested for sulfur content every week in which it burns non-PUC certified gas, during the time that it is burning the non-PUC certified gas. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive sulfur tests, then the fuel sulfur testing frequency shall be semi-annually. If a semi-annual fuel sulfur test fails to show compliance, weekly testing shall resume as indicated above until compliance with the sulfur limits can be demonstrated for 8 consecutive sulfur tests. If the unit is not operated on any non-PUC certified gas during the interval between the semi-annual sulfur testing, the test need not be performed until the unit is operated on fuel that contains non-PUC certified gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Source testing to measure natural gas-combustion NOx 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, 4306 and 4320] Federally Enforceable Through Title V Permit
7. 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
8. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall determine sulfur content of gas combusted in this steam generator using ASTM method D3246 or double GC for H2S and mercaptans or Draeger tube analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
12. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] 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 fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. 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
16. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. All units in a group for which representative units are source tested for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches at any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 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

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

22. 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
23. 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
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. 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

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-3585-19-2

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK

**EXPIRATION DATE:** 04/30/2014

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## PERMIT UNIT REQUIREMENTS

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1. Throughput shall not exceed 2000 bbl/day. [District Rule 2201]
2. 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
3. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
4. 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
5. 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
6. 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
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. 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
9. 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-3585-24-1

EXPIRATION DATE: 04/30/2014

SECTION: NW 14 TOWNSHIP: 27S RANGE: 27E

## EQUIPMENT DESCRIPTION:

85 MMBTU/HR PCL IDENTIFICATION #POSO-J404 NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MAGNA-FLAME LE LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR), AND O2 CONTROLLER

## PERMIT UNIT REQUIREMENTS

1. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
2. Emissions shall not exceed any of the following limits: 7 ppmv-NOx @ 3% O2 (0.008 lb/MMBtu), 0.00298 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 35 ppmv-CO @ 3% O2 (0.026 lb-CO/MMBtu) or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] 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. Steam generator shall be fired on natural gas and/or TEOR gas from S-1385-9 with a sulfur content of no greater than 1.0 gr-S/100 scf or pre-treated using a sulfa-treat (or equivalent) system for 95% control of SOx emissions. [District Rule 2201 and 4801] Federally Enforceable Through Title V Permit
5. The gas incinerated in this steam generator shall be tested for sulfur content every week in which it burns non-PUC certified gas, during the time that it is burning the non-PUC certified gas. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive sulfur tests, then the fuel sulfur testing frequency shall be semi-annually. If a semi-annual fuel sulfur test fails to show compliance, weekly testing shall resume as indicated above until compliance with the sulfur limits can be demonstrated for 8 consecutive sulfur tests. If the unit is not operated on any non-PUC certified gas during the interval between the semi-annual sulfur testing, the test need not be performed until the unit is operated on fuel that contains non-PUC certified gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Source testing to measure natural gas-combustion NOx 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, 4306 and 4320] Federally Enforceable Through Title V Permit
7. 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
8. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall determine sulfur content of gas combusted in this steam generator using ASTM method D3246 or double GC for H2S and mercaptans or Draeger tube analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
12. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] 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 fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. 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
16. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. All units in a group for which representative units are source tested for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches at any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 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

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



22. 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
23. 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
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. 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

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-3585-25-2

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 26S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

5,000 BBL PETROLEUM STORAGE TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-3585-1

## PERMIT UNIT REQUIREMENTS

1. Fugitive emissions shall not exceed 12.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
4. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. Operator shall monitor vapor control system pressures on a quarterly basis to ensure that system pressure does not exceed pressure relief valve setting [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. A Leak-Free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 (amended May 19, 2005) and shall be reported as a deviation. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minutes. [District Rule 4623, 3.11, 3.17, 3.18 and 6.4.8] Federally Enforceable Through Title V Permit
7. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. 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 2520, 9.3.2] 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. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. 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 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. 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-3585-28-2

EXPIRATION DATE: 04/30/2014

SECTION: NW14 TOWNSHIP: 27S RANGE: 27E

## EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (J405) EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER (OR EQUIVALENT), FLUE GAS RECIRCULATION (FGR), AND OXYGEN CONTROLLER

## PERMIT UNIT REQUIREMENTS

1. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
2. Emissions shall not exceed any of the following limits: 7 ppmv-NO<sub>x</sub> @ 3% O<sub>2</sub> (0.008 lb/MMBtu), 0.00298 lb-SO<sub>x</sub>/MMBtu, 0.0076 lb-PM<sub>10</sub>/MMBtu, 35 ppmv-CO @ 3% O<sub>2</sub> (0.0258 lb-CO/MMBtu) or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rules 4201] Federally Enforceable Through Title V Permit
4. The sulfur content of the gas combusted in this steam generator shall be reduced by a minimum of 95% or to a concentration not to exceed 1.0 grains/100 dscf. [District Rules 2201, 4320 and 4801] Federally Enforceable Through Title V Permit
5. The gas incinerated in this steam generator shall be tested for sulfur content every week in which it burns non-PUC certified gas, during the time that it is burning the non-PUC certified gas. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive sulfur tests, then the fuel sulfur testing frequency shall be semi-annually. If a semi-annual fuel sulfur test fails to show compliance, weekly testing shall resume as indicated above until compliance with the sulfur limits can be demonstrated for 8 consecutive sulfur tests. If the unit is not operated on any non-PUC certified gas during the interval between the semi-annual sulfur testing, the test need not be performed until the unit is operated on fuel that contains non-PUC certified gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. 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, 4306 and 4320] Federally Enforceable Through Title V Permit
7. 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
8. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall determine sulfur content of gas combusted in this steam generator using ASTM method D3246 or double GC for H<sub>2</sub>S and mercaptans or Draeger tube analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
12. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] 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 fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. 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
16. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO<sub>x</sub> and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO<sub>x</sub> and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The following conditions must be met for representative unit(s) to be used to test for NO<sub>x</sub> and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. All units in a group for which representative units are source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. All units in a group for which representative units are source tested for NO<sub>x</sub> and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches at any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306 and 4320] 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

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

22. 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
23. 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
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. 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

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

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# **Attachment A**

## **Equipment Listing**

<b>Permit#</b>	<b>Equipment Description</b>
S-3585-1-6	3,000 BBL FIXED ROOF WASH TANK #WT-1 WITH VAPOR RECOVERY SYSTEM INCLUDING COMPRESSOR SHARED WITH TANKS S-3585-13, -14 AND -25, HEATER TREATERS V-200 (PEER 1-0) AND -11, WEMCO -16 AND THREE FWKOS, VENTED TO TEOR OPERATION S-3585-9
S-3585-2-0	ONE 3,000 BBL FIXED ROOF WASH TANK #WT-2
S-3585-3-0	ONE 2,000 BBL FIXED ROOF PETROLEUM STORAGE TANK #20S302
S-3585-4-0	ONE 2,000 BBL FIXED ROOF PETROLEUM STORAGE TANK #20S284
S-3585-5-0	ONE 2,000 BBL FIXED ROOF PETROLEUM STORAGE TANK #20S283
S-3585-6-0	ONE 2,000 BBL FIXED ROOF PETROLEUM STORAGE TANK #20S285
S-3585-8-6	84 MMBTU/HR THERMOTICS NATURAL GAS AND TEOR GAS-FIRED STEAM GENERATOR WITH MAGNA FLAME MODEL 4231-85-GLE-X2631 BURNER, FGR, AND RADAC O2 CONTROLLER
S-3585-9-9	TEOR OPERATION WITH CASING GAS COLLECTION SYSTEM WITH SULFUR TREATMENT SYSTEM SERVING 275 STEAM-ENHANCED WELLS CONNECTED TO TANK VAPOR RECOVERY SYSTEM S-3585-1 AND VENTED TO A FLARE AND/OR STEAM GENERATORS -8, -17, -24 AND -28
S-3585-11-3	12 MMBTU/HR NATURAL GAS-FIRED CE NATCO HEATER TREATER WITH TWO 6.0 MMBTU/HR MAXON MODEL M-PAKT EB-6 LOW-NOX BURNERS CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-3585-1
S-3585-12-2	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (J402) WITH A NORTH AMERICAN MODEL LE LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR), AND O2 CONTROLLER
S-3585-13-3	5,000 BBL PETROLEUM STORAGE TANK #T-100 VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-3585-1
S-3585-14-2	10,000 BBL PETROLEUM STORAGE TANK #TK-10 VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-3585-1
S-3585-16-2	600 BBL WEMCO UNIT VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-3585-1
S-3585-17-2	85 MMBTU/HR THERMOTICS NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNAFLAME LOW-NOX BURNER, FGR, AND O2 CONTROLLER
S-3585-19-1	2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK
S-3585-24-2	85 MMBTU/HR NATURAL/TEOR GAS-FIRED STEAM GENERATOR (J404) WITH A NORTH AMERICAN MAGNA-FLAME LE LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR), AND O2 CONTROLLER
S-3585-25-1	5,000 BBL PETROLEUM STORAGE TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-3585-1
S-3585-28-1	85 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (J405) EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER (OR EQUIVALENT), FLUE GAS RECIRCULATION (FGR), AND OXYGEN CONTROLLER



# **Attachment B**

## **Exempt Equipment**

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

<b>Exemption Category</b>	<b>Rule 2020 Citation</b>	<b>✓</b>
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	

<b>Exemption Category</b>	<b>Rule 2020 Citation</b>	<b>✓</b>
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**

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-1-6

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

## **EQUIPMENT DESCRIPTION:**

3,000 BBL FIXED ROOF WASH TANK #WT-1 WITH VAPOR RECOVERY SYSTEM INCLUDING COMPRESSOR SHARED WITH TANKS S-3585-13, -14 AND -25, HEATER TREATERS V-200 (PEER 1-0) AND -11, WEMCO -16 AND THREE FWKOS, VENTED TO TEOR OPERATION S-3585-9

## **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 emissions from the components associated with the tank vapor recovery system shall not exceed 110.1 lb/day. [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 Rules 2201 and 4623]
4. Permittee shall conduct true vapor pressure (TVP) and API gravity testing of fluid stored 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 tank in order to maintain exemption from the rule. Sample for TVP analysis shall be taken from tank with highest storage temperature. [District Rule 4623]
5. 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]
6. 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]
7. 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]
8. 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]
9. The permittee shall keep accurate records of the TVP and API gravity of the liquid stored in the tank. [District Rule 4623]
10. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rules 2201 and 1070]
11. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-2-0

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

ONE 3,000 BBL FIXED ROOF WASH TANK #WT-2

## PERMIT UNIT REQUIREMENTS

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Sulfur compound emissions shall not exceed 2000 ppmv as SO<sub>2</sub>. [District Rule 4801]
4. 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]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
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 APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District 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]
11. 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]
12. Formerly permit number S-1632-7-0.

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-3-0

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

ONE 2,000 BBL FIXED ROOF PETROLEUM STORAGE TANK #20S302

## PERMIT UNIT REQUIREMENTS

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Sulfur compound emissions shall not exceed 2000 ppmv as SO<sub>2</sub>. [District Rule 4801]
4. 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]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
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 APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District 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]
11. 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]
12. Formerly permit number S-1632-8-0.

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-4-0

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

ONE 2,000 BBL FIXED ROOF PETROLEUM STORAGE TANK #20S284

## PERMIT UNIT REQUIREMENTS

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Sulfur compound emissions shall not exceed 2000 ppmv as SO<sub>2</sub>. [District Rule 4801]
4. 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]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
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 APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District 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]
11. 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]
12. Formerly permit number S-1632-9-0.

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



# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-5-0

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

ONE 2,000 BBL FIXED ROOF PETROLEUM STORAGE TANK #20S283

## PERMIT UNIT REQUIREMENTS

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Sulfur compound emissions shall not exceed 2000 ppmv as SO<sub>2</sub>. [District Rule 4801]
4. 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]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
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 APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District 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]
11. 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]
12. Formerly permit number S-1632-10-0.

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-6-0

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

ONE 2,000 BBL FIXED ROOF PETROLEUM STORAGE TANK #20S285

## PERMIT UNIT REQUIREMENTS

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Sulfur compound emissions shall not exceed 2000 ppmv as SO<sub>2</sub>. [District Rule 4801]
4. 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]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
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 APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District 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]
11. 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]
12. Formerly permit number S-1632-11-0.

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-8-6

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

84 MMBTU/HR THERMOTICS NATURAL GAS AND TEOR GAS-FIRED STEAM GENERATOR WITH MAGNA FLAME MODEL 4231-85-GLE-X2631 BURNER, FGR, AND RADAC O2 CONTROLLER

## PERMIT UNIT REQUIREMENTS

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081]
4. Emissions shall not exceed any of the following limits: 7 ppmv-NO<sub>x</sub> @ 3% O<sub>2</sub> (0.008 lb/MMBtu), 0.0084 lb-SO<sub>x</sub>/MMBtu, 0.0076 lb-PM<sub>10</sub>/MMBtu, 50 ppmv-CO @ 3% O<sub>2</sub> (0.037 lb-CO/MMBtu) or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rules 4201]
6. The sulfur content of the gas combusted in this steam generator shall be reduced by a minimum of 95% or to a concentration not to exceed 2.95 grains/100 dscf. [District Rules 2201, 4320 and 4801]
7. The gas incinerated in this steam generator shall be tested for sulfur content every week in which it burns non-PUC certified gas, during the time that it is burning the non-PUC certified gas. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive sulfur tests, then the fuel sulfur testing frequency shall be semi-annually. If a semi-annual fuel sulfur test fails to show compliance, weekly testing shall resume as indicated above until compliance with the sulfur limits can be demonstrated for 8 consecutive sulfur tests. If the unit is not operated on any non-PUC certified gas during the interval between the semi-annual sulfur testing, the test need not be performed until the unit is operated on fuel that contains non-PUC certified gas. [District Rule 2201]
8. 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, 4306 and 4320]
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. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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, 4306 and 4320]
12. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2. [District Rules 4305, 4306 and 4320]
13. Permittee shall determine sulfur content of gas incinerated in this steam generator using ASTM method D3246 or double GC for H<sub>2</sub>S and mercaptans or Draeger tube analysis. [District Rules 1081 and 2201]
14. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081]
15. 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]
16. The fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 4306 and 4320]
17. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
18. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO<sub>x</sub> and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO<sub>x</sub> and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306 and 4320]
19. The following conditions must be met for representative unit(s) to be used to test for NO<sub>x</sub> and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306 and 4320]
20. All units in a group for which representative units are source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). [District Rules 4305, 4306 and 4320]
21. All units in a group for which representative units are source tested for NO<sub>x</sub> and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches at any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306 and 4320]
22. The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306 and 4320]
23. 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

24. 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]
25. 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]
26. 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]
27. 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]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-9-9

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

## **EQUIPMENT DESCRIPTION:**

TEOR OPERATION WITH CASING GAS COLLECTION SYSTEM WITH SULFUR TREATMENT SYSTEM SERVING 275 STEAM-ENHANCED WELLS CONNECTED TO TANK VAPOR RECOVERY SYSTEM S-3585-1 AND VENTED TO A FLARE AND/OR STEAM GENERATORS -8, -17, -24 AND -28

## **PERMIT UNIT REQUIREMENTS**

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311]
4. The 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]
5. 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. 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]
6. Flare gas pressure shall be greater than or equal to 5 psig. [District Rules 4001 and 4311]
7. Air-assist blower shall be maintained and operated for smokeless combustion. [District Rules 2201 and 4101]
8. Flare shall be equipped with operational produced gas volume flow meter. [District Rule 2201]
9. The total number of leaks in the TEOR system shall not exceed 15. [District Rules 2201 and 4401]
10. There shall be no components with any gas leaks greater than 50,000 ppmv. [District Rule 4401]
11. Pilot gas flow rate to flare shall not exceed 1,500 scf per day. [District Rule 2201]
12. Flow rate of collected casing gas and tank vapor recovery gas to the flare shall not exceed 251,580 scf per day. [District Rule 2201]
13. Pilot shall be fired only on PUC quality natural gas containing no more than 1 grain-S/100 scf. [District Rule 2201]
14. The weight percentage of VOC in the total organic compounds in the TEOR gas shall not exceed 52%. [District Rule 2201]
15. Sulfur compounds of casing gas and tank vapor recovery gas shall be reduced by a minimum of 95% across the sulfur treatment system or to an outlet concentration not exceeding 2.91 grain/100 scf. Compliance with sulfur treatment system control efficiency or outlet concentration limit shall be demonstrated annually by measuring the inlet and/or outlet flows to the treatment system, as appropriate. [District Rule 2201]
16. Emissions from the flare shall not exceed any of the following limits: 67.9 lb-NO<sub>x</sub>/MMscf, 8.3 lb-SO<sub>x</sub>/MMscf, 7.9 lb-PM<sub>10</sub>/MMscf, 369.8 lb-CO/MMscf, or 63.1 lb-VOC/MMscf. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

17. Fugitive emissions from the TEOR system shall not exceed 58.4 lb-VOC/day. [District Rule 2201]
18. Un-condensable vapors from these steam enhanced wells shall be incinerated in the flare and/or steam generators S-3585-8 (J401), -17 (J403) -24 (J404) and -28 (J405). [District Rule 2201]
19. The gas being flared shall be tested for sulfur content every week in which it operates. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive sulfur tests, then the fuel sulfur testing frequency shall be semi-annually. If a semi-annual fuel sulfur test fails to show compliance, weekly testing shall resume as indicated above until compliance with the sulfur limits can be demonstrated for 8 consecutive sulfur tests. If the unit is not operated during the interval between the semi-annual sulfur testing, the test need not be performed until the unit is operated again. [District Rule 2201]
20. The sulfur content of the gas being flared shall be determined using ASTM D 1072-80, D 3031-81, D 4084-82, D 3246-81 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2201]
21. The TEOR gas shall be tested annually for VOC content. [District Rule 2201]
22. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
23. Any open steam-enhanced crude oil production well vents shall be connected to a VOC collection and control system that has a VOC destruction or removal efficiency of at least 99%. [District Rule 4401]
24. There shall be no open ended lines or valves located at the end of any lines that are not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401]
25. Unless otherwise specified, an operator shall perform all component inspections and gas leak measurements pursuant to the requirements of Section 6.3.3 of Rule 4401. [District Rule 4401]
26. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401]
27. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but no later than any of the following limits: 14 calendar days for minor gas leaks, 5 calendar days for major gas leaks between 10,000 ppm and 50,000 ppmv, 2 calendar days for major gas leaks in excess of 50,000 ppmv, 3 calendar days for minor liquid leaks and 2 calendar days for major liquid leaks. [District Rule 4401]
28. An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but no later than any of the following limits: 14 calendar days for minor gas leaks, 5 calendar days for major gas leaks between 10,000 ppm and 50,000 ppmv, 2 calendar days for major gas leaks in excess of 50,000 ppmv, 3 calendar days for minor liquid leaks and 2 calendar days for major liquid leaks. [District Rule 4401]
29. An operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. An operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401]
30. An operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401]
31. Except for PRDs subject to the requirements of Section 5.8.4.1, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

32. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401]
33. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401]
34. Upon detection of a leaking component, the operator shall affix to that component a weatherproof, readily visible tag, bearing the date and time when the leak was detected, the date and time of the leak measurement, and the concentration in ppmv. The tag shall remain in place until the leaking component is repaired or replaced and reinspected (using EPA test method 21) and found to be in compliance with the requirements of this rule. [District Rule 4401]
35. The operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401]
36. If an operator has minimized a leak in a non-critical or non-essential component, but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall either repair or replace the leaking component, vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation as soon as practicable, but no later than any of the following limits: 14 calendar days for minor gas leaks, 5 calendar days for major gas leaks between 10,000 ppm and 50,000 ppmv, 2 calendar days for major gas leaks in excess of 50,000 ppmv, 3 calendar days for minor liquid leaks and 2 calendar days for major liquid leaks. [District Rule 4401]
37. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of Rule 4401, the operator shall repair or replace the essential component or critical component 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, whichever comes earlier. [District Rule 4401]
38. An operator shall maintain records required by Section 6.1, including all of the following information: 1) The date and well identification where steam injection or well stimulation occurs, 2) The inspection log pursuant to Section 6.4 of Rule 4401, 3) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration, 4) Copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401, 5) A copy of the APCO-approved Operator Management Plan at the facility, 6) A list of all gauge tanks including the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment, and 8) The date that any PRD release is discovered, and the identity and location of the PRD that released. [District Rule 4401]
39. An operator shall maintain an inspection log that includes all of the following data: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type, 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found, 3) The date of leak detection and the method of leak detection, 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak, 5) The date of repair, replacement, or removal from operation of leaking components, 6) The identity and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, 9) The inspector's name, business mailing address, and business telephone number, and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401]
40. An operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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



41. An operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO, using diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required. The OMP shall include all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to this Rule 4401, and all wells and all associated VOC collection and control systems that are exempt pursuant to Section 4.0 of Rule 4401, 2) Identification and description of any known hazard that might affect the safety of an inspector, 3) Except for pipes, the number of components that are subject to Rule 4401 by component type, 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to Rule 4401 and the reasons for such designation, 5) Except for pipes, the location of components subject to Rule 4401 (components may be grouped together functionally by process unit or facility description), 6) Except for pipes, components exempt pursuant to Section 4.8 of Rule 4401 (except for components buried below ground) may be described in the OMP by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.8 of Rule 4401 shall be submitted with the OMP, 7) A detailed schedule of an operator's inspections of components to be conducted as required by Rule 4401 and whether the required operator inspections of components will be performed by a qualified contractor or by an in-house team, 8) A description of the training standards for personnel that inspect and repair components, and 9) A description of the leak detection training for conducting the test method specified in Section 6.3.3 of Rule 4401 for new operators, and for experienced operators, as necessary. [District Rule 4401]
42. No provision of the Operator Management Plan, approved or not, shall conflict with or take precedence over any provision of Rule 4401. [District Rule 4401]
43. An operator shall submit information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401]
44. By January 30 of each year, an operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to an existing Operator Management Plan. [District Rule 4401]
45. Daily records of the amount of gas combusted in the flare shall be maintained. [District Rule 2201]
46. Records of all TEOR gas sulfur and VOC content analyses shall be maintained. [District Rules 2201]
47. Permittee shall maintain with the permit a list of all steam enhanced wells connected to the TEOR system, and an accurate fugitive component count and the resulting emissions calculated pursuant to CAPCOA document, "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c, "Oil and Gas Production," using screening value ranges emission factors. [District Rule 2201]
48. 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 1070]
49. All records shall be made available to the APCO, California Air Resources Board (ARB), and EPA upon request. [District Rule 4401]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3585-11-3

EXPIRATION DATE: 04/30/2014

SECTION: 14 TOWNSHIP: 27S RANGE: 27E

## EQUIPMENT DESCRIPTION:

12 MMBTU/HR NATURAL GAS-FIRED CE NATCO HEATER TREATER WITH TWO 6.0 MMBTU/HR MAXON MODEL M-PAKT EB-6 LOW-NOX BURNERS CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-3585-1

## PERMIT UNIT REQUIREMENTS

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081]
4. 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> (0.018 lb/MMBtu), 0.00285 lb-SO<sub>x</sub>/MMBtu, 0.0076 lb-PM<sub>10</sub>/MMBtu, 200 ppmvd CO @ 3% O<sub>2</sub> (0.148 lb/MMBtu), or 0.0055 lb-VOC/MMBtu. [District Rule 2201]
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rules 4201]
6. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201]
7. Fugitive emissions from the components that connect this unit to the vapor recovery system (S-3585-1) shall not exceed 5.3 lb/day. [District Rule 2201]
8. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rules 1070 and 2201]
9. 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, 4306 and 4320]
10. 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]
11. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

13. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2. [District Rules 4305, 4306 and 4320]
14. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081]
15. 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]
16. The fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 4306 and 4320]
17. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
18. 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]
19. 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]
20. 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]
21. 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]
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]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3585-12-2

EXPIRATION DATE: 04/30/2014

SECTION: 14 TOWNSHIP: 27S RANGE: 27E

## EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (J402) WITH A NORTH AMERICAN MODEL LE LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR), AND O2 CONTROLLER

## PERMIT UNIT REQUIREMENTS

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081]
4. Emissions from the unit shall not exceed any of the following limits: 7 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> (0.008 lb/MMBtu), 0.00285 lb-SO<sub>x</sub>/MMBtu, 0.0076 lb-PM<sub>10</sub>/MMBtu, 50 ppmvd CO @ 3% O<sub>2</sub> (0.037 lb/MMBtu), or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rules 4201]
6. The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201 and 4320]
7. 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, 4306 and 4320]
8. 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]
9. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
10. 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]
11. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2. [District Rules 4305, 4306 and 4320]
12. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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]
14. The fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 4306 and 4320]
15. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
16. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306 and 4320]
17. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306 and 4320]
18. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). [District Rules 4305, 4306 and 4320]
19. All units in a group for which representative units are source tested for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches at any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306 and 4320]
20. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306 and 4320]
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 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]
22. 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]
23. If either the NOx or CO concentrations corrected to 3% O2, 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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]
25. 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]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-13-3

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27 S **RANGE:** 27 E

**EQUIPMENT DESCRIPTION:**

5,000 BBL PETROLEUM STORAGE TANK #T-100 VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-3585-1

## 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. Fugitive emissions shall not exceed 12.8 lb/day. [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 Rules 2201 and 4623]
4. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rules 1070 and 2201]
5. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-14-2

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

10,000 BBL PETROLEUM STORAGE TANK #TK-10 VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-3585-1

## 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. Fugitive emissions shall not exceed 12.8 lb/day. [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 Rules 2201 and 4623]
4. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rules 1070 and 2201]
5. 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 1070]

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



# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-16-2

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

600 BBL WEMCO UNIT VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-3585-1

## PERMIT UNIT REQUIREMENTS

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1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
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]
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Fugitive emissions shall not exceed 12.8 lb/day. [District Rule 2201]
5. 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 Rules 2201 and 4623]
6. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rules 1070 and 2201]
7. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3585-17-2

EXPIRATION DATE: 04/30/2014

SECTION: 14 TOWNSHIP: 27S RANGE: 27E

## EQUIPMENT DESCRIPTION:

85 MMBTU/HR THERMOTICS NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNAFLAME LOW-NOX BURNER, FGR, AND O2 CONTROLLER

## PERMIT UNIT REQUIREMENTS

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081]
4. Emissions shall not exceed any of the following limits: 7 ppmv-NOx @ 3% O2 (0.008 lb/MMBtu), 0.00298 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 35 ppmv-CO @ 3% O2 (0.026 lb-CO/MMBtu) or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rules 4201]
6. The sulfur content of the gas combusted in this steam generator shall be reduced by a minimum of 95% or to a concentration not to exceed 2.95 grains/100 dscf. [District Rules 2201, 4320 and 4801]
7. The gas incinerated in this steam generator shall be tested for sulfur content every week in which it burns non-PUC certified gas, during the time that it is burning the non-PUC certified gas. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive sulfur tests, then the fuel sulfur testing frequency shall be semi-annually. If a semi-annual fuel sulfur test fails to show compliance, weekly testing shall resume as indicated above until compliance with the sulfur limits can be demonstrated for 8 consecutive sulfur tests. If the unit is not operated on any non-PUC certified gas during the interval between the semi-annual sulfur testing, the test need not be performed until the unit is operated on fuel that contains non-PUC certified gas. [District Rules 2201 and 4320]
8. Source testing to measure natural gas-combustion NOx 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, 4306 and 4320]
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. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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, 4306 and 4320]
12. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2. [District Rules 4305, 4306 and 4320]
13. Permittee shall determine sulfur content of gas combusted in this steam generator using ASTM method D3246 or double GC for H<sub>2</sub>S and mercaptans or Draeger tube analysis. [District Rules 1081 and 2201]
14. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081]
15. 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]
16. The fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 4306 and 4320]
17. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
18. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO<sub>x</sub> and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO<sub>x</sub> and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306 and 4320]
19. The following conditions must be met for representative unit(s) to be used to test for NO<sub>x</sub> and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306 and 4320]
20. All units in a group for which representative units are source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). [District Rules 4305, 4306 and 4320]
21. All units in a group for which representative units are source tested for NO<sub>x</sub> and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches at any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306 and 4320]
22. The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306 and 4320]
23. 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

24. 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]
25. 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]
26. 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]
27. 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]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-19-1

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK

## PERMIT UNIT REQUIREMENTS

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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. Throughput shall not exceed 2000 bbl/day. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
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 APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District 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]
11. 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-3585-24-2

**EXPIRATION DATE:** 04/30/2014

**SECTION:** NW 14 **TOWNSHIP:** 27S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

85 MMBTU/HR NATURAL/TEOR GAS-FIRED STEAM GENERATOR (J404) WITH A NORTH AMERICAN MAGNA-FLAME LE LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR), AND O2 CONTROLLER

## PERMIT UNIT REQUIREMENTS

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081]
4. Emissions shall not exceed any of the following limits: 7 ppmv-NOx @ 3% O2 (0.008 lb/MMBtu), 0.00298 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 35 ppmv-CO @ 3% O2 (0.026 lb-CO/MMBtu) or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rules 420]
6. The sulfur content of the gas combusted in this steam generator shall be reduced by a minimum of 95% or to a concentration not to exceed 1.0 grains/100 dscf. [District Rules 2201, 4320 and 4801]
7. The gas incinerated in this steam generator shall be tested for sulfur content every week in which it burns non-PUC certified gas, during the time that it is burning the non-PUC certified gas. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive sulfur tests, then the fuel sulfur testing frequency shall be semi-annually. If a semi-annual fuel sulfur test fails to show compliance, weekly testing shall resume as indicated above until compliance with the sulfur limits can be demonstrated for 8 consecutive sulfur tests. If the unit is not operated on any non-PUC certified gas during the interval between the semi-annual sulfur testing, the test need not be performed until the unit is operated on fuel that contains non-PUC certified gas. [District Rules 2201 and 4320]
8. Source testing to measure natural gas-combustion NOx 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, 4306 and 4320]
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. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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, 4306 and 4320]
12. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2. [District Rules 4305, 4306 and 4320]
13. Permittee shall determine sulfur content of gas combusted in this steam generator using ASTM method D3246 or double GC for H<sub>2</sub>S and mercaptans or Draeger tube analysis. [District Rules 1081 and 2201]
14. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081]
15. 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]
16. The fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 4306 and 4320]
17. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
18. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO<sub>x</sub> and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO<sub>x</sub> and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306 and 4320]
19. The following conditions must be met for representative unit(s) to be used to test for NO<sub>x</sub> and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306 and 4320]
20. All units in a group for which representative units are source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). [District Rules 4305, 4306 and 4320]
21. All units in a group for which representative units are source tested for NO<sub>x</sub> and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches at any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306 and 4320]
22. The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306 and 4320]
23. 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. 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]
25. 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]
26. 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]
27. 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]

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



# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3585-25-1

**EXPIRATION DATE:** 04/30/2014

**SECTION:** 14 **TOWNSHIP:** 26S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

5,000 BBL PETROLEUM STORAGE TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-3585-1

## 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. Fugitive emissions shall not exceed 12.8 lb/day. [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 Rules 2201 and 4623]
4. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rules 1070 and 2201]
5. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3585-28-1

EXPIRATION DATE: 04/30/2014

SECTION: NW14 TOWNSHIP: 27S RANGE: 27E

## EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (J405) EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER (OR EQUIVALENT), FLUE GAS RECIRCULATION (FGR), AND OXYGEN CONTROLLER

## PERMIT UNIT REQUIREMENTS

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1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081]
4. Emissions shall not exceed any of the following limits: 7 ppmv-NO<sub>x</sub> @ 3% O<sub>2</sub> (0.008 lb/MMBtu), 0.00298 lb-SO<sub>x</sub>/MMBtu, 0.0076 lb-PM<sub>10</sub>/MMBtu, 35 ppmv-CO @ 3% O<sub>2</sub> (0.0258 lb-CO/MMBtu) or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rules 4201]
6. The sulfur content of the gas combusted in this steam generator shall be reduced by a minimum of 95% or to a concentration not to exceed 1.0 grains/100 dscf. [District Rules 2201, 4320 and 4801]
7. The gas incinerated in this steam generator shall be tested for sulfur content every week in which it burns non-PUC certified gas, during the time that it is burning the non-PUC certified gas. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive sulfur tests, then the fuel sulfur testing frequency shall be semi-annually. If a semi-annual fuel sulfur test fails to show compliance, weekly testing shall resume as indicated above until compliance with the sulfur limits can be demonstrated for 8 consecutive sulfur tests. If the unit is not operated on any non-PUC certified gas during the interval between the semi-annual sulfur testing, the test need not be performed until the unit is operated on fuel that contains non-PUC certified gas. [District Rules 2201 and 4320]
8. 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, 4306 and 4320]
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. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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, 4306 and 4320]
12. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2. [District Rules 4305, 4306 and 4320]
13. Permittee shall determine sulfur content of gas combusted in this steam generator using ASTM method D3246 or double GC for H<sub>2</sub>S and mercaptans or Draeger tube analysis. [District Rules 1081 and 2201]
14. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081]
15. 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]
16. The fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 4306 and 4320]
17. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
18. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO<sub>x</sub> and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO<sub>x</sub> and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306 and 4320]
19. The following conditions must be met for representative unit(s) to be used to test for NO<sub>x</sub> and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306 and 4320]
20. All units in a group for which representative units are source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). [District Rules 4305, 4306 and 4320]
21. All units in a group for which representative units are source tested for NO<sub>x</sub> and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches at any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306 and 4320]
22. The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306 and 4320]
23. 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. 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]
25. 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]
26. 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]
27. 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]

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## **ATTACHMENT D**

# Current District Rule SIP Comparison

**Stringency Comparison of District Rule 4601 Non-SIP Version (12/17/09) to Current SIP Version (10/31/01)**

Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
2.0 Applicability	This rule is applicable to any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures any architectural coating for use within the District.	This rule is applicable to any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures, blends or repackages any architectural coating for use within the District.	No change in the applicability, therefore, non-SIP version of rule is as stringent as SIP version.
4.0 Exemptions	<p>The provisions of this rule shall not apply to:</p> <p>4.1 Any architectural coating that is sold or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.</p> <p>4.2 Any architectural coating that is sold in a containers with a volume of one liter (1.057 quarts) or less.</p> <p>4.3 Any aerosol coating product.</p>	<p>4.1 The provisions of this rule shall not apply to:</p> <p>4.1.1 Any architectural coating that is supplied, sold, offered for sale, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.</p> <p>4.1.2 Any aerosol coating product.</p> <p>4.2 With the exception of Section 6.2, the provisions of this rule shall not apply to any architectural coating that is sold in a container with a volume of one liter (1.057 quarts) or less.</p>	The only change is to require reporting requirements as discussed in Section 6.2 of the non-SIP approved version. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.
5.0 Requirements	<b>Note: Section 5.0 requirements refer to Table of Standards, Table of Standards 1, and Table of Standards 2. These tables are included as Attachment X.</b>		
	<p>5.1 VOC Content Limits: Except as provided in Sections 5.2, 5.3, 5.8 and 8.0, no person shall;</p> <p>5.1.1 manufacture, blend, or repackage for sale within the District;</p> <p>5.1.2 supply, sell, or offer for sale within the district;</p> <p>5.1.3 solicit for application or apply within the District any architectural coating with a VOC content in excess of the corresponding limit specified in the Table of Standards, after the specified effective date in the Table of Standards.</p>	<p>5.1 VOC Content Limits: Except as provided in Sections 5.2 and 5.3, no person shall: manufacture, blend, or repackage for use within the District; or supply, sell, or offer for sale within the District; or solicit for application or apply within the District any architectural coating with a VOC content in excess of the corresponding limit specified in the Table of Standards 1 or the Table of Standards 2, after the specified effective date in the Table of Standards 1 or the Table of Standards 2. Limits are expressed as VOC Regulatory, thinned to the manufacturer's maximum thinning recommendation, excluding any colorant added to tint bases.</p>	Sections 5.8 and 8.0 of the SIP version are not included in the non-SIP version. As discussed in corresponding sections the non-SIP version is more stringent. The Table of Standards and Table of Standards 1 have the same VOC limits. Table of Standard 2 is more stringent as discussed below. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.
	<p>5.2 Most Restrictive VOC Limit: If anywhere on the container of any architectural coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on their behalf, any representation is made that indicates that the coating meets the definition of or is recommended for use for more than one of the coating categories listed in the Table of Standards, then the most restrictive VOC content limit shall apply. This provision does not apply to the following coating categories:</p> <p>5.2.1 Lacquer coatings (including lacquer sanding sealers)</p> <p>5.2.2 Metallic pigmented coatings</p> <p>5.2.3 Shellacs</p> <p>5.2.4 Fire-retardant coatings</p> <p>5.2.5 Pretreatment wash primers</p> <p>5.2.6 Industrial maintenance coatings</p> <p>5.2.7 Low-solids coatings</p>	<p>5.2 Most Restrictive VOC Limit: If a coating meets the definition in Section 3.0 for one or more specialty coating categories listed in the Table of Standards 1 or the Table of Standards 2, then that coating is not required to meet the VOC limits for Flat, Nonflat, or Nonflat – High Gloss coatings, but is required to meet the VOC limit for the applicable specialty coating listed in the Table of Standards 1 or the Table of Standards 2.</p> <p>5.2.1 Effective until December 31, 2010, with the exception of the specialty coating categories specified in Section 5.2.3.1 through 5.2.3.15, if a coating is recommended for use in more than one of the specialty coating categories listed in the Table of Standards 1, the most restrictive (or lowest) VOC content limit shall apply.</p> <p>5.2.2 Effective on and after January 1, 2011, with the exception of the</p>	The VOC limit of the non-SIP version is at least as stringent as the SIP version. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.

Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
	<p>5.2.8 Wood preservatives</p> <p>5.2.9 High temperature coatings</p> <p>5.2.10 Temperature-indicator safety coatings</p> <p>5.2.11 Antenna coatings</p> <p>5.2.12 Antifouling coatings</p> <p>5.2.13 Flow coatings</p> <p>5.2.14 Bituminous roof primers</p> <p>5.2.15 Specialty primers, sealers and undercoaters</p>	<p>specialty coating categories specified in Sections 5.2.3.2, 5.2.3.3, 5.2.3.5 through 5.2.3.9, and 5.2.3.14 through 5.2.3.18, if a coating is recommended for use in more than one of the specialty coating categories listed in the Table of Standards 2, the most restrictive (or lowest) VOC content limit shall apply.</p> <p>5.2.3 This requirement applies to: usage recommendations that appear anywhere on the coating container, anywhere on any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on their behalf.</p> <p>5.2.3.1 Lacquer coatings (including lacquer sanding sealers)</p> <p>5.2.3.2 Metallic pigmented coatings</p> <p>5.2.3.3 Shellacs</p> <p>5.2.3.4 Fire-retardant coatings</p> <p>5.2.3.5 Pretreatment wash primers</p> <p>5.2.3.6 Industrial maintenance coatings</p> <p>5.2.3.7 Low-solids coatings</p> <p>5.2.3.8 Wood preservatives</p> <p>5.2.3.9 High temperature coatings</p> <p>5.2.3.10 Temperature-indicator safety coatings</p> <p>5.2.3.11 Antenna coatings</p> <p>5.2.3.12 Antifouling coatings</p> <p>5.2.3.13 Flow coatings</p> <p>5.2.3.14 Bituminous roof primers</p> <p>5.2.3.15 Specialty primers, sealers and undercoaters</p> <p>5.2.3.16 Aluminum roof coatings</p> <p>5.2.3.17 Zinc-rich primers</p> <p>5.2.3.18 Wood Coatings</p>	
	<p>5.3 Sell-Through of Coatings:</p> <p>5.3.1 A coating manufactured prior to the January 1, 2003 or January 1, 2004 effective date specified for that coating in the Table of Standards may be sold, supplied, or offered for sale for up to three years after the specified effective date. In addition, a coating manufactured before the effective date specified for that coating in the Table of Standards may be applied at any time, both before and after the specified effective date, so long as the coating complied with the standards in effect at the time the coating was manufactured. This Section 5.3 does not apply to any coating that does not display the date or date-code required by Section 6.1.1.</p> <p>5.3.2 A coating included in an approved Averaging Program that does not comply with the specified limit in the</p>	<p>5.3 Sell-Through of Coatings:</p> <p>A coating manufactured prior to the effective date specified for that coating in the Table of Standards 1 or the Table of Standards 2, and that complied with the standards in effect at the time the coating was manufactured, may be sold, supplied, or offered for sale for up to three years after the specified effective date. In addition, a coating manufactured before the effective date specified for that coating in the Table of Standards 1 or the Table of Standards 2 may be applied at any time, both before and after the specified effective date, so long as the coating complied with the standards in effect at the time the coating was manufactured. This Section 5.3 does not apply to any coating that does not display the date or date-code required by Section 6.1.1.</p>	<p>The VOC limit of the non-SIP version is at least as stringent as the SIP version. Section 5.3.2 was removed it is no longer applicable in the SIP version. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.</p>

Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
	<p>Table of Standards may be sold, supplied, or offered for sale for up to three years after the end of the compliance period specified in the approved Averaging Program. In addition, such a coating may be applied at any time, both during and after the compliance period. This Section 5.3.2 does not apply to any coating that does not display on the container either the statement: "This product is subject to architectural coatings averaging provisions in California" or a substitute symbol specified by the Executive Officer of the California Air Resources Board (ARB). This Section 5.3.2 shall remain in effect until January 1, 2008.</p>		
	<p>5.4 Painting Practices: All architectural coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. These architectural coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers. Containers of any VOC containing materials used for thinning and cleanup shall also be closed when not in use.</p>	<p>5.4 Painting Practices: All architectural coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. These architectural coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers. Containers of any VOC-containing materials used for thinning and cleanup shall also be closed when not in use.</p>	<p>No change in the requirements, therefore, non-SIP version of rule is as stringent as SIP version.</p>
	<p>5.5 Thinning: No person who applies or solicits the application of any architectural coating shall apply a coating that is thinned to exceed the applicable VOC limit specified in the Table of Standards.</p>	<p>5.5 Thinning: No person who applies or solicits the application of any architectural coating shall apply a coating that is thinned to exceed the applicable VOC limit specified in the Table of Standards 1 or the Table of Standards 2.</p>	<p>The VOC limit of the non-SIP version is at least as stringent as the SIP version. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.</p>
	<p>5.6 Rust Preventative Coatings: Effective January 1, 2004, no person shall apply or solicit the application of any rust preventative coating for industrial use, unless such a rust preventative coating complies with the industrial maintenance coating VOC limit specified in the Table of Standards.</p>	<p>5.6 Rust Preventative Coatings: Effective through December 31, 2010, no person shall apply or solicit the application of any rust preventative coating for industrial use, unless such a rust preventative coating complies with the industrial maintenance coating VOC limit specified in the Table of Standards 1.</p>	<p>The VOC limit of the non-SIP version is at least as stringent as the SIP version. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.</p>
	<p>5.7 Coatings Not Listed in the Table of Standards: For any coating that does not meet any of the definitions for the specialty coatings categories listed in the Table of Standards, the VOC content limit shall be determined by classifying the coating as a flat coating or a nonflat coating, based on its gloss, as defined in Sections 3.21, 3.36 and 3.37 and the corresponding flat or nonflat VOC limit shall apply.</p>	<p>5.7 Coatings Not Listed in the Table of Standards 1 or the Table of Standards 2: For any coating that does not meet any of the definitions for the specialty coatings categories listed in the Table of Standards 1 or the Table of Standards 2, the VOC content limit shall be determined by classifying the coating as a Flat, Nonflat, or Nonflat – High Gloss coating, based on its gloss, and the corresponding Flat, Nonflat, or Nonflat – High Gloss VOC limit in the Table of Standards 1 or the Table of Standards 2 shall apply.</p>	<p>The VOC limit of the non-SIP version is at least as stringent as the SIP version. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.</p>
	<p>5.8 Lacquers: Notwithstanding the provisions of Section 3.1, a person or facility may add up to 10 percent by volume of VOC to a lacquer to avoid blushing of the finish during days with relative humidity greater</p>	<p>---</p>	<p>This section has been removed. The operation is required to meet the lacquer VOC limit regardless of</p>



Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
	than 70 percent and temperature below 65°F, at the time of application, provided that the coating contains acetone and no more than 550 grams of VOC per liter of coating, less water and exempt compounds, prior to the addition of VOC.		temperature and humidity. Therefore, non-SIP version of rule is as stringent as SIP version
	5.9 Averaging Compliance Option: On or after January 1, 2003, in lieu of compliance with the specified limits in The Table of Standards for floor coatings; industrial maintenance coatings; primers, sealers, and undercoaters; quick-dry primers, sealers, and undercoaters; quick-dry enamels; roof coatings; bituminous roof coatings; rust preventative coatings; stains; waterproofing sealers, as well as flats and non-flats (excluding recycled coatings), manufacturers may average designated coatings such that their actual cumulative emissions from the averaged coatings are less than or equal to the cumulative emissions that would have been allowed under those limits over a compliance period not to exceed one year. Such manufacturers must also comply with the averaging provisions contained in Section 8.0, as well as maintain and make available for inspection records for at least three years after the end of the compliance period. This Section 5.9 and Section 8.0 shall cease to be effective on January 1, 2005, after which averaging will no longer be allowed.	---	This section is removed from the non-SIP version, it is no longer applicable. Therefore, non-SIP version of rule is as stringent as SIP version.
	---	5.8 Prior to January 1, 2011, any coating that meets a definition in Section 3.0 for a coating category listed in the Table of Standards 2 and complies with the applicable VOC limit in the Table of Standards 2 and with Sections 5.2 and 6.1 (including those provision of Section 6.1 otherwise effective on January 1, 2011) shall be considered in compliance with this rule.	Table of Standards 2 is more stringent than the VOC limits of Table of Standards in the SIP-Approved version. Therefore, non-SIP version of rule is as stringent as SIP version.
6.0 Administrative Requirements	Table of Standards (See Attachment X for Table)	Table of Standards 1 (Effective through 12/31/10) (See Attachment X for Table)	The non-SIP rule requirements are the same as the Table of Standards in the SIP approved rule, except Table of Standards 1 expires at which time Table of Standards 2 is in effect. As discussed below these standards are more stringent. Therefore, non-SIP version of rule is as stringent as SIP version.
6.0 Administrative Requirements		Table of Standards 2 (Effective on and after 1/1/11) (See Attachment X for Table)	The requirements of Table of Standards 2 are more stringent than the Table of Standards in the SIP rule. Therefore, non-SIP version of rule is as stringent as SIP version.
6.0 Administrative Requirements	6.1 Labeling Requirements: Each manufacturer of any architectural coating subject to this rule shall display the information listed in Sections	6.1 Labeling Requirements: Each manufacturer of any architectural coating subject to this rule shall display the	The non-SIP approved rule contain sections listed in the SIP rule plus

Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
	<p>6.1.1 through 6.1.9 on the coating container (or label) in which the coating is sold or distributed.</p> <p>6.1.1 Date Code: The date the coating was manufactured, or a date code representing the date, shall be indicated on the label, lid or bottom of the container. If the manufacturer uses a date code for any coating, the manufacturer shall file an explanation of each code with the Executive Officer of the ARB.</p> <p>6.1.2 Thinning Recommendations: A statement of the manufacturer's recommendation regarding thinning of the coating shall be indicated on the label or lid of the container. This requirement does not apply to the thinning of architectural coatings with water. If thinning of the coating prior to use is not necessary, the recommendation must specify that the coating is to be applied without thinning.</p> <p>6.1.3 VOC Content: Each container of any coating subject to this rule shall display either the maximum or actual VOC content of the coating, as supplied, including the maximum thinning as recommended by the manufacturer. VOC content shall be displayed in grams of VOC per liter of coating. VOC content displayed shall be calculated using product formulation data, or shall be determined using the test methods in Section</p> <p>6.3.1. The equations in Sections 3.25 or 3.26, as appropriate, shall be used to calculate VOC content.</p> <p>6.1.4 Industrial Maintenance Coatings: In addition to the information specified in Sections 6.1.1, 6.1.2 and 6.1.3, each manufacturer of any industrial maintenance coating subject to this rule shall display on the label or lid of the container in which the coating is sold or distributed one or more of the following descriptions listed in Section 6.1.4.1 through 6.1.4.3.</p> <p>6.1.4.1 "For industrial use only"</p> <p>6.1.4.2 "For professional use only"</p> <p>6.1.4.3 "Not for residential use" or "Not intended for residential use"</p> <p>6.1.5 Clear Brushing Lacquers: Effective January 1, 2003, the labels of all clear brushing lacquers shall prominently display the statements "For brush application only," and "This product must not be thinned or sprayed."</p> <p>6.1.6 Rust Preventative Coatings: Effective January 1, 2003, the labels of all rust preventative coatings shall prominently display the statement "For Metal Substrates Only"</p> <p>6.1.7 Specialty Primers, Sealers and Undercoaters: Effective January 1, 2003, the labels of all specialty primers, sealers and undercoaters shall prominently</p>	<p>information listed in Sections 6.1.1 through 6.1.14 on the coating container (or label) in which the coating is sold or distributed.</p> <p>6.1.1 Date Code: The date the coating was manufactured, or a date code representing the date, shall be indicated on the label, lid or bottom of the container. If the manufacturer uses a date code for any coating, the manufacturer shall file an explanation of each code with the Executive Officer of the ARB.</p> <p>6.1.2 Thinning Recommendations: A statement of the manufacturer's recommendation regarding thinning of the coating shall be indicated on the label or lid of the container. This requirement does not apply to the thinning of architectural coatings with water. If thinning of the coating prior to use is not necessary, the recommendation must specify that the coating is to be applied without thinning.</p> <p>6.1.3 VOC Content: Each container of any coating subject to this rule shall display one of the following values, in grams of VOC per liter of coating:</p> <p>6.1.3.1 Maximum VOC Content, as determined from all potential product formulations; or</p> <p>6.1.3.2 VOC Content, as determined from actual formulation data; or</p> <p>6.1.3.3 VOC Content, as determined using the test methods in Section 6.3.2.</p> <p>If the manufacturer does not recommend thinning, the container must display the VOC Content, as supplied. If the manufacturer recommends thinning, the container must display the VOC Content, including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multicomponent product, the container must display the VOC content as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.</p> <p>6.1.4 Faux Finishing Coatings: Effective January 1, 2011, the labels of all clear topcoat Faux Finishing coatings shall prominently display the statement "This product can only be sold or used as part of a Faux Finishing coating system".</p> <p>6.1.5 Industrial Maintenance Coatings: Each manufacturer of any industrial maintenance coating subject to this rule shall display on the label or lid of</p>	<p>additional requirements not found in the SIP version. Therefore, non-SIP version of rule is as stringent as SIP version.</p>

Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
	<p>display one or more of the descriptions listed in Section</p> <p>6.1.7.1 through 6.1.7.5.</p> <p>6.1.7.1 For blocking stains.</p> <p>6.1.7.2 For fire-damaged substrates.</p> <p>6.1.7.3 For smoke-damaged substrates.</p> <p>6.1.7.4 For water-damaged substrates.</p> <p>6.1.7.5 For excessively chalky substrates.</p> <p>6.1.8 Quick Dry Enamels: Effective January 1, 2003, the labels of all quick dry enamels shall prominently display the words "Quick Dry" and the dry hard time.</p> <p>6.1.9 Non-flat – High Gloss Coatings: Effective January 1, 2003, the labels of all non-flat – high gloss coatings shall prominently display the words "High Gloss".</p>	<p>the container in which the coating is sold or distributed one or more of the following descriptions listed in Section 6.1.5.1 through 6.1.5.3.</p> <p>6.1.5.1 "For industrial use only"</p> <p>6.1.5.2 "For professional use only"</p> <p>6.1.5.3 "Not for residential use" or "Not intended for residential use"</p> <p>6.1.6 Clear Brushing Lacquers: The labels of all clear brushing lacquers shall prominently display the statements "For brush application only," and "This product must not be thinned or sprayed." (Category deleted effective January 1, 2011.)</p> <p>6.1.7 Rust Preventative Coatings: The labels of all rust preventative coatings shall prominently display the statement "For Metal Substrates Only".</p> <p>6.1.8 Specialty Primers, Sealers and Undercoaters: Effective until December 31, 2010, the labels of all specialty primers, sealers and undercoaters shall prominently display one or more of the descriptions listed in Section 6.1.8.1 through 6.1.8.5. Effective on and after January 1, 2011, the labels of all specialty primers, sealers, and undercoaters shall prominently display one or more of the descriptions listed in Sections 6.1.8.1 through 6.1.8.3. On and after January 1, 2011, Sections 6.1.8.4 and 6.1.8.5 will be no longer effective.</p> <p>6.1.8.1 For fire-damaged substrates.</p> <p>6.1.8.2 For smoke-damaged substrates.</p> <p>6.1.8.3 For water-damaged substrates.</p> <p>6.1.8.4 For excessively chalky substrates.</p> <p>6.1.8.5 For blocking stains.</p> <p>6.1.9 Quick Dry Enamels: The labels of all quick dry enamels shall prominently display the words "Quick Dry" and the dry hard time. (Category deleted effective January 1, 2011.)</p> <p>6.1.10 Reactive Penetrating Sealers: Effective January 1, 2011, the labels of all Reactive Penetrating Sealers shall prominently display the statement "Reactive Penetrating Sealer."</p> <p>6.1.11 Stone Consolidants: Effective January 1, 2011, the labels of all Stone Consolidants shall prominently display the statement "Stone Consolidant - For Professional Use Only."</p> <p>6.1.12 Nonflat– High Gloss Coatings: The labels of all Nonflat – high gloss coatings shall prominently display the words "High Gloss."</p>	

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		<p>6.1.13 Wood Coatings: Effective January 1, 2011, the labels of all Wood Coatings shall prominently display the statement "For Wood Substrates Only."</p> <p>6.1.14 Zinc Rich Primers: Effective January 1, 2011, the labels of all Zinc Rich Primers shall prominently display one or more of the following descriptions listed in Section 6.1.14.1 through 6.1.14.3.</p> <p>6.1.14.1 "For industrial use only"</p> <p>6.1.14.2 "For professional use only"</p> <p>6.1.14.3 "Not for residential use" or "Not intended for residential use"</p>	
	<p>6.2 Reporting Requirements</p> <p>6.2.1 Clear Brushing Lacquers: Each manufacturer of clear brushing lacquers shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of clear brushing lacquers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.</p> <p>6.2.2 Rust Preventative Coatings: Each manufacturer of rust preventative coatings shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of rust preventative coatings sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.</p> <p>6.2.3 Specialty Primers, Sealers and Undercoaters: Each manufacturer of specialty primers, sealers and undercoaters shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of specialty primers, sealers and undercoaters sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.</p> <p>6.2.4 Toxic Exempt Compounds: For each architectural coating that contains perchloroethylene or methylene chloride, the manufacturer shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB the following information for products sold in the State during the preceding year:</p> <p>6.2.4.1 the product brand name and a copy of the product label with legible usage instructions;</p>	<p>6.2 Reporting Requirements</p> <p>The reporting requirements specified in Sections 6.2.1 through 6.2.6 shall apply until December 31, 2010.</p> <p>6.2.1 Clear Brushing Lacquers: Each manufacturer of clear brushing lacquers shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of clear brushing lacquers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.</p> <p>6.2.2 Rust Preventative Coatings: Each manufacturer of rust preventative coatings shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of rust preventative coatings sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.</p> <p>6.2.3 Specialty Primers, Sealers and Undercoaters: Each manufacturer of specialty primers, sealers and undercoaters shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of specialty primers, sealers and undercoaters sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.</p> <p>6.2.4 Toxic Exempt Compounds: For each architectural coating that contains perchloroethylene or methylene chloride, the manufacturer shall, on or before April 1 of each calendar year beginning in the year 2004, submit an</p>	<p><b>Until December 31, 2010 both versions of the rule have the same reporting requirements. After that date the non-SIP approved rule includes very specific information to be kept and is required for all architectural coatings. Therefore, non-SIP version of rule is as stringent as SIP version.</b></p>

Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
	<p>6.2.4.2 the product category listed in the Table of Standards to which the coating belongs;</p> <p>6.2.4.3 the total sales in California during the calendar year to the nearest gallon;</p> <p>6.2.4.4 the volume percent, to the nearest 0.10 percent, of perchloroethylene and methylene chloride in the coating.</p> <p>6.2.5 Recycled Coatings: Manufacturers of recycled coatings must submit a letter to the Executive Officer of the ARB certifying their status as a Recycled Paint Manufacturer. The manufacturer shall, on or before April 1 of each calendar year beginning with the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall include, for all recycled coatings, the total number of gallons distributed in the State during the preceding year, and shall describe the method used by the manufacturer to calculate State distribution.</p> <p>6.2.6 Bituminous Coatings: Each manufacturer of bituminous roof coatings or bituminous roof primers shall, on or before April 1 of each calendar year beginning with the year 2004, submit an annual report to the Executive Officer of ARB. The report shall specify the number of gallons of bituminous roof coatings or bituminous roof primers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.</p>	<p>annual report to the Executive Officer of the ARB the following information for products sold in the State during the preceding year:</p> <p>6.2.4.1 the product brand name and a copy of the product label with legible usage instructions;</p> <p>6.2.4.2 the product category listed in the Table of Standards 1 or the Table of Standards 2 to which the coating belongs;</p> <p>6.2.4.3 the total sales in California during the calendar year to the nearest gallon;</p> <p>6.2.4.4 the volume percent, to the nearest 0.10 percent, of perchloroethylene and methylene chloride in the coating.</p> <p>6.2.5 Recycled Coatings: Manufacturers of recycled coatings must submit a letter to the Executive Officer of the ARB certifying their status as a Recycled Paint Manufacturer. The manufacturer shall, on or before April 1 of each calendar year beginning with the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall include, for all recycled coatings, the total number of gallons distributed in the State during the preceding year, and shall describe the method used by the manufacturer to calculate State distribution.</p> <p>6.2.6 Bituminous Coatings: Each manufacturer of bituminous roof coatings or bituminous roof primers shall, on or before April 1 of each calendar year beginning with the year 2004, submit an annual report to the Executive Officer of ARB. The report shall specify the number of gallons of bituminous roof coatings or bituminous roof primers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate state sales.</p> <p>6.2.7 Effective on and after January 1, 2011, Sales Data: All sales data listed in Sections 6.2.7.1 to 6.2.7.14 shall be maintained on-site by the responsible official for a minimum of three years. A responsible official from each manufacturer shall upon request of the Executive Officer of the ARB, or his or her delegate, provide data concerning the distribution and sales of architectural coatings. Sales data submitted by the responsible official to the Executive Officer of the ARB may be claimed as confidential, and such information shall be handled in accordance with the procedures specified in Title 17,</p>	

Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
		<p>California Code of Regulations Sections 91000-91022. The responsible official shall within 180 days provide information, including, but not limited to the data listed in Sections 6.2.7.1 through 6.2.7.14:</p> <p>6.2.7.1 the name and mailing address of the manufacturer;</p> <p>6.2.7.2 the name, address and telephone number of a contact person;</p> <p>6.2.7.3 the name of the coating product as it appears on the label and the applicable coating category;</p> <p>6.2.7.4 whether the product is marketed for interior or exterior use or both;</p> <p>6.2.7.5 the number of gallons sold in California in containers greater than one liter (1.057 quart) and equal to or less than one liter (1.057 quart);</p> <p>6.2.7.6 the VOC Actual content and VOC Regulatory content in grams per liter. If thinning is recommended, list the VOC Actual content and VOC Regulatory content after maximum recommended thinning. If containers less than one liter have a different VOC content than containers greater than one liter, list separately. If the coating is a multi-component product, provide the VOC content as mixed or catalyzed;</p> <p>6.2.7.7 the names and CAS numbers of the VOC constituents in the product;</p> <p>6.2.7.8 the names and CAS numbers of any compounds in the product specifically exempted from the VOC definition;</p> <p>6.2.7.9 whether the product is marketed as solvent-borne, waterborne, or 100% solids;</p> <p>6.2.7.10 description of resin or binder in the product;</p> <p>6.2.7.11 whether the coating is a single-component or multi-component product;</p> <p>6.2.7.12 the density of the product in pounds per gallon;</p> <p>6.2.7.13 the percent by weight of: solids, all volatile materials, water, and any compounds in the product specifically exempted from the VOC definition; and</p> <p>6.2.7.14 the percent by volume of: solids, water, and any compounds in the product specifically exempted from the VOC definition.</p>	

Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
	<p>6.3 Test Methods</p> <p>6.3.1 VOC Content of Coatings: To determine the physical properties of a coating in order to perform the calculations in Section 3.26 and 3.27, the reference method for VOC content is U.S. EPA Method 24, except as provided in Sections 6.3.2 and 6.3.15. An alternative method to determine the VOC content of coatings is SCAQMD Method 304-91 (Revised February 1996), incorporated by reference in Section 6.3.14. The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised August 1996), incorporated by reference in Section 6.3.12. To determine the VOC content of a coating, the manufacturer may use U.S. EPA Method 24, or an alternative method as provided in Section 6.3.2, formulation data, or any other reasonable means for predicting that the coating has been formulated as intended (e.g., quality assurance checks, recordkeeping). However, if there are any inconsistencies between the results of a Method 24 test and any other means for determining VOC content, the Method 24 test results will govern, except when an alternative method is approved as specified in Section 6.3.2. The District Air Pollution Control Officer (APCO) may require the manufacturer to conduct a Method 24 analysis.</p> <p>6.3.2 Alternative Test Methods: Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with Section 6.3.1, after review and approved in writing by the staffs of the District, the ARB and the U.S. EPA, may also be used. 6.3.3 Methacrylate Traffic Marking Coatings: Analysis of methacrylate multicomponent coatings used as traffic marking coatings shall be conducted according to a modification of U.S. EPA Method 24 (40 CFR 59, subpart D, Appendix A), incorporated by reference in Section 6.3.15. This method has not been approved for methacrylate multicomponent coatings used for other purposes than as traffic marking coatings or for other classes of multicomponent coatings.</p> <p>6.3.4 Flame Spread Index: The flame spread index of a fire-retardant coating shall be determined by ASTM Designation E 84-99, "Standard Test Method for Surface Burning Characteristics of Building Materials"(see Section 3, Fire-Retardant Coating).</p> <p>6.3.5 Fire Resistance Rating: The fire</p>	<p>6.3 Test Methods</p> <p>The test methods listed below shall be used to demonstrate compliance with this rule. Alternate equivalent test methods may be used provided the test methods have been approved by the APCO and EPA.</p> <p>6.3.1 Calculation of VOC Content: For the purpose of determining compliance with the VOC content limits in the Table of Standards 1 or the Table of Standards 2, the VOC content of a coating shall be determined as defined in Section 3.77, 3.78, or 3.79 as appropriate. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured. If the manufacturer does not recommend thinning, the VOC Content must be calculated for the product as supplied. If the manufacturer recommends thinning, the VOC Content must be calculated including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multi-component product, the VOC content must be calculated as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOC during the curing process, the VOC content must include the VOCs emitted during curing.</p> <p>6.3.2 VOC Content of Coatings: To determine the physical properties of a coating in order to perform the calculations in Section 3.77 and 3.79, the reference method for VOC content is EPA Method 24, except as provided in Sections 6.3.3 and 6.3.16. An alternative method to determine the VOC content of coatings is SCAQMD Method 304-91 (Revised February 1996). The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised 1993), BAAQMD Method 43 (Revised 1996), or BAAQMD Method 41 (Revised 1995), as applicable. To determine the VOC content of a coating, the manufacturer may use EPA Method 24, or an alternative method as provided in Section 6.3.3, formulation data, or any other reasonable means for predicting that the coating has been formulated as intended (e.g., quality assurance checks, recordkeeping). However, if there are any inconsistencies between the results of EPA Method 24 test and any other means for determining VOC content, the EPA Method 24</p>	<p>The non-SIP version includes all the requirements of the SIP version. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.</p>

Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
	<p>resistance rating of a fire-resistive coating shall be determined by ASTM Designation E 119-98, "Standard Test Methods for Fire Tests of Building Construction Materials"(see Section 3, Fire-Resistive Coating).</p> <p>6.3.6 Gloss Determination: The gloss of a coating shall be determined by ASTM Designation D 523-89 (1999), "Standard Test Method for Specular Gloss"(see Section 3, Flat Coating, Nonflat Coating, Nonflat-High Gloss Coating and Quick-Dry Enamel).</p> <p>6.3.7 Metal Content of Coatings: The metallic content of a coating shall be determined by SCAQMD Method 318-95, Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction, <i>SCAQMD Laboratory Methods of Analysis for Enforcement Samples</i> (see Section 3, Metallic Pigmented Coating).</p> <p>6.3.8 Acid Content of Coatings: The acid content of a coating shall be determined by ASTM Designation D 1613-96, "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer and related products"(see Section 3, Pre-Treatment Wash Primer).</p> <p>6.3.9 Drying Times: The set-to-touch, dry-hard, dry-to-touch and dry-to-recoat times of a coating shall be determined by ASTM Designation D 1640-95, "Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature" (see Section 3, Quick-Dry Enamel and Quick-Dry Primer, Sealer and Undercoater) The tack-free time of a quickdry enamel coating shall be determined by the Mechanical Test Method of ASTM Designation D 1640-95.</p> <p>6.3.10 Surface Chalkiness: The chalkiness of a surface shall be determined using ASTM Designation D4214-98, "Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films"(see Section 3, Specialty Primer, Sealer and Undercoater).</p> <p>6.3.11 Exempt Compounds—Siloxanes: Exempt compounds that are cyclic, branched, or linear completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with Section 6 by BAAQMD Method 43, "Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials," <i>BAAQMD Manual of Procedures</i>, Volume III, adopted 11/6/96 (see Section 3, Volatile Organic Compound, and Section 6.3.1).</p> <p>6.3.12 Exempt Compounds—</p>	<p>test results will govern, except when an alternative method is approved as specified in Section 6.3.3. The District Air Pollution Control Officer (APCO) may require the manufacturer to conduct an EPA Method 24 analysis.</p> <p>6.3.3 Alternative Test Methods: Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with Section 6.3.2 4, after review and approved in writing by the staffs of the District, ARB and EPA, may also be used.</p> <p>6.3.4 Methacrylate Traffic Marking Coatings: Analysis of methacrylate multicomponent coatings used as traffic marking coatings shall be conducted according to a modification of EPA Method 24 (40 CFR 59, subpart D, Appendix A). This method has not been approved for methacrylate multicomponent coatings used for other purposes than as traffic marking coatings or for other classes of multicomponent coatings.</p> <p>6.3.5 Flame Spread Index: The flame spread index of a fire-retardant coating shall be determined by ASTM E84-07, "Standard Test Method for Surface Burning Characteristics of Building Materials" (see Section 3.0, Fire-Retardant Coating).</p> <p>6.3.6 Fire Resistance Rating: The fire resistance rating of a fire-resistive coating shall be determined by ASTM E119-07, "Standard Test Methods for Fire Tests of Building Construction Materials" (see Section 3.0, Fire-Resistive Coating).</p> <p>6.3.7 Gloss Determination: The gloss of a coating shall be determined by ASTM D523-89 (1999), "Standard Test Method for Specular Gloss" (see Section 3.0, Flat Coating, Nonflat Coating, Nonflat-High Gloss Coating and Quick-Dry Enamel).</p> <p>6.3.8 Metal Content of Coatings: The metallic content of a coating shall be determined by SCAQMD Method 318-95, Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction, <i>SCAQMD Laboratory Methods of Analysis for Enforcement Samples</i> (see Section 3.0, Metallic Pigmented Coating, Aluminum Roof Coating and Faux Finish).</p> <p>6.3.9 Acid Content of Coatings: The acid content of a coating shall be determined by ASTM D1613-06, "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer and related products" (see Section 3.0, Pre-Treatment Wash Primer).</p>	



Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
	<p>Parachlorobenzotrifluoride (PCBTF): The exempt compound parachlorobenzotrifluoride, shall be analyzed as an exempt compound for compliance with Section 6 by BAAQMD Method 41, "Determination of Volatile Organic Compounds in Solvent Based Coatings and Related Materials Containing Parachlorobenzotrifluoride," <i>BAAQMD Manual of Procedures</i>, Volume III, adopted 12/20/95 (see Section 3, Volatile Organic Compound, and Section 6.3.1).</p> <p>6.3.13 Exempt Compounds: The content of compounds under U.S. EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised 1996), "Determination of Exempt Compounds," <i>SCAQMD Laboratory Methods of Analysis for Enforcement Samples</i> (see Section 3, Volatile Organic Compound, and Section 6.3.1).</p> <p>6.3.14 VOC Content of Coatings: The VOC content of a coating shall be determined by U.S. EPA Method 24 as it exists in appendix A of 40 <i>Code of Federal Regulations</i> (CFR) part 60, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids and Weight Solids of Surface Coatings" (see Section 6.3.1).</p> <p>6.3.15 Alternative VOC Content of Coatings: The VOC content of coatings may be analyzed either by U.S. EPA Method 24 or SCAQMD Method 304-91 (Revised 1996), "Determination of Volatile Organic Compounds (VOC) in Various Materials," <i>SCAQMD Laboratory Methods of Analysis for Enforcement Samples</i> (see Section 6.3.1).</p> <p>6.3.16 Methacrylate Traffic Marking Coatings: The VOC content of methacrylate multicomponent coatings used as traffic marking coatings shall be analyzed by the procedures in 40 CFR part 59, subpart D, appendix A, "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings" (September 11, 1998) (see Section 6.3.3).</p>	<p>6.3.10 Drying Times: The set-to-touch, dry-hard, dry-to-touch and dry-to-recoat times of a coating shall be determined by ASTM D1640-95, "Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature" (see Section 3.0, Quick-Dry Enamel and Quick-Dry Primer, Sealer and Undercoater) The tack-free time of a quick-dry enamel coating shall be determined by the Mechanical Test Method of ASTM D1640-95. (Category deleted effective January 1, 2011.)</p> <p>6.3.11 Surface Chalkiness: The chalkiness of a surface shall be determined using ASTM D4214-98, "Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films" (see Section 3, Specialty Primer, Sealer and Undercoater). (Category deleted effective January 1, 2011.)</p> <p>6.3.12 Exempt Compounds—Siloxanes: Exempt compounds that are cyclic, branched, or linear completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with Section 6 by BAAQMD Method 43, "Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials," <i>BAAQMD Manual of Procedures</i>, Volume III, adopted 11/6/96 (see Section 3.0, Volatile Organic Compound, and Section 6.3.2).</p> <p>6.3.13 Exempt Compounds—Parachlorobenzotrifluoride (PCBTF): The exempt compound parachlorobenzotrifluoride, shall be analyzed as an exempt compound for compliance with Section 6 by BAAQMD Method 41, "Determination of Volatile Organic Compounds in Solvent Based Coatings and Related Materials Containing Parachlorobenzotrifluoride," <i>BAAQMD Manual of Procedures</i>, Volume III, adopted 12/20/95 (see Section 3.0, Volatile Organic Compound, and Section 6.3.2).</p> <p>6.3.14 Exempt Compounds: The content of compounds under U.S. EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised 1993), "Determination of Exempt Compounds," <i>SCAQMD Laboratory Methods of Analysis for Enforcement Samples</i> (see Section 3.0, Volatile Organic Compound, and Section 6.3.2).</p> <p>6.3.15 VOC Content of Coatings: The VOC content of a coating shall be determined by EPA Method 24 as it exists in appendix A of 40 <i>Code of</i></p>	

Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
		<p><i>Federal Regulations</i> (CFR) part 60, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids and Weight Solids of Surface Coatings" (see Section 6.3.2).</p> <p>6.3.16 Alternative VOC Content of Coatings: The VOC content of coatings may be analyzed either by U.S. EPA Method 24 or SCAQMD Method 304-91 (Revised 1996), "Determination of Volatile Organic Compounds (VOC) in Various Materials," <i>SCAQMD Laboratory Methods of Analysis for Enforcement Samples</i>.</p> <p>6.3.17 Methacrylate Traffic Marking Coatings: The VOC content of methacrylate multicomponent coatings used as traffic marking coatings shall be analyzed by the procedures in 40 CFR part 59, subpart D, appendix A, "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings" (September 11, 1998).</p> <p>6.3.18 Hydrostatic Pressure for Basement Specialty Coatings: The hydrostatic pressure resistance for basement specialty coatings shall be analyzed using ASTM D7088-04, "Standard Practice for Resistance to Hydrostatic Pressure for Coatings Used in Below Grade Applications Applied to Masonry".</p> <p>6.3.19 Tub and Tile Refinish Coating Adhesion: The adhesion of tub and tile coating shall be determined by ASTM D4585-99, "Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation" and ASTM D3359-02, "Standard Test Methods for Measuring Adhesion by Tape Test".</p> <p>6.3.20 Tub and Tile Refinish Coating Hardness: The hardness of tub and tile refinish coating shall be determined by ASTM D3363-05, "Standard Test Method for Film Hardness by Pencil Test".</p> <p>6.3.21 Tub and Tile Refinish Coating Abrasion Resistance: Abrasion resistance of tub and tile refinish coating shall be analyzed by ASTM D4060-07, "Standard Test Methods for Abrasion Resistance of Organic Coatings by the Taber Abraser".</p> <p>6.3.22 Tub and Tile Refinish Coating Water Resistance: Water resistance of tub and tile refinish coatings shall be determined by ASTM D4585-99, "Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation" and ASTM D714-02e1, "Standard Test Method</p>	

Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
		<p>for Evaluating Degree of Blistering of Paints".</p> <p>6.3.23 Waterproofing Membrane: Waterproofing membrane shall be tested by ASTM C836-06, "Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course".</p> <p>6.3.24 Mold and Mildew Growth for Basement Specialty Coatings: Mold and mildew growth resistance for basement specialty coatings shall be determined by ASTM D3273-00, "Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber" and ASTM D3274-95, "Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation".</p> <p>6.3.25 Reactive Penetrating Sealer Water Repellency: Reactive penetrating sealer water repellency shall be analyzed by ASTM C67-07, "Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile"; or ASTM C97-02, "Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone"; or ASTM C140-06, "Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units".</p> <p>6.3.26 Reactive Penetrating Sealer Water Vapor Transmission: Reactive penetrating sealer water vapor transmission shall be analyzed ASTM E96/E96M-05, "Standard Test Method for Water Vapor Transmission of Materials".</p> <p>6.3.27 Reactive Penetrating Sealer - Chloride Screening Applications: Reactive penetrating sealers shall be analyzed by National Cooperative Highway Research Report 244 (1981), "Concrete Sealers for the Protection of Bridge Structures".</p> <p>6.3.28 Stone Consolidants: Stone consolidants shall be tested using ASTM E2167-01, "Standard Guide for Selection and Use of Stone Consolidants".</p>	
7.0 Compliance Schedule	Persons subject to this rule shall be in compliance with this rule by October 31, 2001.	Persons subject to this rule shall be in compliance with this rule by the dates specified within the rule.	No change in the requirements, therefore, non-SIP version of rule is as stringent as SIP version.
8.0 Averaging Compliance Option	8.1 On or after January 1, 2003, in lieu of compliance with the specified limits in the Table of Standards for floor coatings; industrial maintenance coatings; primers, sealers, and undercoaters; quick-dry primers, sealers, and undercoaters; quick-dry enamels; roof coatings; rust		No change in the requirements, therefore, non-SIP version of rule is as stringent as SIP version.

Requirement Category	SIP Version of Rule 4601 (10/31/01)	Non-SIP Version of Rule 4601 (12/17/09)	Conclusion
	<p>preventative coatings; stains; waterproofing sealers, as well as flats and non-flats (excluding recycled coatings), manufacturers may average designated coatings such that their actual cumulative emissions from the averaged coatings are less than or equal to the cumulative emissions that would have been allowed under those limits over a compliance period not to exceed one year. Such manufacturers must also comply with the averaging provisions contained in this Section, as well as maintain and make available for inspection records for at least three years after the end of the compliance period. This Section shall cease to be effective on January 1, 2005, after which averaging will no longer be allowed.</p> <p>Per Section 8.1, averaging is no longer applicable. Therefore, Section 8.2 through 8.14 are not listed.</p>		

District Rule 4601 was amended (12/17/2009). As analyzed, each amended section of the non-SIP version of the rule is at least as stringent as, or more stringent than the corresponding section of the SIP version of the rule. Therefore, it is concluded that overall the non-SIP version of the rule is more stringent than the SIP version of the rule.