



AUG 15 2014

Mr. Steve Fisher  
All American Oil & Gas Co.  
P O Box 10207  
Bakersfield, CA 93389

**Re: Notice of Preliminary Decision - Federally Mandated Operating Permit  
District Facility # S-7858  
Project # S-1134523**

Dear Mr. Fisher:

Enclosed for your review is the District's analysis of All American Oil & Gas Co.'s application for the Federally Mandated Operating Permit for its operation at Heavy Oil Central Stationary Source (NE/4, S6, T29S, R28E), Kern County, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Federally Mandated Operating Permit. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Sincerely,

Arnaud Marjollet  
Director of Permit Services

Enclosures

cc: Mike Tollstrup, CARB (w/enclosure) via email  
cc: Gerardo C. Rios, EPA (w/enclosure) via email  
Seyed Sadredin  
Executive Director/Air Pollution Control Officer

**SAN JOAQUIN VALLEY  
UNIFIED AIR POLLUTION CONTROL DISTRICT**

**ALL AMERICAN OIL & GAS COMPANY**

**ENGINEERING EVALUATION**

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ATTACHMENT A - DETAILED FACILITY REPORT

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ATTACHMENT C - CURRENT PERMIT TO OPERATE

# TITLE V APPLICATION REVIEW

Project #: S-1134523  
Deemed Complete: December 6, 2013

Engineer: Jonah Aiyabei  
Date: August 13, 2014

Facility Number: S-7858  
Facility Name: All American Oil & Gas Company  
Mailing Address: P O Box 10207  
Bakersfield, CA 93389

Contact Name: Steve Fisher  
Phone: (661) 589-2507

Responsible Official: Steve Fisher  
Title: Operations Manager

## I. PROPOSAL

All American Oil & Gas Company is proposing that an initial Title V permit be issued for its crude oil production operation at Heavy Oil Central Stationary Source in Kern County. The purpose of this 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

All American Oil & Gas Company is located at Heavy Oil Central Stationary Source (NE/4, S6, T29S, R28E), Kern County, CA.

## III. EQUIPMENT LISTING

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

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

## IV. GENERAL PERMIT TEMPLATE USAGE

The applicant has requested to utilize template #SJV-UM-0-3, Facility-wide Umbrella General Permit Template. Based on the information submitted on

the Template Qualification Form, the applicant qualifies for the use of this template.

## V. SCOPE OF EPA AND PUBLIC REVIEW

Certain segments of the proposed Operating Permit are based on model general permit templates that have been previously subject to EPA and public review. The terms and conditions from the model general permit templates are included in the proposed permit and are not subject to further EPA and public review.

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

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

Conditions 1 through 40 of the requirements for permit unit S-7858-0-1.

## VI. REQUIREMENTS ADDRESSED BY GENERAL PERMIT TEMPLATES

- District Rule 1100, Equipment Breakdown, (amended December 17, 1992)
- District Rule 1160, Emission Statements, (adopted November 18, 1992)
- District Rule 2010, Permits Required, (amended December 17, 1992)
- District Rule 2020, Exemptions, (amended July 21, 1994 ⇒ amended August 18, 2011)<sup>1</sup>
- District Rule 2031, Transfer of Permits, (amended December 17, 1992)
- District Rule 2040, Applications, (amended December 17, 1992)
- District Rule 2070, Standards for Granting Applications, (amended December 17, 1992)

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<sup>1</sup> The amendments made to this rule on August 18, 2011 have no impact to this source; therefore template SJV-UM-0-3 is still valid for this project.

- District Rule 2080, Conditional Approval, (amended December 17, 1992)
- District Rule 2520, Federally Mandated Operating Permits, Sections 5.2, 9.1.1, 9.4, 9.5, 9.7, 9.8, 9.9, 9.13.1, 9.13.2, 9.16, and 10.0, (amended June 21, 2001 )
- District Rule 4101, Visible Emissions, (amended November 15, 2001 ⇒ amended February 17, 2005)
- District Rule 4601, Architectural Coatings, (amended October 31, 2001 ⇒ amended December 17, 2009)
- District Rule 8021, Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities, (adopted November 15, 2001; amended August 19, 2004)
- District Rule 8031, Bulk Materials, (adopted November 15, 2001; amended August 19, 2004)
- District Rule 8041, Carryout and Trackout, (adopted November 15, 2001; amended August 19, 2004)
- District Rule 8051, Open Areas, (adopted November 15, 2001; amended August 19, 2004)
- District Rule 8061, Paved and Unpaved Roads, (adopted November 15, 2001; amended August 19, 2004)
- District Rule 8071, Unpaved Vehicle/Equipment Traffic Areas, (adopted November 15, 2001; amended September 16, 2004)
- 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos, (amended September 18, 2003)
- 40 CFR Part 82, Subpart B, Stratospheric Ozone, (amended November 9, 2007)
- 40 CFR Part 82, Subpart F, Stratospheric Ozone, (amended June 8, 2008)

## VII. REQUIREMENTS NOT ADDRESSED BY GENERAL PERMIT TEMPLATES

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

- District Rule 1081, Source Sampling, (amended December 16, 1993)
- District Rule 2201, New and Modified Stationary Source Review Rule, (amended April 21, 2011)
- District Rule 2410, Prevention of Significant Deterioration, (adopted June 16, 2011)
- District Rule 4201, Particulate Matter Concentration, (amended December 17, 1992)
- District Rule 4301, Fuel Burning Equipment, (amended December 17, 1992)
- District Rule 4305, Boilers, Steam Generators, and Process Heaters - Phase 2, (amended August 21, 2003)
- District Rule 4306, Boilers, Steam Generators, and Process Heaters - Phase 3, (amended October 16, 2008)
- District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater Than 5.0 MMBtu/Hr, (amended October 16, 2008)
- District Rule 4401, Steam-Enhanced Crude Oil Production Wells, (amended June 16, 2011)
- District Rule 4623, Storage of Organic Liquids, (amended May 19, 2005)
- District Rule 4801, Sulfur Compounds, (amended December 17, 1992)
- 40 CFR 60.40c, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
- 40 CFR Part 64, Compliance Assurance Monitoring (CAM)
- 40 CFR 72.6(b), Acid Rain 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 Permits. The terms and conditions that are part of the facility's Title V permit are designated as Federally Enforceable through Title V Permit.

This facility is subject to the following District-only requirements that are not currently federally enforceable:

**District Rule 4102 – Nuisance**

This rule prevents the discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property.

a. S-7858-0-1 – Facility-Wide Requirements

- Condition 41 of the requirements for this permit unit is based on this requirement and is therefore not federally enforceable through Title V.

**Public Resources Code 21000-21177: California Environmental Quality Act**

The California Environmental Quality Act (CEQA) is California's broadest environmental law. CEQA helps to guide the Department during issuance of permits and approval of projects. CEQA applies to all discretionary projects proposed to be conducted or approved by a California public agency, including private projects requiring discretionary government approval.

- a. S-7858-1-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
- b. S-7858-2-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

- Conditions 1 and 2 of the requirements for these permit units are based on this requirement and are therefore not federally enforceable through Title V.

**IX. COMPLIANCE**

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

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

requirements as condition numbers 1 through 40 to assure compliance with these requirements.

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

**1. District Rule 1070 – Inspections**

The purpose of this rule is to explain the District's authority in determining compliance with the requirements of these rules and regulations. District Rule 1070 has been submitted to the EPA to replace Kern County Rule 107 that is in the State Implementation Plan (SIP). District Rule 1070 is at least as stringent as Kern County Rule 107 as shown in the following comparison:

| Comparison of District Rule 1070 to Kern County Rule 107   |                    |                      |
|--|--------------------|----------------------|
| REQUIREMENTS   | District Rule 1070 | Kern County Rule 107 |
| Inspections shall be made by the enforcement agency for the purpose of obtaining information necessary to determine whether air pollution sources are in compliance with applicable rules and regulations. | X                  | X                    |
| The District also has the authority to require record keeping, to make inspections and to conduct tests of air pollution sources.  | X                  | X                    |

- a. S-7858-4-2: 13' X 70' (1500 BBL) FWKO VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)
- b. S-7858-5-3: 1,500 BBL FIXED ROOF WASH TANK (T-100) SERVED BY A VAPOR RECOVERY SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TEOR PERMIT S-7858-3 (NUKERN LEASE)
- c. S-7858-6-1: 3,000 BBL FIXED ROOF SALES TANK (TANK 101) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- d. S-7858-7-1: 3,000 BBL FIXED ROOF SALES TANK (T-102) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

- e. S-7858-8-2: 5,000 BBL FIXED ROOF WASTE WATER TANK (T-200) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
  - f. S-7858-9-2: 5,000 BBL FIXED ROOF WASTE WATER TANK (T-201) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
  - g. S-7858-10-2: 1000 BBL FIXED ROOF DRAIN TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
  - h. S-7858-11-1: 500 BBL FIXED ROOF BRINE REJECT TANK T-203 SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)
  - i. S-7858-12-1: 3,000 BBL FIXED ROOF FEED WATER TANK T-202 SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)
  - j. S-7858-13-1: 10' DIAMETER BY 24' LONG (336 BBL) FREE WATER KNOCKOUT (FWKO) VESSEL SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)
- Condition 12 of the requirements for these permit units ensures compliance with this rule.

## **2. District Rule 1081 – Source Sampling**

The purpose of this rule is to ensure that any source operation which emits or may emit air contaminants provides adequate and safe facilities for use in sampling to determine compliance. This rule also specifies methods and procedures for source testing, sample collection, and compliance determination.

Section 7.0 requires that the District must be notified 30 days prior to any compliance source testing and the owner shall submit a source test plan for District approval 15 days prior to source sampling; and that source test reports must be submitted to the District within 60 days of completion of field testing.

- a. S-7858-1-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

- b. S-7858-2-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
  - Conditions 7, 9 and 10 of the requirements for these permit units ensure compliance with this rule.

### **3. District Rule 2020 – Exemptions**

District Rule 2020 lists equipment which is specifically exempt from obtaining permits and specifies recordkeeping requirements to verify such exemptions. The amendments to this rule do not have any effect on current permit requirements and will therefore not be addressed in this evaluation.

### **4. District Rule 2201 – New and Modified Stationary Source Review Rule**

Permit units S-7858-1 through S-7858-13 were subject to the District Rule 2201 upon application for Authority to Construct (ATC). In accordance with the White Paper for Streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting Permit to Operate (PTO) were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- a. S-7858-1-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
- b. S-7858-2-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
  - Conditions 4 through 7 from the current PTOs have been included as conditions 3 through 6 of the requirements for the proposed permits.
- c. S-7858-3-2: 80 THERMALLY ENHANCED OIL WELLS SERVED BY A WELL CASING VENT VAPOR CONTROL SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
  - Conditions 1 through 3 from the current PTO have been included as conditions 1 through 3 of the requirements for the proposed permit.

- d. S-7858-4-2: 13' X 70' (1500 BBL) FWKO VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)
- e. S-7858-5-3: 1,500 BBL FIXED ROOF WASH TANK (T-100) SERVED BY A VAPOR RECOVERY SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TEOR PERMIT S-7858-3 (NUKERN LEASE)
  - Conditions 1, 3, 4, 6 and 7 from the current PTOs have been included as conditions 1, 3, 4, 6 and 7 of the requirements for the proposed permits.
- f. S-7858-6-1: 3,000 BBL FIXED ROOF SALES TANK (TANK 101) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- g. S-7858-7-1: 3,000 BBL FIXED ROOF SALES TANK (T-102) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
  - Conditions 1 through 4 and 6 from the current PTOs have been included as conditions 1 through 4 and 6 of the requirements for the proposed permits.
- h. S-7858-8-2: 5,000 BBL FIXED ROOF WASTE WATER TANK (T-200) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- i. S-7858-9-2: 5,000 BBL FIXED ROOF WASTE WATER TANK (T-201) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- j. S-7858-10-2: 1000 BBL FIXED ROOF DRAIN TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- k. S-7858-11-1: 500 BBL FIXED ROOF BRINE REJECT TANK T-203 SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)
- l. S-7858-12-1: 3,000 BBL FIXED ROOF FEED WATER TANK T-202 SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)

m. S-7858-13-1: 10' DIAMETER BY 24' LONG (336 BBL) FREE WATER KNOCKOUT (FWKO) VESSEL SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)

- Conditions 1, 3, 4, 6 and 7 from the current PTOs have been included as conditions 1, 3, 4, 6 and 7 of the requirements for the proposed permits.

#### **5. District Rule 2410 – Prevention of Significant Deterioration**

The prevention of significant deterioration (PSD) program is a construction permitting program for new major stationary sources and major modifications to existing major stationary sources located in areas classified as attainment or in areas that are unclassifiable for any criteria air pollutant. The provisions of this rule apply to any source and the owner or operator of any source subject to any requirement under Title 40 Code of Federal Regulations (40 CFR) Part 52.21 as incorporated into this rule.

There are no PSD requirements for this source. Therefore, the facility is not subject to this rule and no further discussion is required.

#### **6. District Rule 2520 – Federally Mandated Operating Permits**

##### Greenhouse Gas Requirements

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.

##### Beginning Date for Reporting Periods

Section 9.5 requires the submittal of monitoring reports at least every six months. The applicant requested that the beginning date for the reporting periods be set to October 6 to match their other Title V source. The beginning date for the reporting periods is specified in condition 42 of the facility-wide requirements.

#### **7. District Rule 4201 – Particulate Matter Concentration**

The purpose of this rule is to protect the ambient air quality by establishing a particulate matter emission standard. Section 3.1 requires emissions to be at or below 0.1 grains of particulate matter per dry standard cubic foot of exhaust gas.

Natural Gas-Fired Steam Generators

|   |                           |
|---|---------------------------|
| F-Factor for NG:                                | 8,578 dscf/MMBtu at 60 °F |
| PM10 Emission Factor:                           | 0.0076 lb-PM10/MMBtu      |
| Percentage of PM as PM10 in Exhaust:            | 100%                      |
| Exhaust Oxygen (O <sub>2</sub> ) Concentration: | 3%                        |
| Excess air correction:                          | (20.9/(20.9 - 3)) = 1.17  |

$$\begin{aligned} \text{Emissions}_{\text{Conc.}} &= \left( \frac{0.0076 \text{ lb-PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb-PM}} \right) / \left( \frac{8,578 \text{ ft}^3}{\text{MMBtu}} \times 1.17 \right) \\ &= 0.005 \text{ grain/dscf} < 0.1 \text{ grain/dscf} \end{aligned}$$

As demonstrated above, the emissions concentration for natural gas-fired boilers is not expected to exceed the rule limit of 0.1 gr/dscf.

- a. S-7858-1-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
- b. S-7858-2-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
  - Condition 5 of the requirements for these permit units ensures compliance with this rule.

**8. District Rule 4301 – Fuel Burning Equipment**

The purpose of this rule is to limit the emission of air contaminants from fuel burning equipment. This rule limits the concentration of combustion contaminants and specifies maximum emission rates for sulfur dioxide, nitrogen oxide and combustion contaminant emissions.

The rule specifies maximum emission rates in lb/hr for SO<sub>2</sub>, NO<sub>2</sub>, and combustion contaminants. This rule also limits combustion contaminants to ≤ 0.1 gr/scf.

- a. S-7858-1-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
- b. S-7858-2-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
  - Condition 5 of the requirements for these permit units ensures compliance with this rule.

**9. District Rule 4305 – Boilers, Steam Generators, and Process Heaters  
– Phase 2**

The purpose of this rule is to limit emissions of oxides of nitrogen (NO<sub>x</sub>) and carbon monoxide (CO) from boilers, steam generators, and process heaters.

Section 5.1.1 limits the NO<sub>x</sub> emission rate for units operated on gaseous fuel to 30 ppmv (0.036 lb/MMBtu). Section 5.3 limits the CO emission rate to 400 ppmv. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen.

Section 5.4.2 requires that permit units subject section 5.1 emissions limits shall either install and maintain Continuous Emission Monitoring (CEM) equipment for NO<sub>x</sub>, CO and O<sub>2</sub>, or install and maintain APCO-approved alternate monitoring. An APCO approved Alternate Monitoring System shall monitor one or more of the following: (a) periodic NO<sub>x</sub> and CO exhaust emission concentrations; (b) periodic exhaust oxygen concentration; (c) flow rate of reducing agent added to exhaust; (d) catalyst inlet and exhaust temperature; (e) catalyst inlet and exhaust oxygen concentration; (f) periodic flue gas recirculation rate; or (g) other operational characteristics.

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).

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, and that 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.

Section 5.5.4 requires that for emissions monitoring pursuant to Sections 5.4.2, 5.4.2.1, and 6.3.1 using a portable NO<sub>x</sub> analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced out over the 15-consecutive-minute period.

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 limit.

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.3 shall be maintained for five calendar years and shall be made available to the APCO upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

Section 6.2 identifies the following test methods as District-approved source testing methods for the pollutants listed: (a) NO<sub>x</sub> in ppmv - EPA Method 7E or ARB Method 100; (b) NO<sub>x</sub> in lb/MMBtu - EPA Method 19; (c) CO in ppmv - EPA Method 10 or ARB Method 100; (d) Stack gas O<sub>2</sub> in % - EPA Method 3 or 3A, or ARB Method 100; (e) stack gas velocity in ft/min - EPA Method 2; and (f) stack gas moisture content in % - EPA Method 4.

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.

- a. S-7858-1-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
- b. S-7858-2-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
  - Conditions 5, 6, 8, 11 through 13, and 15 through 21 of the requirements for these permit units ensure compliance with this rule.

#### **10. District Rule 4306 – Boilers, Steam Generators, and Process Heaters – Phase 3**

The purpose of this rule is to limit emissions of oxides of nitrogen (NO<sub>x</sub>) and carbon monoxide (CO) from boilers, steam generators, and process heaters.

Section 5.1.1 limits the NO<sub>x</sub> and CO emission rates for units rated less than 20 MMBtu/hr to 15 ppmv (0.018 lb/MMBtu) and 400 ppmv, respectively. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen.

Section 5.4.2 requires that permit units subject to section 5.1 emissions limits shall either install and maintain Continuous Emission Monitoring (CEM) equipment for NO<sub>x</sub>, CO and O<sub>2</sub>, or install and maintain APCO-approved alternate monitoring. An APCO approved Alternate Monitoring System shall monitor one or more of the following: (a) periodic NO<sub>x</sub> and CO exhaust emission concentrations; (b) periodic exhaust oxygen concentration; (c) flow rate of reducing agent added to exhaust; (d) catalyst inlet and exhaust temperature; (e) catalyst inlet and exhaust oxygen concentration; (f) periodic flue gas recirculation rate; or (g) other operational characteristics.

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).

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, and that 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.

Section 5.5.4 requires that for emissions monitoring pursuant to Sections 5.4.2, 5.4.2.1, and 6.3.1 using a portable NO<sub>x</sub> analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced out over the 15-consecutive-minute period.

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 limit.

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.3 shall be maintained for five calendar years and shall be made available to the APCO upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

Section 6.2 identifies the following test methods as District-approved source testing methods for the pollutants listed: (a) NO<sub>x</sub> in ppmv - EPA Method 7E or ARB Method 100; (b) NO<sub>x</sub> in lb/MMBtu - EPA Method 19; (c) CO in ppmv - EPA Method 10 or ARB Method 100; (d) Stack gas O<sub>2</sub> in % - EPA Method 3 or 3A, or ARB Method 100; (e) stack gas velocity in ft/min - EPA Method 2; and (f) stack gas moisture content in % - EPA Method 4.

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.

- a. S-7858-1-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
- b. S-7858-2-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
  - Conditions 5, 6, 8, 11 through 13, and 15 through 21 of the requirements for these permit units ensure compliance with this rule.

**11. District Rule 4320 - Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater Than 5.0 MMBtu/Hr**

This rule limits NO<sub>x</sub>, CO, SO<sub>2</sub> and PM<sub>10</sub> emissions from boilers, steam generators and process heaters rated greater than 5 MMBtu/hr. This rule also provides a compliance option of payment of fees in proportion to the actual amount of NO<sub>x</sub> emitted over the previous year.

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

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

Section 5.2.1 requires that on and after the indicated Compliance Deadline units shall not be operated in a manner which exceeds the applicable NO<sub>x</sub> limit specified in Table 1 of this rule.

The units at this facility are fired on >50% PUC quality gas and have a maximum heat input of 85.0 MMBtu/hr each; therefore, the applicable emission limit category Section 5.2, Table 1, Category C.2.a as follows:

| C. Oilfield Steam Generators                          |   |                        |                     |
|---|---|------------------------|---------------------|
| Category  | NO <sub>x</sub> Limit   | Authority to Construct | Compliance Deadline |
| 2. Units with a total rated heat input >20.0 MMBtu/hr | a) Standard Schedule<br>7 ppmv or 0.008 lb/MMBtu; or                          | July 1, 2009           | July 1, 2010        |
|   | b) Staged Enhanced Schedule<br>Initial Limit<br>9 ppmv or 0.011 lb/MMBtu; and | July 1, 2011           | July 1, 2012        |
|   | Final Limit<br>5 ppmv or 0.0062 lb/MMBtu                                      | January 1, 2013        | January 1, 2014     |

Section 5.4 requires that, to limit particulate matter emissions, an operator shall comply with one of the following requirements:

- 5.4.1.1 On and after the applicable NO<sub>x</sub> Compliance Deadline specified in Section 5.2 Table 1, operators shall fire units exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases;
- 5.4.1.2 On and after the applicable NO<sub>x</sub> Compliance Deadline specified in Section 5.2 Table 1, operators shall limit fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet; or

5.4.1.3 On and after the applicable NO<sub>x</sub> Compliance Deadline specified in Section 5.2 Table 1, operators shall install and properly operate an emission control system that reduces SO<sub>2</sub> emissions by at least 95% by weight; or limit exhaust SO<sub>2</sub> to less than or equal to 9 ppmv corrected to 3.0% O<sub>2</sub>.

5.4.1.4 Notwithstanding the compliance deadlines indicated in Sections 5.4.1.1 through 5.4.1.3, refinery units, which require modification of refinery equipment to reduce sulfur emissions, shall be in compliance with the applicable requirement in Section 5.4.1 no later than July 1, 2013.

Section 5.6 requires that on and after the full compliance deadline specified in Section 5.0, the applicable emission limits of Sections 5.2 Table 1 and 5.5.2 shall not apply during start-up or shutdown provided an operator complies with the requirements specified in Sections 5.6.1 through 5.6.5.

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

Section 5.7.6 requires operators complying with Sections 5.4.1.1 or 5.4.1.2 to provide an annual fuel analysis to the District unless a more frequent sampling and reporting period is included in the Permit to Operate. Sulfur analysis shall be performed in accordance with the test methods in Section 6.2.

Section 5.8.1 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 5.2. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant to Rule 1081 (Source Sampling).

Section 5.8.2 requires that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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.

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

five (5) readings evenly spaced out over the 15-consecutive-minute period.

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

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

Section 6.2 identifies the following test methods as District-approved source testing methods: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100; NO<sub>x</sub> (lb/MMBtu) - EPA Method 19; CO - 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 - EPA Method 2; Stack Gas Moisture - EPA Method 4; Oxides of Sulfur - EPA Method 6C, EPA Method 8, or ARB Method 100; and Total Sulfur as Hydrogen Sulfide (H<sub>2</sub>S) Content - EPA Method 11 or EPA Method 15, as appropriate.

Section 6.3.1 requires that emission units 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.

- a. S-7858-1-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
- b. S-7858-2-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
  - Conditions 4 through 8 and 11 through 21 of the requirements for these permit units ensure compliance with this rule.

## **12. District Rule 4401 – Steam-Enhanced Crude Oil Production Wells**

The purpose of this rule is to limit the VOC emissions from steam-enhanced crude oil production well vents. This rule is applicable to all steam-enhanced crude oil production wells and any associated VOC collection and control systems.

Pursuant to Section 3.0, a leak shall be defined as a reading as methane on a portable hydrocarbon detection instrument (calibrated with methane) in excess of 10,000 ppm when measured in accordance with the test method specified in Section 6.3.3.

Section 4.1 exempts any steam-enhanced crude oil production well undergoing service or repair from the requirements of this rule. Section 4.7 exempts any operation from the requirements of Section 5.4.1 through Section 5.4.7 (Inspection and Re-Inspection) of this rule if components exclusively handle gas/vapor or liquid with a VOC content of ten percent by weight or less (10 wt.%), as determined by the test methods in Section 6.3.4.

Pursuant to Section 5.1, an operator shall not operate a steam-enhanced crude oil production well unless either of the following two conditions are met: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids is connected to a VOC collection and control system as defined in Section 3.0 of this rule, or 2) the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system that has a VOC collection and control system as defined in Section 3.0 of this rule.

Pursuant to Section 5.2: (1) There shall be no open-ended line or a valve located at the end of the line that is 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; (2) There shall be no components with a major liquid leak as defined in Section 3.20.2; (3) There shall be no components with a gas leak of greater than 50,000 ppmv; and (4) There shall be no more than a total of 8 component leaks, including minor liquid leaks, minor gas leaks or gas leaks between 10,000 ppmv and 50,000 ppmv.

Pursuant to Section 5.3: (1) No leaking components may be used unless they have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5; (2) Each hatch shall be closed at all times except during attended repair, replacement, or maintenance operations, providing such activities are done as expeditiously as possible with minimal spillage or material and VOC emissions into the atmosphere; and (3) The operator shall comply with the requirements of Section 6.7 if there is any change in the description of major components or critical components.

Pursuant to Section 5.5.1, upon detection of a leak, an operator shall affix a readily visible weatherproof tag to that leaking component that includes the following information: (1) The date and time of leak detection; (2) The date and time of the leak measurement; (3) For a gaseous leak, the leak concentration in ppmv; (4) For a liquid leak, whether it is a major or minor liquid leak; and (5) Whether the component is an essential component, and unsafe-to-monitor component, or a critical component.

Pursuant to Section 5.5.2, the tag shall remain affixed to the leaky component until all the following requirements are met: (1) The component is repaired or replaced; (2) The component is re-inspected as set forth in Section 6.3; and (3) The component is found to be in compliance with this rule.

Pursuant to Section 5.5.3, an 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.

Pursuant to Section 5.5.4, except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0, an operator shall comply with at least one of the following three requirements as soon as practicable but not later than the time period specified in Table 3: (1) Repair or replace the leaking component; (2) Vent the leaking component to a VOC collection and control system as defined in Section 3.0, or (3) Remove the leaking component from operation.

Pursuant to Section 5.5.5, the leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3.

Pursuant to Section 5.5.6, the time of the initial leak detection shall be the start of the repair period specified in Table 3.

Pursuant to Section 5.5.7, 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 this rule, 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.

Pursuant to Section 6.1, the following records shall be retained for a period of five years and made available for District inspection upon request:

- 1) The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs.
- 2) A small producer shall maintain monthly records of county-specific crude oil production. For the purpose of this rule, the monthly crude oil production records required by the California Division of Oil, Gas, and Geothermal Resources may be used to satisfy Section 6.1.2.
- 3) An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0.
- 5) The inspection log maintained pursuant to Section 6.4.
- 6) 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.
- 7) An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5.
- 8) An operator shall keep a copy of the APCO-approved Operator Management Plan at the facility.

- 9) An operator shall keep a list of all gauge tanks, as defined in Section 3.0. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment.
- 10) The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing.
- 11) An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year.

Pursuant to Section 6.2.3, an operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0: (1) An operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July – September), and whenever there is a change in the source or type of produced fluid in the gauge tank; (2) The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9.

Pursuant to Section 6.3, the following test methods shall be used:

- 1) The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the concentration must be below 50 ppmv, in which case EPA Method 25a may be used. EPA Method 18 may be used instead, providing the requirements under Section 6.3.1 are met.
- 2) VOC content shall be analyzed using the latest revision of ASTM Method E-168, E169 or E260 as applicable. Analysis of halogenated exempt compounds shall be performed using ARB Method 432.
- 3) Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not

more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface.

- 4) The VOC content by weight percent shall be determined using ASTM D1945 for gasses and SCAQMD Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids.

Pursuant to Section 6.4, the operator shall maintain an inspection log in which the operator records at least all of the following information for each inspection performed:

- 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 liquids leaks, whether the leak is major or minor,
- 5) The date of repair, replacement or removal from operation of leaking components,
- 6) The identity and location of essential components and critical components as defined in this Rule, 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 1 year after detection, whichever comes earlier,
- 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or replaced,
- 9) The inspectors 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.

Pursuant to Section 6.5, the operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures as necessary.

Pursuant to Section 6.6, an operator whose existing wells are subject to this rule or whose existing wells are exempt pursuant to Section 4.0 of this rule on or before December 14, 2006 shall prepare and submit an Operator Management Plan for approval by the APCO. An operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required by Section 6.6.4 through Section 6.6.7.

Pursuant to Section 6.7, 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.

S-7858-3-2: 80 THERMALLY ENHANCED OIL WELLS SERVED BY A WELL CASING VENT VAPOR CONTROL SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

- Conditions 1 through 35 of the requirements for this permit unit ensure compliance with this rule.

### **13. District Rule 4623 – Storage of Organic Liquids**

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

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

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

Pursuant to section 6.2, an operator shall conduct a TVP testing of each uncontrolled fixed roof 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 each tank.

Pursuant to Section 6.3.6, an operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid; test methods used, and a copy of the test results. An operator who uses the information in Appendix A to demonstrate the TVP and/or API gravity of the stored organic liquid shall submit information to the APCO within 45 days after the date that the type of organic liquid stored in the tank has been determined.

Pursuant to Section 6.4, the following test methods shall be used, unless otherwise approved by the APCO and the United States Environmental Protection Agency (US EPA):

- The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92 (2000) 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 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products".
  - 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 US EPA, shall be used to determine the TVP of crude oil with an API gravity of 26° or less, or for any API gravity that is specified in this test method.
- a. S-7858-4-2: 13' X 70' (1500 BBL) FWKO VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)
  - b. S-7858-5-3: 1,500 BBL FIXED ROOF WASH TANK (T-100) SERVED BY A VAPOR RECOVERY SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TEOR PERMIT S-7858-3 (NUKERN LEASE)

- Conditions 2, 5, and 8 through 11 of the requirements for these permit units ensure compliance with this rule.
- c. S-7858-6-1: 3,000 BBL FIXED ROOF SALES TANK (TANK 101) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- d. S-7858-7-1: 3,000 BBL FIXED ROOF SALES TANK (T-102) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- Conditions 5, and 7 through 11 of the requirements for these permit units ensure compliance with this rule.
- e. S-7858-8-2: 5,000 BBL FIXED ROOF WASTE WATER TANK (T-200) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- f. S-7858-9-2: 5,000 BBL FIXED ROOF WASTE WATER TANK (T-201) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- g. S-7858-10-2: 1000 BBL FIXED ROOF DRAIN TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- Conditions 2, 5, and 8 through 11 of the requirements for these permit units ensure compliance with this rule.

**14. District Rule 4801 – Sulfur Compounds**

This rule limits the emissions of sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: two-tenths (0.2) percent by volume calculated as sulfur dioxide (SO<sub>2</sub>), on a dry basis averaged over 15 consecutive minutes.

The rule has been submitted to the EPA to replace County Rule 407 (Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin counties) which is contained in the SIP. District Rule 4801 is as stringent as County Rule 407, as shown on the following table:

| Comparison of District Rule 4801 to County Rule 407   |                    |                 |
|---|--------------------|-----------------|
| REQUIREMENTS  | District Rule 4801 | 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 | ✓                  | ✓               |

| Comparison of District Rule 4801 to County Rule 407  |                    |                 |
|--|--------------------|-----------------|
| REQUIREMENTS   | District Rule 4801 | 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 emission units at this facility are required by permit condition to be fired solely on PUC-quality natural gas with a maximum sulfur content of 1.0 gr/100 scf (equivalent to a Sox emission rate of 0.00285 lb/MMBtu). Using the ideal gas equation, the expected maximum sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = \frac{nRT}{P}$$

With:

$$n = \text{moles SO}_2$$

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

$$T \text{ (Standard Temperature)} = 60^\circ\text{F} = 520^\circ\text{R}$$

$$P \text{ (Standard Pressure)} = 14.7 \text{ psi}$$

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

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

Since the expected sulfur compounds emissions are less than 0.2% (2,000 ppmv), compliance with the requirements of this rule is expected.

- a. S-7858-1-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
- b. S-7858-2-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
  - Condition 4 of the requirements for these permit units ensures compliance with this rule.

**15. 40 CFR 60.40c – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Industrial Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr constructed, modified, or reconstructed after 6/9/89.

The steam generators at this facility are rated 85 MMBtu/hr and are fired on natural gas. Subpart Dc has no standards for gas-fired steam generators. Therefore subpart Dc has no applicable standards.

**16. 40 CFR Part 64 – Compliance Assurance Monitoring**

40 CFR Part 64 requires Compliance Assurance Monitoring (CAM) for units that meet the following three 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.
- a. S-7858-1-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
  - b. S-7858-2-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

These units have an emission limit and add-on control (FGR) for NO<sub>x</sub>.

FGR Control Efficiency:

AP-42 Table 1.4-1 (7/98) lists the following emissions factors for small boilers < 100 MMBtu/hr:

|   | Emissions Factor<br>(lb/10 <sup>6</sup> scf) |
|---|--|
| Uncontrolled  | 100  |
| Controlled – low NO <sub>x</sub> burners                        | 50   |
| Controlled – Low NO <sub>x</sub> burners/Flue gas recirculation | 32   |

Based on the above emission factors, the control efficiency for FGR =  
 $100 \times (50 - 32)/50 = 36\%$

Post-control NO<sub>x</sub> PE = 0.008 lb/MMBtu x 85 MMBtu/hr x 8,760 hr/yr =  
5,957 lb/yr

Pre-control NO<sub>x</sub> PE = (5,957 lb/yr) / (1 - 0.36) = 9,308 lb/yr.

Since the pre-control PE is less than the NO<sub>x</sub> major source threshold  
(20,000 lb/yr), CAM is not applicable.

- c. S-7858-3-2: 80 THERMALLY ENHANCED OIL WELLS SERVED BY A WELL CASING VENT VAPOR CONTROL SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- d. S-7858-4-2: 13' X 70' (1500 BBL) FWKO VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)
- e. S-7858-5-3: 1,500 BBL FIXED ROOF WASH TANK (T-100) SERVED BY A VAPOR RECOVERY SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TEOR PERMIT S-7858-3 (NUKERN LEASE)
- f. S-7858-6-1: 3,000 BBL FIXED ROOF SALES TANK (TANK 101) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- g. S-7858-7-1: 3,000 BBL FIXED ROOF SALES TANK (T-102) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- h. S-7858-8-2: 5,000 BBL FIXED ROOF WASTE WATER TANK (T-200) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- i. S-7858-9-2: 5,000 BBL FIXED ROOF WASTE WATER TANK (T-201) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

- j. S-7858-10-2: 1000 BBL FIXED ROOF DRAIN TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)
- k. S-7858-11-1: 500 BBL FIXED ROOF BRINE REJECT TANK T-203 SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)
- l. S-7858-12-1: 3,000 BBL FIXED ROOF FEED WATER TANK T-202 SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)
- m. S-7858-13-1: 10' DIAMETER BY 24' LONG (336 BBL) FREE WATER KNOCKOUT (FWKO) VESSEL SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)

These units have emission limits for VOC. However, as discussed below, they are not considered to have any add-on controls for VOC, and are therefore not subject to CAM.

For oilfield tanks and wells, CAM is required if an emission unit is subject to an emission limit or standard for the pollutant of concern (VOC), uses a control device to comply with the emission limit or standard, and has a pre-control PE greater than 10 tons/year.

While most tanks and wells are equipped with vapor control systems, include an emission limit or standard, and have uncontrolled potential to emit greater than 10 tons/year, the District has concluded that these units are not subject to CAM because the vapor control systems in question do not meet the criteria for add-on control devices as defined in 40 CFR part 64.

The definition of control device from 40 CFR Part 64 is as follows (emphasis added):

*Control device* means equipment, other than inherent process equipment, that is used to destroy or remove air pollutant(s) prior to discharge to the atmosphere. The types of equipment that may commonly be used as control devices include, but are not limited to, fabric filters, mechanical collectors, electrostatic precipitators, inertial separators, afterburners, thermal or catalytic incinerators, adsorption devices (such as carbon beds), condensers, scrubbers (such as wet collection and gas absorption devices), selective catalytic or non-catalytic reduction systems, flue gas recirculation systems, spray dryers, spray towers, mist eliminators, acid plants,

sulfur recovery plants, injection systems (such as water, steam, ammonia, sorbent or limestone injection), and combustion devices independent of the particular process being conducted at an emissions unit (e.g., the destruction of emissions achieved by venting process emission streams to flares, boilers or process heaters). For purposes of this part, a control device does not include passive control measures that act to prevent pollutants from forming, such as the use of seals, lids, or roofs to prevent the release of pollutants, use of low-polluting fuel or feedstocks, or the use of combustion or other process design features or characteristics. If an applicable requirement establishes that particular equipment which otherwise meets this definition of a control device does not constitute a control device as applied to a particular pollutant-specific emissions unit, then that definition shall be binding for purposes of this part.

It is important to note that this definition includes an exemption for “inherent process equipment”. Inherent process equipment is by definition not a control device. Emission units equipped with inherent process equipment are not subject to the requirements of CAM.

40 CFR Part 64 defines inherent process equipment as (emphasis added):

*Inherent process equipment* means equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. Equipment that must be operated at an efficiency higher than that achieved during normal process operations in order to comply with the applicable emission limitation or standard is not inherent process equipment. For the purposes of this part, inherent process equipment is not considered a control device.

Please note that the above definition requires that inherent process equipment must be used “... for the proper or safe operation of the process ...”. It is important to note that the equipment need not be used solely for the proper or safe operation of the process. Such systems could be used for compliance with regulations as well.

The District has concluded that vapor control systems installed on oilfield tanks and oil production wells are inherent process equipment (and by definition not a control device) for the reasons stated below:

- Tank and well vapor control systems reduce emission of H<sub>2</sub>S (a

toxic substance) from the tanks/wells and as such assure worker safety for OSHA and other regulatory requirements.

- Tank vapor control systems minimize air intrusion into the vapor space and as such reduces corrosion of the tank interior. Such systems are commonly installed even though they are not required to comply with District regulations. District Rule 4623 – Storage of Organic Liquids does not require vapor control on storage tanks storing liquids with a true vapor pressure of less than 0.5 psia. Due to the relatively low actual emissions from such tanks, vapor control is typically not a Rule 2201 best available control technology (BACT) requirement for most heavy crude oil storage tanks. Even though not required by District rules, facilities commonly install vapor control on storage tanks for safety and corrosion prevention purposes.
- As stated above, facilities commonly install vapor control on tanks even though there is not an requirement to do so. Vapor control has historically been installed on crude oil production well vents as well prior to the requirement to install such controls. In fact, the District has issued emission reduction credits for the installation of well vent vapor control systems.
- Vapors collected by tank and well vapor control systems are commonly burned in multiple existing units, e.g. steam generators, in which useful energy is recovered. Steam generators, are used in oil production to enhance oil recovery from production wells. The steam generators, wells and tanks (with their associated vapor control systems) are part of the overall process to thermally enhance oil production.

Such systems typically distribute the vapors to multiple steam generators (or other devices) for use as a fuel. The quantity of vapors from such vapor control systems combusted in a particular steam generator varies as the operational needs of the facility change. For example, vapors that are typically combusted in a given steam generator will be combusted in a different approved steam generator instead if the first steam generator is taken out of service.

For all of the reasons stated above, the District believes that oil production tank and well vapor control systems are truly “inherent process systems”, and therefore cannot be considered add-on control devices for the purposes of CAM applicability.

## **17. 40 CFR 72.6(b) – Acid Rain Provisions**

Pursuant to 40 CFR 72.6(b)(8), non-utility units (units not used to produce electricity for sale) are no affected units subject to the requirements of the Acid Rain Program.

- a. S-7858-1-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM
- b. S-7858-2-1: 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

These steam generators are non-utility units and are therefore not subject to the requirements of the Acid Rain Program.

## **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 Title V 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**

By using the model general permit template listed in Section IV of this evaluation, the applicant has requested that a permit shield be issued for requirements addressed in the template. The basis for each permit shield is discussed in the Permit Shield section of the template.

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

The applicant has not requested any permit shields for requirements not addressed by model general permit templates.

## **XI. PERMIT CONDITIONS**

See draft operating permit beginning on the following page.

# San Joaquin Valley Air Pollution Control District

FACILITY: S-7858-0-1

EXPIRATION DATE: 07/31/2017

## FACILITY-WIDE REQUIREMENTS

1. {4362} 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; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
2. {4363} 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; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. {4364} 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. {4365} Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. {4366} 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, 9.9.1 and 9.13.1] Federally Enforceable Through Title V Permit
6. {4367} 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. {4368} 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. {4369} 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. {4370} 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: ALL AMERICAN OIL & GAS INC.  
Location: HEAVY OIL CENTRAL, SEC 6, T29S, R28E, CA  
S-7858-0-1: Aug 12 2014 3:58PM - AYABEJ

10. {4371} 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. {4372} 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. {4373} 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. {4374} 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. {4375} 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. {4376} 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. {4377} 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. {4378} 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. {4379} 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. {4380} 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. {4381} 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. {4382} 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

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

22. {4383} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
23. {4384} No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in Table of Standards 1 effective until 12/30/10 or Table of Standards 2 effective on and after 1/1/11 of District Rule 4601 (12/17/09) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit
24. {4385} All VOC-containing materials 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. {4386} 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. {4387} 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. {4388} If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
28. {4389} If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit
29. {4390} 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. {4391} 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. {4392} 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. {4393} 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. {4394} Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8061 and Rule 8011] Federally Enforceable Through Title V Permit

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

34. {4395} Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rule 8071 and Rule 8011] Federally Enforceable Through Title V Permit
35. {4396} 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
36. {4397} 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. {4398} 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. {4399} 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. {4400} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. {4401} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4601 (12/17/09); 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
42. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report begin on October 6 of every year, 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.

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-1-1

EXPIRATION DATE: 07/31/2017

SECTION: NE06 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

## PERMIT UNIT REQUIREMENTS

1. This unit shall be equipped with horizontal convection section with at least 235 square feet of bare tube surface area (or thermodynamically equivalent number of square feet of finned tube) per MMBtu/hr of heat input. [California Environmental Quality Act]
2. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [California Environmental Quality Act]
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320 and 4801] Federally Enforceable Through Title V Permit
5. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.008 lb-NO<sub>x</sub>/MMBtu, 0.0050 lb-PM<sub>10</sub>/MMBtu, 25 ppmvd CO @ 3% O<sub>2</sub> or 0.0184 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
8. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
10. 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
11. NO<sub>x</sub> emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
15. 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
16. 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
17. 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
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 the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
20. 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
21. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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-7858-2-1

EXPIRATION DATE: 07/31/2017

SECTION: NE06 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

## PERMIT UNIT REQUIREMENTS

1. This unit shall be equipped with horizontal convection section with at least 235 square feet of bare tube surface area (or thermodynamically equivalent number of square feet of finned tube) per MMBtu/hr of heat input. [California Environmental Quality Act]
2. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [California Environmental Quality Act]
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320 and 4801] Federally Enforceable Through Title V Permit
5. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.008 lb-NO<sub>x</sub>/MMBtu, 0.0050 lb-PM<sub>10</sub>/MMBtu, 25 ppmvd CO @ 3% O<sub>2</sub> or 0.0184 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
8. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
10. 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
11. NO<sub>x</sub> emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
15. 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
16. 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
17. 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
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 the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
20. 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
21. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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-7858-3-2

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

80 THERMALLY ENHANCED OIL WELLS SERVED BY A WELL CASING VENT VAPOR CONTROL SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

1. The VOC content of produced gas shall not exceed 10% by weight. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
3. Permittee shall maintain an APCO-approved VOC collection and control system that is not open to the atmosphere and that is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to an APCO-approved control device that has a VOC destruction or removal efficiency of at least 99%, that transports gases or vapors back to a process system, or injects vapors into DOGGR approved wells. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
4. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
5. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
6. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines; a component with a major liquid leak; or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401] Federally Enforceable Through Title V Permit
7. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [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.

8. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
9. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
10. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
11. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
12. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3 of Rule 4401, and the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
13. An 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
14. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: repair or replace the leaking component; or 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. [District Rule 4401] Federally Enforceable Through Title V Permit
15. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401] Federally Enforceable Through Title V Permit
16. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
17. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
18. 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 this rule, 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
19. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
20. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [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.

21. 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 shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
22. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
23. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
24. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such 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
25. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
26. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
27. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
28. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
29. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [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.

30. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. 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. the date of repair, replacement, or removal from operation of leaking components, identify 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, 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, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, 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
31. 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
32. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
33. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
34. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4401 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
35. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401] 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-7858-4-2

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

13' X 70' (1500 BBL) FWKO VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The vessel shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This vessel 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. The VOC content of vessel recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The vessel shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage vessel, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this vessel 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 vessel in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
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 vessel identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The 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
11. 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
12. 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 1070] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-5-3

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

1,500 BBL FIXED ROOF WASH TANK (T-100) SERVED BY A VAPOR RECOVERY SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TEOR PERMIT S-7858-3 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [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 Rule 4623] Federally Enforceable Through Title V Permit
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. 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
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] Federally Enforceable Through Title V Permit

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

10. The 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
11. 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
12. 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 1070] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-6-1

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF SALES TANK (TANK 101) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
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 Rule 4623] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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
8. 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
9. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. 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
11. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
12. 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 1070] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-7-1

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF SALES TANK (T-102) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
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 Rule 4623] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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
8. 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
9. 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

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

10. 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
11. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
12. 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 1070] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-8-2

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF WASTE WATER TANK (T-200) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [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 Rule 4623] Federally Enforceable Through Title V Permit
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. 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
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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The 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
11. 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
12. 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 1070] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-9-2

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF WASTE WATER TANK (T-201) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [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 Rule 4623] Federally Enforceable Through Title V Permit
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. 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
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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The 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
11. 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
12. 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 1070] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-7858-10-2

**EXPIRATION DATE:** 07/31/2017

**SECTION:** NE6 **TOWNSHIP:** 29S **RANGE:** 28E

**EQUIPMENT DESCRIPTION:**

1000 BBL FIXED ROOF DRAIN TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [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 Rule 4623] Federally Enforceable Through Title V Permit
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. 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
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] Federally Enforceable Through Title V Permit

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

10. The 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
11. 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
12. 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 1070] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-11-1

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF BRINE REJECT TANK T-203 SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [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 Rule 2080] Federally Enforceable Through Title V Permit
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. 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 2080] Federally Enforceable Through Title V Permit
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 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The 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 2080] Federally Enforceable Through Title V Permit
11. 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 2080] Federally Enforceable Through Title V Permit
12. 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 1070] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-7858-12-1

**EXPIRATION DATE:** 07/31/2017

**SECTION:** NE6 **TOWNSHIP:** 29S **RANGE:** 28E

**EQUIPMENT DESCRIPTION:**

3,000 BBL FIXED ROOF FEED WATER TANK T-202 SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [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 Rule 2080] Federally Enforceable Through Title V Permit
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. 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 2080] Federally Enforceable Through Title V Permit
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 2080] Federally Enforceable Through Title V Permit

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

10. The 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 2080] Federally Enforceable Through Title V Permit
11. 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 2080] Federally Enforceable Through Title V Permit
12. 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 1070] Federally Enforceable Through Title V Permit

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

DRAFT

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-13-1

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

10' DIAMETER BY 24' LONG (336 BBL) FREE WATER KNOCKOUT (FWKO) VESSEL SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [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 Rule 2080] Federally Enforceable Through Title V Permit
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. 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 2080] Federally Enforceable Through Title V Permit
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 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The 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 2080] Federally Enforceable Through Title V Permit
11. 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 2080] Federally Enforceable Through Title V Permit
12. 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 1070] Federally Enforceable Through Title V Permit

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

DRAFT

Attachment A  
Detailed Facility Report

**Detailed Facility Report**

For Facility=7858

Sorted by Facility Name and Permit Number

|   |            |        |           |        |             |            |
|---|------------|--------|-----------|--------|-------------|------------|
| ALL AMERICAN OIL & GAS INC.<br>HEAVY OIL CENTRAL<br>SEC 6, T29S, R28E<br>CA | FAC #      | S 7858 | TYPE:     | TitleV | EXPIRE ON:  | 07/31/2017 |
|   | STATUS:    | A      | TOXIC ID: |        | AREA:       | 811        |
|   | TELEPHONE: |        |           |        | INSP. DATE: | 07/14      |
|   |            |        |           |        |             |            |

| PERMIT NUMBER | FEE DESCRIPTION             | FEE RULE  | QTY | FEE AMOUNT | FEE TOTAL | PERMIT STATUS | EQUIPMENT DESCRIPTION  |
|---------------|-----------------------------|-----------|-----|------------|-----------|---------------|--|
| S-7858-1-0    | 85.0 MMBtu/hr               | 3020-02 H | 1   | 1,030.00   | 1,030.00  | A             | 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM   |
| S-7858-2-0    | 85.0 MMBtu/hr               | 3020-02 H | 1   | 1,030.00   | 1,030.00  | A             | 85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM   |
| S-7858-3-0    | 80 thermally enhanced wells | 3020-09 A | 80  | 9.34       | 747.20    | A             | 80 THERMALLY ENHANCED OIL WELLS SERVED BY A WELL CASING VENT VAPOR CONTROL SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE) |
| S-7858-4-1    | 1500 BBLs                   | 3020-05 D | 1   | 185.00     | 185.00    | A             | 13' X 70' (1500 BBL) FWKO VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)   |
| S-7858-5-2    | 63,000 gallons              | 3020-05 D | 1   | 185.00     | 185.00    | A             | 1,500 BBL FIXED ROOF WASH TANK (T-100) SERVED BY A VAPOR RECOVERY SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TEOR PERMIT S-7858-3 (NUKERN LEASE)   |
| S-7858-6-0    | 126,000 gallons             | 3020-05 E | 1   | 246.00     | 246.00    | A             | 3,000 BBL FIXED ROOF SALES TANK (TANK 101) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)   |
| S-7858-7-0    | 126,000 gallons             | 3020-05 E | 1   | 246.00     | 246.00    | A             | 3,000 BBL FIXED ROOF SALES TANK (T-102) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)  |
| S-7858-8-1    | 5000 BBLs                   | 3020-05 E | 1   | 246.00     | 246.00    | A             | 5,000 BBL FIXED ROOF WASTE WATER TANK (T-200) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)  |
| S-7858-9-1    | 5000 BBLs                   | 3020-05 E | 1   | 246.00     | 246.00    | A             | 5,000 BBL FIXED ROOF WASTE WATER TANK (T-201) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)  |
| S-7858-10-1   | 1000 BBLs                   | 3020-05 C | 1   | 135.00     | 135.00    | A             | 1000 BBL FIXED ROOF DRAIN TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)   |
| S-7858-11-0   | 21,000 gallons              | 3020-05 C | 1   | 135.00     | 135.00    | A             | 500 BBL FIXED ROOF BRINE REJECT TANK T-203 SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)   |
| S-7858-12-0   | 126,000 gallons             | 3020-05 E | 1   | 246.00     | 246.00    | A             | 3,000 BBL FIXED ROOF FEED WATER TANK T-202 SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)   |

### Detailed Facility Report

For Facility=7858

Sorted by Facility Name and Permit Number

| PERMIT NUMBER | FEE DESCRIPTION | FEE RULE  | QTY | FEE AMOUNT | FEE TOTAL | PERMIT STATUS | EQUIPMENT DESCRIPTION  |
|---------------|-----------------|-----------|-----|------------|-----------|---------------|--|
| S-7858-13-0   | 14,112 gallons  | 3020-05 B | 1   | 93.00      | 93.00     | A             | 10' DIAMETER BY 24' LONG (336 BBL) FREE WATER KNOCKOUT (FWKO) VESSEL SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE) |

Number of Facilities Reported: 1

Attachment B  
Exempt Equipment

**San Joaquin Valley  
Unified Air Pollution Control District  
Title V Application - INSIGNIFICANT ACTIVITIES**

COMPANY NAME: All American Oil & Gas Company

FACILITY ID: S-7858

Check the box next to the exemption category from Rule 2020 which describes any insignificant activity or equipment at your facility not requiring a permit.

| Exemption Category   | Rule 2020 Citation | √                                   | Exemption Category   | Rule 2020 Citation | √                                   |
|--|--------------------|-------------------------------------|--|--------------------|-------------------------------------|
| Structure or incinerator assoc. with a structure designed as a dwelling for 4 families or less   | 4.1                | <input type="checkbox"/>            | Containers used to store refined lubricating oils  | 6.6.8              | <input checked="" type="checkbox"/> |
| Locomotives, airplanes, and watercraft used to transport passengers or freight   | 4.4                | <input type="checkbox"/>            | Unvented pressure vessels used exclusively to store liquified gases or assoc with exempt equipment   | 6.6.9 or 6.13      | <input checked="" type="checkbox"/> |
| Natural gas or LPG-fired boilers or other indirect heat transfer units of 5 MMBtu/hr or less   | 6.1.1              | <input checked="" type="checkbox"/> | Portable tanks used exclusively to store produced fluids for ≤ six months  | 6.6.10             | <input checked="" type="checkbox"/> |
| Piston-type i.c. engine with maximum continuous rating of 50 braking horsepower (bhp) or less  | 6.1.2              | <input checked="" type="checkbox"/> | Mobile transport tanks on delivery vehicles of VOCs  | 6.6.11             | <input checked="" type="checkbox"/> |
| Gas turbine engines with maximum heat input rating of 3 MMBtu/hr or less   | 6.1.3              | <input type="checkbox"/>            | 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            | <input checked="" type="checkbox"/> |
| Space heating equipment other than boilers   | 6.1.4              | <input checked="" type="checkbox"/> | 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            | <input checked="" type="checkbox"/> |
| 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                | <input checked="" type="checkbox"/> | Equipment used exclusively for the transfer of refined lubricating oil   | 6.7.2              | <input type="checkbox"/>            |
| Use of less than 2 gal/day of graphic arts materials   | 6.3                | <input type="checkbox"/>            | Equipment used to apply architectural coatings   | 6.8.1              | <input checked="" type="checkbox"/> |
| Equipment at retail establishments used to prepare food for human consumption  | 6.4.1              | <input type="checkbox"/>            | 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                | <input checked="" type="checkbox"/> |
| Ovens at bakeries with total daily production less than 1,000 pounds and exempt by sec. 6.1.1  | 6.4.3              | <input type="checkbox"/>            | Brazing, soldering, or welding equipment   | 6.10               | <input checked="" type="checkbox"/> |
| Equipment used exclusively for extruding or compression molding of rubber or plastics, where no plastisizer or blowing agent is used                               | 6.5                | <input type="checkbox"/>            | Equipment used to compress natural gas   | 6.11               | <input type="checkbox"/>            |
| Containers used to store clean produced water  | 6.6.1              | <input checked="" type="checkbox"/> | Fugitive emissions sources assoc. with exempt equipment  | 6.12               | <input checked="" type="checkbox"/> |
| Containers ≤ 100 bbl used to store oil with specific gravity ≥ 0.8762  | 6.6.2              | <input checked="" type="checkbox"/> | Pits and Ponds as defined in Rule 1020   | 6.15               | <input checked="" type="checkbox"/> |
| Containers ≤ 100 bbl installed prior to 6/1/89 used to store oil with specific gravity ≥ 0.8762  | 6.6.3              | <input type="checkbox"/>            | On-site roadmix manufacturing and the application of roadmix as a road base material   | 6.17               | <input checked="" type="checkbox"/> |
| Containers with a capacity ≤ 250 gallons used to store organic material where the actual storage temperature < 150 F   | 6.6.4              | <input checked="" type="checkbox"/> | Emissions less than 2 lb/day from units not included above   | 6.19               | <input checked="" type="checkbox"/> |
| Containers used to store unheated organic material with an initial boiling point ≥ 302 F   | 6.6.5              | <input checked="" type="checkbox"/> | Venting PUC quality natural gas from for sole purpose of pipeline and compressor repair and or maintenance   | 7.2                | <input type="checkbox"/>            |
| Containers used to store fuel oils or non-air-blown asphalt with specific gravity ≥ 0.9042   | 6.6.6              | <input checked="" type="checkbox"/> | Non-structural repairs & maintenance to permitted equipment  | 7.3                | <input checked="" type="checkbox"/> |
| Containers used to store petroleum distillates used as motor fuel with specific gravity ≥ 0.8251   | 6.6.7              | <input checked="" type="checkbox"/> | Detonation of explosives ≤ 100 lb/day and 1,000 lb/year  | 7.4                | <input type="checkbox"/>            |

No insignificant activities (Check this box if no equipment in the above categories exist at your facility.)

## Attachment C

# Current Permit to Operate



# Permit to Operate

**FACILITY:** S-7858

**EXPIRATION DATE:** 07/31/2017

**LEGAL OWNER OR OPERATOR:**  
**MAILING ADDRESS:**

ALL AMERICAN OIL & GAS INC.  
P O BOX 10207  
C/O ENTERPRISE DRILLING  
BAKERSFIELD, CA 93389

**FACILITY LOCATION:**

HEAVY OIL CENTRAL  
SEC 6, T29S, R28E  
CA

**FACILITY DESCRIPTION:**

OIL AND NATURAL GAS PRODUCTION

The Facility's Permit to Operate may include Facility-wide Requirements as well as requirements that apply to specific permit units.

This Permit to Operate remains valid through the permit expiration date listed above, subject to payment of annual permit fees and compliance with permit conditions and all applicable local, state, and federal regulations. This permit is valid only at the location specified above, and becomes void upon any transfer of ownership or location. Any modification of the equipment or operation, as defined in District Rule 2201, will require prior District approval. This permit shall be posted as prescribed in District Rule 2010.

**Seyed Sadredin**  
Executive Director / APCO

**Arnaud Marjollet**  
Director of Permit Services

San Joaquin Valley  
Air Pollution Control District

FACILITY: S-7858-0-0

EXPIRATION DATE: 07/31/2017

## FACILITY-WIDE REQUIREMENTS

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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: ALL AMERICAN OIL & GAS INC.  
Location: HEAVY OIL CENTRAL, SEC 6, T29S, R28E, CA  
S-7858-0-0; Jun 4 2014 10:15AM - AIYABEJJ

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-1-0

EXPIRATION DATE: 07/31/2017

SECTION: NE06 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

## PERMIT UNIT REQUIREMENTS

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1. This unit shall be equipped with horizontal convection section with at least 235 square feet of bare tube surface area (or thermodynamically equivalent number of square feet of finned tube) per MMBtu/hr of heat input. [California Environmental Quality Act]
2. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [California Environmental Quality Act]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 and 4320]
6. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.008 lb-NO<sub>x</sub>/MMBtu, 0.0050 lb-PM<sub>10</sub>/MMBtu, 25 ppmvd CO @ 3% O<sub>2</sub> or 0.0184 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4801]
7. Source testing to measure natural gas-combustion NO<sub>x</sub> and CO emissions from this unit shall be conducted within 60 days of initial startup and at least once every twelve (12) months thereafter. 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 2201, 4305, 4306, and 4320]
8. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]
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. 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 results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
12. NO<sub>x</sub> emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320]

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

13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
14. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]
15. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
16. 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]
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]
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. 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 the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320]
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]
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, 4320, and 40 CFR 60.48c(i)]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-2-0

EXPIRATION DATE: 07/31/2017

SECTION: NE06 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

85.0 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

## PERMIT UNIT REQUIREMENTS

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1. This unit shall be equipped with horizontal convection section with at least 235 square feet of bare tube surface area (or thermodynamically equivalent number of square feet of finned tube) per MMBtu/hr of heat input. [California Environmental Quality Act]
2. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [California Environmental Quality Act]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 and 4320]
6. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.0050 lb-PM10/MMBtu, 25 ppmvd CO @ 3% O2 or 0.0184 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4801]
7. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial startup and at least once every twelve (12) months thereafter. 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 2201, 4305, 4306, and 4320]
8. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]
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. 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 results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
12. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
14. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]
15. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
16. 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]
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]
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. 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 the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320]
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]
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, 4320, and 40 CFR 60.48c(i)]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-7858-3-0

**EXPIRATION DATE:** 07/31/2017

**SECTION:** NE6 **TOWNSHIP:** 29S **RANGE:** 28E

**EQUIPMENT DESCRIPTION:**

80 THERMALLY ENHANCED OIL WELLS SERVED BY A WELL CASING VENT VAPOR CONTROL SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The VOC content of produced gas shall not exceed 10% by weight. [District Rules 2201 and 4401, 4.9]
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rules 2201 and 4401, 4.9]
3. Permittee shall maintain an APCO-approved VOC collection and control system that is not open to the atmosphere and that is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to an APCO-approved control device that has a VOC destruction or removal efficiency of at least 99%, that transports gases or vapors back to a process system, or injects vapors into DOGGR approved wells. [District Rules 2201 and 4401, 3.50]
4. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20]
5. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of rule 4401. [District Rule 4401, 5.5.1 and 5.5.2]
6. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.8 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.6.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401 5.6.2]
7. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.8 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 3 of Rule 4401. [District Rule 4401 5.6.2]

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

8. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.6.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.9 of Rule 4401. [District Rule 4401 5.7.1]
9. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401 5.7.2]
10. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401 5.7.3]
11. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401 5.9.1]
12. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and 5.9.2.3 of Rule 4401, or the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.9.2]
13. An 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 5.9.3]
14. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.9.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 4 of Rule 4401: Repair or replace the leaking component; or 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. [District Rule 4401 5.9.4]
15. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401 5.9.4]
16. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 4 of Rule 4401. [District Rule 4401 5.9.5]
17. The time of the initial leak detection shall be the start of the repair period specified in Table 4 of Rule 4401. [District Rule 4401 5.9.6]
18. 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 this rule, 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 5.9.7]
19. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401 6.1.1]
20. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401 6.1.5]
21. 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 shall be maintained. [District Rule 4401 6.1.6]

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

22. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401 6.1.7]
23. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401 6.1.8]
24. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401 6.1.11]
25. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct an initial TVP testing of the produced fluid in each gauge tank within 60 days of start-up. Thereafter, an operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.10 of Rule 4401. [District Rule 4401 6.2.5]
26. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401 6.3.1]
27. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401 6.3.2]
28. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401 6.3.3]
29. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401 6.3.5]
30. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. 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. the date of repair, replacement, or removal from operation of leaking components, identify 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, 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, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, 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 6.4]
31. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

32. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401]
33. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401]
34. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4401 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401]
35. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection 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-7858-4-1

**EXPIRATION DATE:** 07/31/2017

**SECTION:** NE6 **TOWNSHIP:** 29S **RANGE:** 28E

**EQUIPMENT DESCRIPTION:**

13' X 70' (1500 BBL) FWKO VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The vessel shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]
2. This vessel 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]
3. The VOC content of vessel recovery gas shall not exceed 10% by weight. [District Rule 2201]
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201]
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623].
6. The vessel shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage vessel, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201]
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this vessel 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 vessel in order to maintain exemption from the rule. [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 vessel 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 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]

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

11. 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]
12. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-5-2

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

1,500 BBL FIXED ROOF WASH TANK (T-100) SERVED BY A VAPOR RECOVERY SYSTEM INCLUDING ONE COMPRESSOR SKID AND ONE ADDITIONAL COMPRESSOR SKID SHARED WITH THE VAPOR CONTROL SYSTEM LISTED ON TEOR PERMIT S-7858-3 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [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]
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201]
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201]
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201]
8. 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 2080]
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 2080]
10. 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 2080]

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

11. 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 2080]
12. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-6-0

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF SALES TANK (TANK 101) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]
2. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201]
3. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201]
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [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 Rule 4623]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201]
7. 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]
8. 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]
9. 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]
10. 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623]
12. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-7-0

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF SALES TANK (T-102) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]
2. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201]
3. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201]
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [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 Rule 4623]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201]
7. 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]
8. 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]
9. 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]
10. 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623]
12. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-8-1

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF WASTE WATER TANK (T-200) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [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]
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201]
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201]
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201]
8. 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]
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 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. 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]
12. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-9-1

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF WASTE WATER TANK (T-201) SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [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]
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201]
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201]
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201]
8. 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]
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 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. 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]
12. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-10-1

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

1000 BBL FIXED ROOF DRAIN TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [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]
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201]
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201]
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201]
8. 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]
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 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. 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]
12. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-11-0

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF BRINE REJECT TANK T-203 SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [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]
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201]
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201]
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201]
8. 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 2080]
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 2080]
10. 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 2080]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. 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 2080]
12. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-12-0

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF FEED WATER TANK T-202 SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [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]
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201]
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201]
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201]
8. 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 2080]
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 2080]
10. 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 2080]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. 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 2080]
12. 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 1070]

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7858-13-0

EXPIRATION DATE: 07/31/2017

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

## EQUIPMENT DESCRIPTION:

10' DIAMETER BY 24' LONG (336 BBL) FREE WATER KNOCKOUT (FWKO) VESSEL SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-7858-5 (NUKERN LEASE)

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a fixed roof with no holes or openings. [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]
3. The VOC content of tank recovery gas shall not exceed 10% by weight. [District Rule 2201]
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201]
5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7, or vapors shall be injected into DOGGR approved wells. [District Rule 2201]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201]
8. 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 2080]
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 2080]
10. 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 2080]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. 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 2080]
12. 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 1070]

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